

Tahap 1 (Artikel Awal)

Predicting Student Interests Against Laptop Specifications Through Application of Data Mining Using C4.5 Algorithms

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Abstract. The purpose of this research was to provide information about the prediction of student interest in the laptop specifications through the application of data mining using the c4.5 algorithm. The method used in this research is a survey method by conducting interview. This research was conducted by conducting interviews with several students. The results of this research was a decision tree that describes the laptop specifications that is most in demand by students, so students who want to have a laptop can easily determine laptop specifications based on the number of enthusiasts on certain laptop specifications. The technique used in the application of data mining in this research is a classification technique. The conclusion in this research is that by implementing data mining, students didn't need to look for various sources to find laptop specifications that are needed by students in meeting their college needs in long time.

1. Introduction

Laptop specifications are the most important thing to determine which laptops the user will choose. Laptop specifications are determined based on user requirements. In addition to user needs, laptop specifications are usually also determined by the purchasing power of the user. Of course in this case, students as users in this research will choose laptop specifications that are suitable for student needs and student purchasing power. To make it easier for students to determine laptop specifications, data mining is used. Data mining is a process of extracting or filtering data with a large enough data size through certain processes to find useful information from the large data [1]. One technique that is owned by data mining is classification. The technique consists of several methods and produces a decision tree [2]. The C4.5 algorithm is one of the algorithms used in classification techniques. With the implementation of data mining using the C4.5 algorithm, information about the specifications of

the laptop that is most in demand by students can be known. Technological development makes data processing more dynamic [3]. Data mining can be used for various things, one of which is data mining is used to obtain information such as determining the specifications of laptops, for example laptop specifications that are needed by students that are appropriate for the purchasing power of students. Variety of laptop specifications is certainly a major problem for students in determining the required laptop specifications. By utilizing the application of data mining using the C4.5 algorithm, the specifications of the laptop that students need will be drawn through the decision tree. The decision tree is an illustration of the decision procedure for determining the class of a specified variable [4][5]. The decision tree itself can help students determine which laptop specifications should be chosen. However, even though the decision tree has given students an overview of the specifications of the laptop that are most in demand by students, it is possible for students to choose other specifications according to the needs of the student. Therefore, the purpose of this research was to provide information about the prediction of student interest in laptop specifications through the application of data mining using the c4.5 algorithm.

2. Method

The method used in this research is a survey method by conducting interviews and questionnaires as a research tool. Interviews were conducted and questionnaires were distributed to students of the 7th semester Information System students of Universitas Komputer Indonesia as the population or sample to determine the relationship or influence of each variable tested [6]. The sampling technique used in this research is purposive sampling. Purposive sampling is one of the non-probability sampling techniques that is very effective when a research focuses on certain criteria [7].

3. Results and Discussion

To support the application of data mining using the C4.5 algorithm, of course the sample data is needed. Table 1 contains data from the results of interviews in this study. Sample data were obtained through interviews with several respondents who came from the 7th semester Information System students of Universitas Komputer Indonesia which can be seen in Table 1.

Table 1. Sample Data

No	Respondents	Brand	Processor	VGA	RAM	Operating System	Price	Results
1	Responden 1	Asus	Intel	On Board	2 GB	DOS	Cheap	Purchased
2	Responden 2	Dell	Intel	On Board	2 GB	DOS	Cheap	Not Purchased
3	Responden 3	Axioo	Intel	On Board	2 GB	Windows	Cheap	Not Purchased
4	Responden 4	Acer	Intel	Nvidia	4 GB	Windows	Middle	Purchased
5	Responden 5	Asus	AMD	AMD	4 GB	DOS	Middle	Purchased
6	Responden 6	Asus	Intel	Nvidia	8 GB	Windows	Expensive	Not Purchased
7	Responden 7	HP	Intel	Nvidia	4 GB	Windows	Middle	Not Purchased
8	Responden 8	Lenovo	AMD	AMD	4 GB	DOS	Cheap	Not Purchased
9	Responden 9	Lenovo	AMD	AMD	4 GB	Windows	Middle	Purchased
10	Responden 10	Asus	AMD	On Board	2 GB	DOS	Cheap	Not Purchased

Dikomentari [Asus1]: Please revise these paragraph, it is not necessary to mention the reference's authors in this section.

Answer : Done

11	Responden 11	HP	Intel	Nvidia	2 GB	Windows	Middle	Purchased
12	Responden 12	Acer	Intel	Nvidia	2 GB	Windows	Middle	Purchased
13	Responden 13	Acer	AMD	AMD	8 GB	Windows	Expensive	Not Purchased
14	Responden 14	Apple	Intel	On Board	2 GB	Mac OS	Cheap	Not Purchased
15	Responden 15	Apple	Intel	On Board	4 GB	Mac OS	Middle	Purchased
16	Responden 16	Asus	Intel	Nvidia	4 GB	Windows	Middle	Purchased
17	Responden 17	Apple	Intel	On Board	4 GB	Mac OS	Cheap	Purchased
18	Responden 18	Axioo	Intel	On Board	2 GB	Windows	Cheap	Not Purchased
19	Responden 19	Dell	Intel	On Board	2 GB	Windows	Cheap	Purchased
20	Responden 20	Asus	AMD	On Board	2 GB	Windows	Cheap	Purchased

To get accurate calculation results, calculations used Entropy and Gain for each variable [8]. Entropy measures uncertainty between random variables in a data [9]. The high Entropy value will affect the classification process [10]. The equation used to calculate Entropy and Gain, as follows:

$$Entropy(S) = \sum_{j=1}^k -p_j \log_2 p_j$$

- S : Case set
- k : Number of S partition
- Pj : Probability obtained from the total (Yes / No) divided by the total case

$$Gain(S,A) = Entropy(s) - \sum_{i=1}^n \frac{|s_i|}{|S|} * Entropy(s_i)$$

- S : Case set
- A : Attribute
- n : Number of A attribute partition
- |Si| : Number of cases on the i partition
- |S| : Number of S partition

In Table 2, Entropy and Gain calculations have been performed. The gain obtained will affect whether or not the next node will occur. Each internal node is a test node and corresponds to an attribute; the edges leaving a node correspond to the possible values taken on by that attribute [11]. When we calculate Gain in one of the attributes and get the result Gain is the largest of the other attributes, mark the attribute. Next we need to pay attention to the biggest attribute value of the biggest gain attribute to be used as a key on the next node. When the node occurs, the largest gain value is 1, then the node calculation ends. Gain with a value of 1 can be taken the largest attribute value from the number of "Purchased" in the attribute. Entropy and gain calculation results can be seen in Table 2.

Table 2. Calculation of *Entropy* and *Gain*

Node	Atributs	Value	Number of Cases	Purchased	Not Purchased	Entrophy	Gain
1	Total Brand		20	11	9	0,993	0,142
		Asus	6	4	2	0,918	
		Dell	2	1	1	1,000	
		Axioo	2	0	2	0,000	
		Acer	3	2	1	0,918	
		HP	2	1	1	1,000	
		Apple	3	2	1	0,918	
		Lenovo	2	1	1	1,000	
	Processor						0,003
		Intel	14	8	6	0,985	
		AMD	6	3	3	1,000	
	VGA						0,017
		On Board	10	5	5	1,000	
		Nvidia	6	4	2	0,918	
		AMD	4	2	2	1,000	
	RAM						0,168
		2 GB	10	5	5	1,000	
		4 GB	8	6	2	0,811	
		8 GB	2	0	2	0,000	
	Operating System						0,024
		Windows	12	7	5	0,980	
		DOS	5	2	3	0,971	
		Mac OS	3	2	1	0,918	
	Price						0,086
		Cheap	8	3	5	0,954	
		Middle	8	6	2	0,811	
		Expensive	4	2	2	1,000	
1.1	RAM : 2GB		10	5	5	1,000	0,525
	Brand						
		Asus	3	2	1	0,918	
		Dell	2	1	1	1,000	
		Axioo	2	0	2	0,000	
		Acer	1	1	0	0,000	
		HP	1	1	0	0,000	
		Apple	1	0	1	0,000	
		Lenovo	0	0	0	0,000	
	Processor						0,000
		Intel	8	4	4	1,000	
		AMD	2	1	1	1,000	
	VGA						0,236
		On Board	8	3	5	0,954	
		Nvidia	2	2	0	0,000	
		AMD	0	0	0	0,000	
	Operating System						0,174
		Windows	6	4	2	0,918	
		DOS	3	1	2	0,918	
		Mac OS	1	0	1	0,000	
	Price						0,035
		Cheap	7	3	4	0,985	
		Middle	3	2	1	0,918	
		Expensive	0	0	0	0,000	

1.1.1	RAM : 2 GB & Brand : Asus	3	2	1	0,918	
	Processor					0,252
		Intel	1	1	0	0,000
		AMD	2	1	1	1,000
	VGA					0,000
		On Board	3	2	1	0,918
		Nvidia	0	0	0	0,000
		AMD	0	0	0	0,000
	Operating System					0,252
		Windows	1	1	0	0,000
		DOS	2	1	1	1,000
		Mac OS	0	0	0	0,000
	Price					0,610
		Cheap	3	2	1	0,918
		Middle	0	0	0	0,000
		Expensive	0	0	0	0,000
1.1.1.1	RAM : 2 GB & Brand : Asus & Price : Cheap	3	2	1	0,918	
	Processor					0,252
		Intel	1	1	0	0,000
		AMD	2	1	1	1,000
	VGA					0,000
		On Board	3	2	1	0,918
		Nvidia	0	0	0	0,000
		AMD	0	0	0	0,000
	Operating System					0,252
		Windows	1	1	0	0,000
		DOS	2	1	1	1,000
		Mac OS	0	0	0	0,000

Figure 1 illustrates the decision tree that is the result of Entropy and Gain calculations. The characteristics of decision trees consist of internal nodes, edges and leaf nodes [12]. Internal nodes are usually also called decision nodes namely nodes that represent a variable or a part of a variable. Edges are labels that explain the value or distance of values of a variable. Leaf nodes represent the results in decision making [13]. These three characteristics are inseparable entities. This decision tree can be used as a step to make decisions in choosing a laptop, can be seen in Figure 1.

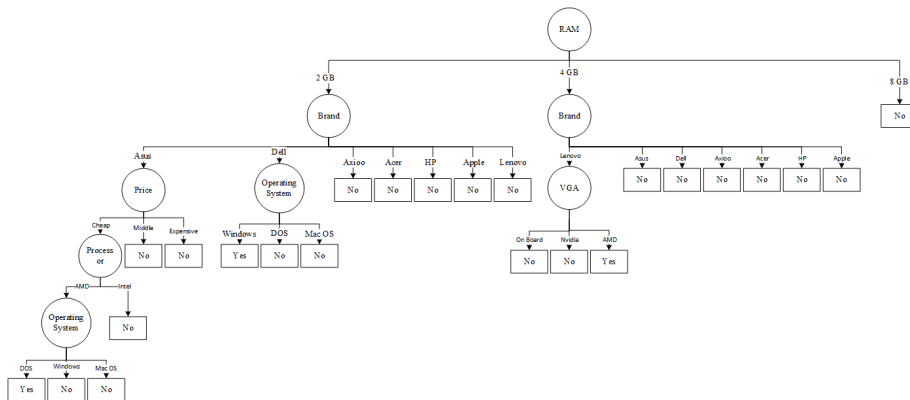


Figure 1. Decision tree result

4. Conclusion

Predicting something through the application of data mining using the C4.5 algorithm makes it easy for students, especially in determining the choice of laptop specifications that are most desirable for students to meet student needs and in accordance with the purchasing power of students. Students no longer need to look for various sources to find laptop specifications that are needed by students in meeting the needs of students, because the laptop specifications from the results of the data mining application have provided the most desirable specifications of laptops. Based on the results of the data processing process through the application of data mining using the C4.5 algorithm, the laptop specification category is of interest to the 7th semester Information System students of Universitas Komputer Indonesia as follows: (1) RAM 2 GB, Asus, Cheap, AMD Processor, and have a Windows Operating System; (2) RAM 2 GB, Dell, dan have an Windows Operating System; (3) RAM 4 GB, Lenovo, and VGA Card AMD.

5. Acknowledgements

Researcher is grateful to the team of entrepreneurs who provide insight and guidance that are very helpful in completing this research. This research is expected to be useful for students in determining laptop specifications.

References

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Revisi 1

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Abstract. The purpose of this research was to provide information about the prediction of student interest in the laptop specifications through the application of data mining using the c4.5 algorithm. The method used in this research is a survey method by conducting interview. This research was conducted by conducting interviews with several students. The results of this research was a decision tree that describes the laptop specifications that is most in demand by students, so students who want to have a laptop can easily determine laptop specifications based on the number of enthusiasts on certain laptop specifications. The technique used in the application of data mining in this research is a classification technique. The conclusion in this research is that by implementing data mining, students didn't need to look for various sources to find laptop specifications that are needed by students in meeting their college needs in long time. Because, the specifications of the laptop from the application of data mining has provided a description of the specifications of the laptop that is most in demand by students.

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Dikomentari [Asus3]: delete

1. Introduction

Laptop specifications are the most important thing to determine which laptops the user will choose. Laptop specifications are determined based on user requirements. In addition to user needs, laptop specifications are usually also determined by the purchasing power of the user. Of course in this case, students as users in this research will choose laptop specifications that are suitable for student needs and student purchasing power. To make it easier for students to determine laptop specifications, data mining is used. According to Sulastri (2017), data mining is a process of extracting or filtering data with a large enough data size through certain processes to find useful information from the large data [1]. One technique that is owned by data mining is classification. According to Haryati (2015), the technique consists of several methods and produces a decision tree [2]. The C4.5 algorithm is one of the algorithms

used in classification techniques. With the implementation of data mining using the C4.5 algorithm, information about the specifications of the laptop that is most in demand by students can be known. According to Soegoto (2013), technological development makes data processing more dynamic [3]. Data mining can be used for various things, one of which is data mining is used to obtain information such as determining the specifications of laptops, for example laptop specifications that are needed by students that are appropriate for the purchasing power of students. Variety of laptop specifications is certainly a major problem for students in determining the required laptop specifications. By utilizing the application of data mining using the C4.5 algorithm, the specifications of the laptop that students need will be drawn through the decision tree. According to Utgoff (1989), the decision tree is an illustration of the decision procedure for determining the class of a specified variable [4]. The decision tree itself can help students determine which laptop specifications should be chosen. However, even though the decision tree has given students an overview of the specifications of the laptop that are most in demand by students, it is possible for students to choose other specifications according to the needs of the student. Previous research has been conducted on students of information systems research programs at Sekolah Tinggi Manajemen Informatika dan Komputer Indonesia Banjarmasin. In this research, the research focuses on determining student majors, while this research focuses on the prediction of the specifications of laptops that are most in demand by students. Both of these studies use the c4.5 algorithm in the application of mining data. According to Swastina (2013), the result of the previous research is the suitability of prospective student majors based on the background, interests, and abilities of the students themselves [5].

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The purpose of this research was to provide information about the prediction of student interest in laptop specifications through the application of data mining using the c4.5 algorithm. The method used in this research is a survey method by conducting interviews and questionnaires. In connection with the research method used, then this research determined the sample in this research was the 7th semester Information System students of Universitas Komputer Indonesia who had a laptop with a total of 20 respondents. The sampling technique used in this research is purposive sampling.

Dikomentari [Asus5]: Please explain the gap between previous studies and your research.

2. Method

The method used in this research is a survey method by conducting interviews and questionnaires as a research tool. Based on the theory presented by Sugiyono (2012), interviews were conducted and questionnaires were distributed to students of the 7th semester Information System students of Universitas Komputer Indonesia as the population or sample to determine the relationship or influence of each variable tested [6]. The sampling technique used in this research is purposive sampling. According to Tangco (2007), purposive sampling is one of the non-probability sampling techniques that is very effective when a research focuses on certain criteria [7].

3. Results and Discussion

To support the application of data mining using the C4.5 algorithm, of course the sample data is needed. Table 1 contains data from the results of interviews in this study. Sample data were obtained through interviews with several respondents who came from the 7th semester Information System students of Universitas Komputer Indonesia which can be seen in Table 1 below.

Table 1. Sample Data

No	Respondents	Brand	Processor	VGA	RAM	Operating System	Price	Results
1	Responden 1	Asus	Intel	On Board	2 GB	DOS	Cheap	Purchased
2	Responden 2	Dell	Intel	On Board	2 GB	DOS	Cheap	Not Purchased
3	Responden 3	Axioo	Intel	On Board	2 GB	Windows	Cheap	Not Purchased

4	Responden 4	Acer	Intel	Nvidia	4 GB	Windows	Middle	Purchased
5	Responden 5	Asus	AMD	AMD	4 GB	DOS	Middle	Purchased
6	Responden 6	Asus	Intel	Nvidia	8 GB	Windows	Expensive	Not Purchased
7	Responden 7	HP	Intel	Nvidia	4 GB	Windows	Middle	Not Purchased
8	Responden 8	Lenovo	AMD	AMD	4 GB	DOS	Cheap	Not Purchased
9	Responden 9	Lenovo	AMD	AMD	4 GB	Windows	Middle	Purchased
10	Responden 10	Asus	AMD	On Board	2 GB	DOS	Cheap	Not Purchased
11	Responden 11	HP	Intel	Nvidia	2 GB	Windows	Middle	Purchased
12	Responden 12	Acer	Intel	Nvidia	2 GB	Windows	Middle	Purchased
13	Responden 13	Acer	AMD	AMD	8 GB	Windows	Expensive	Not Purchased
14	Responden 14	Apple	Intel	On Board	2 GB	Mac OS	Cheap	Not Purchased
15	Responden 15	Apple	Intel	On Board	4 GB	Mac OS	Middle	Purchased
16	Responden 16	Asus	Intel	Nvidia	4 GB	Windows	Middle	Purchased
17	Responden 17	Apple	Intel	On Board	4 GB	Mac OS	Cheap	Purchased
18	Responden 18	Axioo	Intel	On Board	2 GB	Windows	Cheap	Not Purchased
19	Responden 19	Dell	Intel	On Board	2 GB	Windows	Cheap	Purchased
20	Responden 20	Asus	AMD	On Board	2 GB	Windows	Cheap	Purchased

According to Korting (2006), to get accurate calculation results, calculations use Entropy and Gain for each variable [8]. Based on the theory presented by Mazid (2010), entropy measures uncertainty between random variables in a data [9]. And according to Adhatrao (2013), the high Entropy value will affect the classification process [10]. The equation used to calculate Entropy and Gain, as follows:

$$Entropi (S) = \sum_{j=1}^k -p_j \log_2 p_j$$

- S : Case set
k : Number of S partition
Pj : Probability obtained from the total (Yes / No) divided by the total case

$$Gain (S,A) = Entrophy (s) - \sum_{i=1}^n \frac{|s_i|}{|S|} * Entrophy (s_i)$$

- S : Case set
A : Attribute
n : Number of A attribute partition
|Si| : Number of cases on the i partition
|S| : Number of S partition

In Table 2, Entropy and Gain calculations have been performed. The gain obtained will affect whether or not the next node will occur. According to Lindell (2000), each internal node is a test node and corresponds to an attribute; the edges leaving a node correspond to the possible values taken on by that attribute [11]. When we calculate Gain in one of the attributes and get the result Gain is the largest of the other attributes, mark the attribute. Next we need to pay attention to the biggest attribute value of the biggest gain attribute to be used as a key on the next node. When the node occurs, the largest gain value is 1, then the node calculation ends. Gain with a value of 1 can be taken the largest attribute value from the number of "Purchased" in the attribute. Entropy and gain calculation results can be seen in Table 2 below.

Table 2. Calculation of *Entropy* and *Gain*

Node	Atribut	Nilai	Number of Cases	Purchased	Not Purchased	Entropy	Gain
1	Total		20	11	9	0,993	
	Brand						0,142
		Asus	6	4	2	0,918	
		Dell	2	1	1	1,000	
		Axioo	2	0	2	0,000	
		Acer	3	2	1	0,918	
		HP	2	1	1	1,000	
		Apple	3	2	1	0,918	
		Lenovo	2	1	1	1,000	
	Processor						0,003
		Intel	14	8	6	0,985	
		AMD	6	3	3	1,000	
	VGA						0,017
		On Board	10	5	5	1,000	
		Nvidia	6	4	2	0,918	
		AMD	4	2	2	1,000	
	RAM						0,168
		2 GB	10	5	5	1,000	
		4 GB	8	6	2	0,811	
		8 GB	2	0	2	0,000	
	Operating System						0,024
		Windows	12	7	5	0,980	
		DOS	5	2	3	0,971	
		Mac OS	3	2	1	0,918	
	Price						0,086
		Cheap	8	3	5	0,954	
		Middle	8	6	2	0,811	
		Expensive	4	2	2	1,000	
1.1	RAM : 2GB		10	5	5	1,000	
	Brand						0,525
		Asus	3	2	1	0,918	
		Dell	2	1	1	1,000	
		Axioo	2	0	2	0,000	
		Acer	1	1	0	0,000	
		HP	1	1	0	0,000	

		Apple	1	0	1	0,000	
		Lenovo	0	0	0	0,000	
	Processor						0,000
		Intel	8	4	4	1,000	
		AMD	2	1	1	1,000	
	VGA						0,236
		On Board	8	3	5	0,954	
		Nvidia	2	2	0	0,000	
		AMD	0	0	0	0,000	
	Operating System						0,174
		Windows	6	4	2	0,918	
		DOS	3	1	2	0,918	
		Mac OS	1	0	1	0,000	
	Price						0,035
		Cheap	7	3	4	0,985	
		Middle	3	2	1	0,918	
		Expensive	0	0	0	0,000	
1.1.1	RAM : 2 GB & Brand : Asus		3	2	1	0,918	
	Processor						0,252
		Intel	1	1	0	0,000	
		AMD	2	1	1	1,000	
	VGA						0,000
		On Board	3	2	1	0,918	
		Nvidia	0	0	0	0,000	
		AMD	0	0	0	0,000	
	Operating System						0,252
		Windows	1	1	0	0,000	
		DOS	2	1	1	1,000	
		Mac OS	0	0	0	0,000	
	Price						0,610
		Cheap	3	2	1	0,918	
		Middle	0	0	0	0,000	
		Expensive	0	0	0	0,000	
1.1.1.1	RAM : 2 GB & Brand : Asus & Price : Cheap		3	2	1	0,918	
	Processor						0,252
		Intel	1	1	0	0,000	
		AMD	2	1	1	1,000	
	VGA						0,000
		On Board	3	2	1	0,918	
		Nvidia	0	0	0	0,000	
		AMD	0	0	0	0,000	
	Operating System						0,252
		Windows	1	1	0	0,000	
		DOS	2	1	1	1,000	
		Mac OS	0	0	0	0,000	

1.1.1.1.	RAM : 2 GB & Brand : Asus & Price : Cheap & Processor : AMD		2	1	1	1,000	
	VGA						0,000
	On Board		2	1	1	1,000	
	Nvidia		0	0	0	0,000	
	AMD		0	0	0	0,000	
	Operating System						1,000
	Windows		1	1	0	0,000	
	DOS		1	0	1	0,000	
	Mac OS		0	0	0	0,000	
1.1.2	RAM : 2 GB & Brand : Dell		2	1	1	1	
	Processor						0,000
	Intel		2	1	1	1,000	
	AMD		0	0	0	0,000	
	VGA						0,000
	On Board		2	1	1	1,000	
	Nvidia		0	0	0	0,000	
	AMD		0	0	0	0,000	
	Operating System						1,000
	Windows		1	1	0	0,000	
	DOS		1	0	1	0,000	
	Mac OS		0	0	0	0,000	
	Price						0,000
	Cheap		2	1	1	1,000	
	Middle		0	0	0	0,000	
	Expensive		0	0	0	0,000	
1.2	RAM : 4 GB		8	6	2	0,811	
	Brand						0,561
	Asus		2	2	0	0,000	
	Dell		0	0	0	0,000	
	Axioo		0	0	0	0,000	
	Acer		1	1	0	0,000	
	HP		1	0	1	0,000	
	Apple		2	2	0	0,000	
	Lenovo		2	1	1	1,000	
	Processor						0,016
	Intel		5	4	1	0,722	
	AMD		3	2	1	0,918	
	VGA						0,123
	On Board		2	2	0	0,000	
	Nvidia		3	2	1	0,918	
	AMD		3	2	1	0,918	
	Operating System						0,156
	Windows		4	3	1	0,811	
	DOS		2	1	1	1,000	
	Mac OS		2	2	0	0,000	

	Price						0,360
		Cheap	1	0	1	0,000	
		Middle	5	4	1	0,722	
		Expensive	2	2	0	0,000	
1.2.1	RAM : 4 GB & Brand : Lenovo		2	1	1	1,000	
	Processor						0,000
		Intel	0	0	0	0,000	
		AMD	2	1	1	1,000	
	VGA						1,000
		On Board	0	0	1	0,000	
		Nvidia	0	0	0	0,000	
		AMD	2	1	0	0,000	
	Operating System						1,000
		Windows	1	1	0	0,000	
		DOS	1	0	1	0,000	
		Mac OS	0	0	0	0,000	
	Price						0,000
		Cheap	1	0	1	0,000	
		Middle	1	1	0	0,000	
		Expensive	0	0	0	0,000	

Figure 1 illustrates the decision tree that is the result of Entropy and Gain calculations. Dai (2014) said the characteristics of decision trees consist of internal nodes, edges and leaf nodes [12]. Internal nodes are usually also called decision nodes namely nodes that represent a variable or a part of a variable. Edges are labels that explain the value or distance of values of a variable. According to Magerman (1995), leaf nodes represent the results in decision making [13]. These three characteristics are inseparable entities. This decision tree can be used as a step to make decisions in choosing a laptop, can be seen in Figure 1 below.

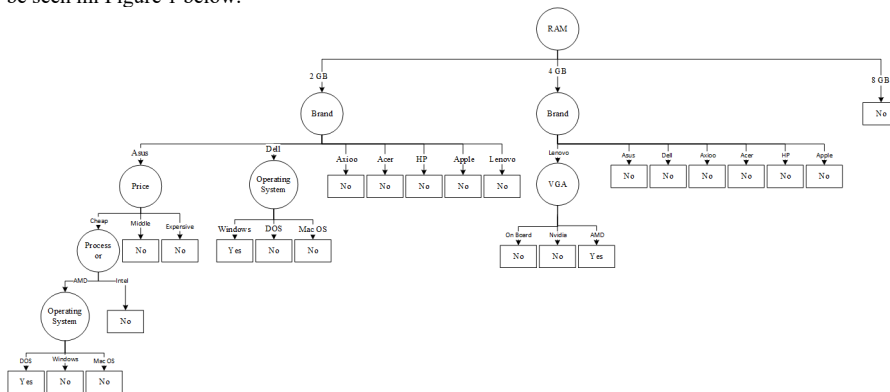


Figure 1. Decision Tree

4. Conclusion

Predicting something through the application of data mining using the C4.5 algorithm makes it easy for students, especially in determining the choice of laptop specifications that are most desirable for students

to meet student needs and in accordance with the purchasing power of students. Students no longer need to look for various sources to find laptop specifications that are needed by students in meeting the needs of students, because the laptop specifications from the results of the data mining application have provided the most desirable specifications of laptops. Based on the results of the data processing process through the application of data mining using the C4.5 algorithm, the laptop specification category is of interest to the 7th semester Information System students of Universitas Komputer Indonesia as follows: (1) RAM 2 GB, Asus, Cheap, AMD Processor, and have a Windows Operating System; (2) RAM 2 GB, Dell, dan have an Windows Operating System; (3) RAM 4 GB, Lenovo, and VGA Card AMD.

5. Acknowledgements

Researcher is grateful to the team of entrepreneurs who provide insight and guidance that are very helpful in completing this research. This research is expected to be useful for students in determining laptop specifications.

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Perbaikan Revisi 1

Predicting Student Interests Against Laptop Specifications Through Application of Data Mining Using C4.5 Algorithms

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Abstract. The purpose of this research was to provide information about the prediction of student interest in the laptop specifications through the application of data mining using the c4.5 algorithm. The method used in this research is a survey method by conducting interview. This research was conducted by conducting interviews with several students. The results of this research was a decision tree that describes the laptop specifications that is most in demand by students, so students who want to have a laptop can easily determine laptop specifications based on the number of enthusiasts on certain laptop specifications. The technique used in the application of data mining in this research is a classification technique. The conclusion in this research is that by implementing data mining, students didn't need to look for various sources to find laptop specifications that are needed by students in meeting their college needs in long time.

1. Introduction

Laptop specifications are the most important thing to determine which laptops the user will choose. Laptop specifications are determined based on user requirements. In addition to user needs, laptop specifications are usually also determined by the purchasing power of the user. Of course in this case, students as users in this research will choose laptop specifications that are suitable for student needs and student purchasing power. To make it easier for students to determine laptop specifications, data mining is used. Data mining is a process of extracting or filtering data with a large enough data size through certain processes to find useful information from the large data [1]. One technique that is owned by data mining is classification. The technique consists of several methods and produces a decision tree [2]. The C4.5 algorithm is one of the algorithms used in classification techniques. With the implementation of data mining using the C4.5 algorithm, information about the specifications of the laptop that is most in

demand by students can be known. Technological development makes data processing more dynamic [3].

Data mining can be used for various things, one of which is data mining is used to obtain information such as determining the specifications of laptops, for example laptop specifications that are needed by students that are appropriate for the purchasing power of students. Variety of laptop specifications is certainly a major problem for students in determining the required laptop specifications. By utilizing the application of data mining using the C4.5 algorithm, the specifications of the laptop that students need will be drawn through the decision tree. The decision tree is an illustration of the decision procedure for determining the class of a specified variable [4][5].

The decision tree itself can help students determine which laptop specifications should be chosen. However, even though the decision tree has given students an overview of the specifications of the laptop that are most in demand by students, it is possible for students to choose other specifications according to the needs of the student. Therefore, the purpose of this research was to provide information about the prediction of student interest in laptop specifications through the application of data mining using the c4.5 algorithm.

2. Method

The method used in this research is a survey method by conducting interviews and questionnaires as a research tool. Interviews were conducted and questionnaires were distributed to students of the 7th semester Information System students of Universitas Komputer Indonesia as the population or sample to determine the relationship or influence of each variable tested [6]. The sampling technique used in this research is purposive sampling. Purposive sampling is one of the non-probability sampling techniques that is very effective when a research focuses on certain criteria [7].

3. Results and Discussion

To support the application of data mining using the C4.5 algorithm, of course the sample data is needed. Table 1 contains data from the results of interviews in this study. Sample data were obtained through interviews with several respondents who came from the 7th semester Information System students of Universitas Komputer Indonesia which can be seen in Table 1.

Table 1. Sample Data

No	Respondents	Brand	Processor	VGA	RAM	Operating System	Price	Results
1	Responden 1	Asus	Intel	On Board	2 GB	DOS	Cheap	Purchased
2	Responden 2	Dell	Intel	On Board	2 GB	DOS	Cheap	Not Purchased
3	Responden 3	Axioo	Intel	On Board	2 GB	Windows	Cheap	Not Purchased
4	Responden 4	Acer	Intel	Nvidia	4 GB	Windows	Middle	Purchased
5	Responden 5	Asus	AMD	AMD	4 GB	DOS	Middle	Purchased
6	Responden 6	Asus	Intel	Nvidia	8 GB	Windows	Expensive	Not Purchased
7	Responden 7	HP	Intel	Nvidia	4 GB	Windows	Middle	Not Purchased
8	Responden 8	Lenovo	AMD	AMD	4 GB	DOS	Cheap	Not Purchased
9	Responden 9	Lenovo	AMD	AMD	4 GB	Windows	Middle	Purchased
10	Responden 10	Asus	AMD	On Board	2 GB	DOS	Cheap	Not Purchased
11	Responden 11	HP	Intel	Nvidia	2 GB	Windows	Middle	Purchased

Dikomentari [Asus1]: Please revise these paragraph, it is not necessary to mention the reference's authors in this section.

Answer : Done

12	Responden 12	Acer	Intel	Nvidia	2 GB	Windows	Middle	Purchased
13	Responden 13	Acer	AMD	AMD	8 GB	Windows	Expensive	Not Purchased
14	Responden 14	Apple	Intel	On Board	2 GB	Mac OS	Cheap	Not Purchased
15	Responden 15	Apple	Intel	On Board	4 GB	Mac OS	Middle	Purchased
16	Responden 16	Asus	Intel	Nvidia	4 GB	Windows	Middle	Purchased
17	Responden 17	Apple	Intel	On Board	4 GB	Mac OS	Cheap	Purchased
18	Responden 18	Axioo	Intel	On Board	2 GB	Windows	Cheap	Not Purchased
19	Responden 19	Dell	Intel	On Board	2 GB	Windows	Cheap	Purchased
20	Responden 20	Asus	AMD	On Board	2 GB	Windows	Cheap	Purchased

To get accurate calculation results, calculations used Entropy and Gain for each variable [8]. Entropy measures uncertainty between random variables in a data [9]. The high Entropy value will affect the classification process [10]. The equation used to calculate Entropy and Gain, as follows:

$$Entropy (S) = \sum_{j=1}^k -p_j \log_2 p_j$$

- S : Case set
- k : Number of S partition
- Pj : Probability obtained from the total (Yes / No) divided by the total case

$$Gain (S,A) = Entropy (s) - \sum_{i=1}^n \frac{|s_i|}{|S|} * Entropy (s_i)$$

- S : Case set
- A : Attribute
- n : Number of A attribute partition
- |Si| : Number of cases on the i partition
- |S| : Number of S partition

In Table 2, Entropy and Gain calculations have been performed. The gain obtained will affect whether or not the next node will occur. Each internal node is a test node and corresponds to an attribute; the edges leaving a node correspond to the possible values taken on by that attribute [11]. When we calculate Gain in one of the attributes and get the result Gain is the largest of the other attributes, mark the attribute. Next we need to pay attention to the biggest attribute value of the biggest gain attribute to be used as a key on the next node. When the node occurs, the largest gain value is 1, then the node calculation ends. Gain with a value of 1 can be taken the largest attribute value from the number of "Purchased" in the attribute. Entropy and gain calculation results can be seen in Table 2.

Table 2. Calculation of *Entropy* and *Gain*

Node	Atributs	Value	Number of Cases	Purchased	Not Purchased	Entropy	Gain
1	Total Brand		20	11	9	0,993	0,142
		Asus	6	4	2	0,918	

		Dell	2	1	1	1,000	
		Axioo	2	0	2	0,000	
		Acer	3	2	1	0,918	
		HP	2	1	1	1,000	
		Apple	3	2	1	0,918	
		Lenovo	2	1	1	1,000	
	Processor						0,003
		Intel	14	8	6	0,985	
	VGA	AMD	6	3	3	1,000	
							0,017
		On Board	10	5	5	1,000	
		Nvidia	6	4	2	0,918	
	RAM	AMD	4	2	2	1,000	
							0,168
		2 GB	10	5	5	1,000	
		4 GB	8	6	2	0,811	
		8 GB	2	0	2	0,000	
	Operating System						0,024
		Windows	12	7	5	0,980	
		DOS	5	2	3	0,971	
		Mac OS	3	2	1	0,918	
	Price						0,086
		Cheap	8	3	5	0,954	
		Middle	8	6	2	0,811	
		Expensive	4	2	2	1,000	
1.1	RAM : 2GB		10	5	5	1,000	
	Brand						0,525
		Asus	3	2	1	0,918	
		Dell	2	1	1	1,000	
		Axioo	2	0	2	0,000	
		Acer	1	1	0	0,000	
		HP	1	1	0	0,000	
		Apple	1	0	1	0,000	
		Lenovo	0	0	0	0,000	
	Processor						0,000
		Intel	8	4	4	1,000	
	VGA	AMD	2	1	1	1,000	
							0,236
		On Board	8	3	5	0,954	
		Nvidia	2	2	0	0,000	
		AMD	0	0	0	0,000	
	Operating System						0,174
		Windows	6	4	2	0,918	
		DOS	3	1	2	0,918	
		Mac OS	1	0	1	0,000	
	Price						0,035
		Cheap	7	3	4	0,985	
		Middle	3	2	1	0,918	
		Expensive	0	0	0	0,000	
1.1.1	RAM : 2 GB & Brand : Asus		3	2	1	0,918	
	Processor						0,252
		Intel	1	1	0	0,000	

VGA	AMD	2	1	1	1,000	0,000
	On Board	3	2	1	0,918	
Operating System	Nvidia	0	0	0	0,000	0,252
	AMD	0	0	0	0,000	
	Windows	1	1	0	0,000	
Price	DOS	2	1	1	1,000	0,610
	Mac OS	0	0	0	0,000	
	Cheap	3	2	1	0,918	
		Middle	0	0	0,000	
		Expensive	0	0	0,000	
1.1.1.1	RAM : 2 GB & Brand : Asus & Price : Cheap	3	2	1	0,918	
Processor						0,252
VGA	Intel	1	1	0	0,000	0,000
	AMD	2	1	1	1,000	
Operating System	On Board	3	2	1	0,918	0,252
	Nvidia	0	0	0	0,000	
	AMD	0	0	0	0,000	
Price	Windows	1	1	0	0,000	0,610
	DOS	2	1	1	1,000	
	Mac OS	0	0	0	0,000	

Figure 1 illustrates the decision tree that is the result of Entropy and Gain calculations. The characteristics of decision trees consist of internal nodes, edges and leaf nodes [12]. Internal nodes are usually also called decision nodes namely nodes that represent a variable or a part of a variable. Edges are labels that explain the value or distance of values of a variable. Leaf nodes represent the results in decision making [13]. These three characteristics are inseparable entities. This decision tree can be used as a step to make decisions in choosing a laptop, can be seen in Figure 1.

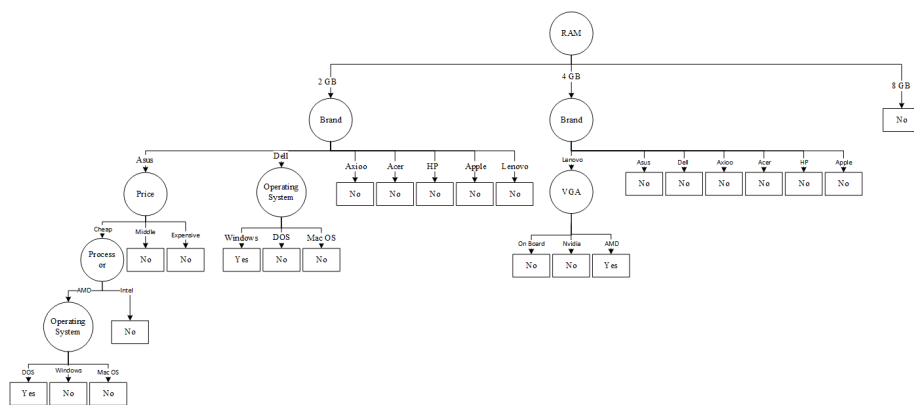


Figure 1. Decision tree result

4. Conclusion

Predicting something through the application of data mining using the C4.5 algorithm makes it easy for students, especially in determining the choice of laptop specifications that are most desirable for students to meet student needs and in accordance with the purchasing power of students. Students no longer need to look for various sources to find laptop specifications that are needed by students in meeting the needs of students, because the laptop specifications from the results of the data mining application have provided the most desirable specifications of laptops. Based on the results of the data processing process through the application of data mining using the C4.5 algorithm, the laptop specification category is of interest to the 7th semester Information System students of Universitas Komputer Indonesia as follows: (1) RAM 2 GB, Asus, Cheap, AMD Processor, and have a Windows Operating System; (2) RAM 2 GB, Dell, dan have an Windows Operating System; (3) RAM 4 GB, Lenovo, and VGA Card AMD.

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Perbaikan Revisi 2

Predicting Student Interests Against Laptop Specifications Through Application of Data Mining Using C4.5 Algorithms

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1. Introduction

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[3]. Data mining can be used for various things, one of which is data mining is used to obtain information such as determining the specifications of laptops, for example laptop specifications that are needed by students that are appropriate for the purchasing power of students. Variety of laptop specifications is certainly a major problem for students in determining the required laptop specifications. By utilizing the application of data mining using the C4.5 algorithm, the specifications of the laptop that students need will be drawn through the decision tree. The decision tree is an illustration of the decision procedure for determining the class of a specified variable [4][5]. The decision tree itself can help students determine which laptop specifications should be chosen. However, even though the decision tree has given students an overview of the specifications of the laptop that are most in demand by students, it is possible for students to choose other specifications according to the needs of the student. Therefore, the purpose of this research was to provide information about the prediction of student interest in laptop specifications through the application of data mining using the c4.5 algorithm.

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To support the application of data mining using the C4.5 algorithm, of course the sample data is needed. Table 1 contains data from the results of interviews in this study. Sample data were obtained through interviews with several respondents who came from the 7th semester Information System students of Universitas Komputer Indonesia which can be seen in Table 1.

Table 1. Sample Data

No	Respondents	Brand	Processor	VGA	RAM	Operating System	Price	Results
1	Responden 1	Asus	Intel	On Board	2 GB	DOS	Cheap	Purchased
2	Responden 2	Dell	Intel	On Board	2 GB	DOS	Cheap	Not Purchased
3	Responden 3	Axioo	Intel	On Board	2 GB	Windows	Cheap	Not Purchased
4	Responden 4	Acer	Intel	Nvidia	4 GB	Windows	Middle	Purchased
5	Responden 5	Asus	AMD	AMD	4 GB	DOS	Middle	Purchased
6	Responden 6	Asus	Intel	Nvidia	8 GB	Windows	Expensive	Not Purchased
7	Responden 7	HP	Intel	Nvidia	4 GB	Windows	Middle	Not Purchased
8	Responden 8	Lenovo	AMD	AMD	4 GB	DOS	Cheap	Not Purchased
9	Responden 9	Lenovo	AMD	AMD	4 GB	Windows	Middle	Purchased
10	Responden 10	Asus	AMD	On Board	2 GB	DOS	Cheap	Not Purchased
11	Responden 11	HP	Intel	Nvidia	2 GB	Windows	Middle	Purchased
12	Responden 12	Acer	Intel	Nvidia	2 GB	Windows	Middle	Purchased

Dikomentari [Asus1]: Please revise these paragraph, it is not necessary to mention the reference's authors in this section.

Answer : Done

13	Responden 13	Acer	AMD	AMD	8 GB	Windows	Expensive	Not Purchased
14	Responden 14	Apple	Intel	On Board	2 GB	Mac OS	Cheap	Not Purchased
15	Responden 15	Apple	Intel	On Board	4 GB	Mac OS	Middle	Purchased
16	Responden 16	Asus	Intel	Nvidia	4 GB	Windows	Middle	Purchased
17	Responden 17	Apple	Intel	On Board	4 GB	Mac OS	Cheap	Purchased
18	Responden 18	Axioo	Intel	On Board	2 GB	Windows	Cheap	Not Purchased
19	Responden 19	Dell	Intel	On Board	2 GB	Windows	Cheap	Purchased
20	Responden 20	Asus	AMD	On Board	2 GB	Windows	Cheap	Purchased

The C4.5 algorithm starts with the process of selecting the highest gain attribute as the root of the tree, then creates a branch for each value, then divides the case in branches, then repeats the process for each branch until all cases in the branch have the same class. To facilitate the application of methodology and system design, the flow of analysis and design is made as shown in Figure 1.

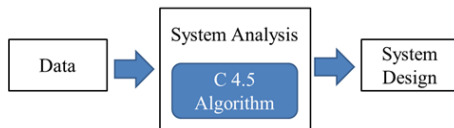


Figure 1. Flow of design and analysis

The flow chart is used to describe the classification process using the C4.5 algorithm can be seen in Figure 2.

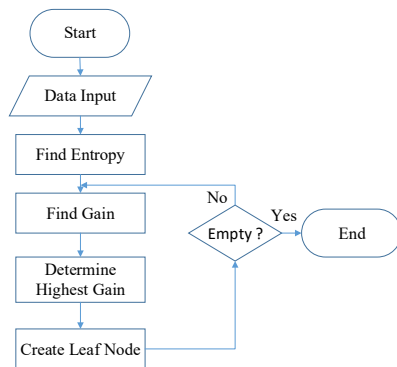


Figure 2. C 4.5 algorithms flowcart

To get accurate calculation results, calculations used Entropy and Gain for each variable [8]. Entropy measures uncertainty between random variables in a data [9]. The high Entropy value will affect the classification process [10]. The equation used to calculate Entropy and Gain, as follows:

$$Entropy(S) = \sum_{j=1}^k -p_j \log_2 p_j$$

- S : Case set
k : Number of S partition
Pj : Probability obtained from the total (Yes / No) divided by the total case

$$Gain(S,A) = Entropy(s) - \sum_{i=1}^n \frac{|s_i|}{|S|} * Entropy(s_i)$$

- S : Case set
A : Attribute
n : Number of A attribute partition
|Si| : Number of cases on the i partition
|S| : Number of S partition

In Table 2, Entropy and Gain calculations have been performed. The gain obtained will affect whether or not the next node will occur. Each internal node is a test node and corresponds to an attribute; the edges leaving a node correspond to the possible values taken on by that attribute [11]. When we calculate Gain in one of the attributes and get the result Gain is the largest of the other attributes, mark the attribute. Next we need to pay attention to the biggest attribute value of the biggest gain attribute to be used as a key on the next node. When the node occurs, the largest gain value is 1, then the node calculation ends. Gain with a value of 1 can be taken the largest attribute value from the number of "Purchased" in the attribute. Entropy and gain calculation results can be seen in Table 2.

Table 2. Calculation of *Entropy* and *Gain*

Node	Atributs	Value	Number of Cases	Purchased	Not Purchased	Entropy	Gain
1	Total Brand		20	11	9	0,993	0,142
		Asus	6	4	2	0,918	
		Dell	2	1	1	1,000	
		Axioo	2	0	2	0,000	
		Acer	3	2	1	0,918	
		HP	2	1	1	1,000	
		Apple	3	2	1	0,918	
		Lenovo	2	1	1	1,000	
		Processor					0,003
			Intel	14	8	6	0,985
			AMD	6	3	3	1,000
		VGA					0,017
			On Board	10	5	5	1,000
			Nvidia	6	4	2	0,918
			AMD	4	2	2	1,000
		RAM					0,168
			2 GB	10	5	5	1,000
			4 GB	8	6	2	0,811
			8 GB	2	0	2	0,000
		Operating System					0,024
		Windows	12	7	5	0,980	
		DOS	5	2	3	0,971	
		Mac OS	3	2	1	0,918	
	Price					0,086	

		Cheap	8	3	5	0,954	
		Middle	8	6	2	0,811	
		Expensive	4	2	2	1,000	
1.1	RAM : 2GB		10	5	5	1,000	
	Brand						0,525
		Asus	3	2	1	0,918	
		Dell	2	1	1	1,000	
		Axioo	2	0	2	0,000	
		Acer	1	1	0	0,000	
		HP	1	1	0	0,000	
		Apple	1	0	1	0,000	
		Lenovo	0	0	0	0,000	
	Processor						0,000
		Intel	8	4	4	1,000	
		AMD	2	1	1	1,000	
	VGA						0,236
		On Board	8	3	5	0,954	
		Nvidia	2	2	0	0,000	
		AMD	0	0	0	0,000	
	Operating System						0,174
		Windows	6	4	2	0,918	
		DOS	3	1	2	0,918	
		Mac OS	1	0	1	0,000	
	Price						0,035
		Cheap	7	3	4	0,985	
		Middle	3	2	1	0,918	
		Expensive	0	0	0	0,000	

Figure 1 illustrates the decision tree that is the result of Entropy and Gain calculations. The characteristics of decision trees consist of internal nodes, edges and leaf nodes [12]. Internal nodes are usually also called decision nodes namely nodes that represent a variable or a part of a variable. Edges are labels that explain the value or distance of values of a variable. Leaf nodes represent the results in decision making [13]. These three characteristics are inseparable entities. This decision tree can be used as a step to make decisions in choosing a laptop, can be seen in Figure 3.

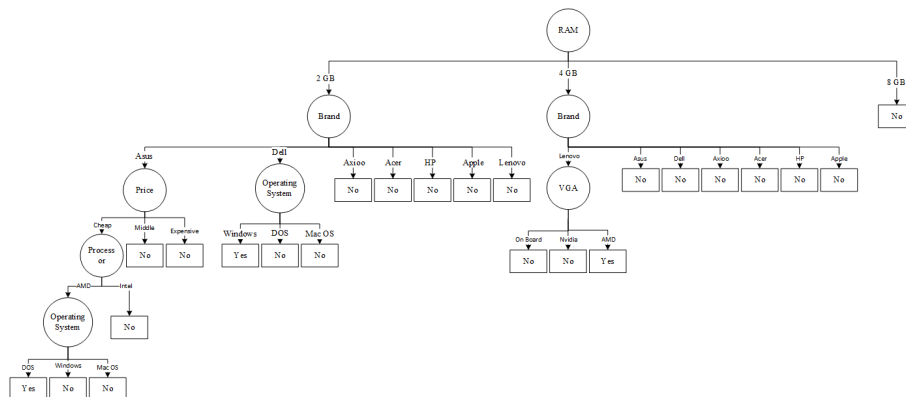


Figure 3. Decision tree result

4. Conclusion

Predicting something through the application of data mining using the C4.5 algorithm makes it easy for students, especially in determining the choice of laptop specifications that are most desirable for students to meet student needs and in accordance with the purchasing power of students. Students no longer need to look for various sources to find laptop specifications that are needed by students in meeting the needs of students, because the laptop specifications from the results of the data mining application have provided the most desirable specifications of laptops. Based on the results of the data processing process through the application of data mining using the C4.5 algorithm, the laptop specification category is of interest to the 7th semester Information System students of Universitas Komputer Indonesia as follows: (1) RAM 2 GB, Asus, Cheap, AMD Processor, and have a Windows Operating System; (2) RAM 2 GB, Dell, dan have an Windows Operating System; (3) RAM 4 GB, Lenovo, and VGA Card AMD.

5. Acknowledgements

Researcher is grateful to the team of entrepreneurs who provide insight and guidance that are very helpful in completing this research. This research is expected to be useful for students in determining laptop specifications.

References

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Final Paper

Predicting Student Interests Against Laptop Specifications Through Application of Data Mining Using C4.5 Algorithms

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Abstract. The purpose of this research was to provide information about the prediction of student interest in the laptop specifications through the application of data mining using the c4.5 algorithm. The method used in this research is a survey method by conducting interview. This research was conducted by conducting interviews with several students. The results of this research was a decision tree that describes the laptop specifications that is most in demand by students, so students who want to have a laptop can easily determine laptop specifications based on the number of enthusiasts on certain laptop specifications. The technique used in the application of data mining in this research is a classification technique. The conclusion in this research is that by implementing data mining, students didn't need to look for various sources to find laptop specifications that are needed by students in meeting their college needs in long time.

1. Introduction

Laptop specifications are the most important thing to determine which laptops the user will choose. Laptop specifications are determined based on user requirements. In addition to user needs, laptop specifications are usually also determined by the purchasing power of the user. Of course in this case, students as users in this research will choose laptop specifications that are suitable for student needs and student purchasing power. To make it easier for students to determine laptop specifications, data mining is used. Data mining is a process of extracting or filtering data with a large enough data size through certain processes to find useful information from the large data [1]. One technique that is owned by data mining is classification. The technique consists of several methods and produces a decision tree [2]. The C4.5 algorithm is one of the algorithms used in classification techniques. With the implementation of data mining using the C4.5 algorithm, information about the specifications of the laptop that is most in demand by students can be known. Technological development makes data processing more dynamic

[3]. Data mining can be used for various things, one of which is data mining is used to obtain information such as determining the specifications of laptops, for example laptop specifications that are needed by students that are appropriate for the purchasing power of students. Variety of laptop specifications is certainly a major problem for students in determining the required laptop specifications. By utilizing the application of data mining using the C4.5 algorithm, the specifications of the laptop that students need will be drawn through the decision tree. The decision tree is an illustration of the decision procedure for determining the class of a specified variable [4][5]. The decision tree itself can help students determine which laptop specifications should be chosen. However, even though the decision tree has given students an overview of the specifications of the laptop that are most in demand by students, it is possible for students to choose other specifications according to the needs of the student. Therefore, the purpose of this research was to provide information about the prediction of student interest in laptop specifications through the application of data mining using the c4.5 algorithm.

2. Method

The method used in this research is a survey method by conducting interviews and questionnaires as a research tool. Interviews were conducted and questionnaires were distributed to students of the 7th semester Information System students of Universitas Komputer Indonesia as the population or sample to determine the relationship or influence of each variable tested [6]. The sampling technique used in this research is purposive sampling. Purposive sampling is one of the non-probability sampling techniques that is very effective when a research focuses on certain criteria [7].

3. Results and Discussion

To support the application of data mining using the C4.5 algorithm, of course the sample data is needed. Table 1 contains data from the results of interviews in this study. Sample data were obtained through interviews with several respondents who came from the 7th semester Information System students of Universitas Komputer Indonesia which can be seen in Table 1.

Table 1. Sample Data

No	Respondents	Brand	Processor	VGA	RAM	Operating System	Price	Results
1	Responden 1	Asus	Intel	On Board	2 GB	DOS	Cheap	Purchased
2	Responden 2	Dell	Intel	On Board	2 GB	DOS	Cheap	Not Purchased
3	Responden 3	Axioo	Intel	On Board	2 GB	Windows	Cheap	Not Purchased
4	Responden 4	Acer	Intel	Nvidia	4 GB	Windows	Middle	Purchased
5	Responden 5	Asus	AMD	AMD	4 GB	DOS	Middle	Purchased
6	Responden 6	Asus	Intel	Nvidia	8 GB	Windows	Expensive	Not Purchased
7	Responden 7	HP	Intel	Nvidia	4 GB	Windows	Middle	Not Purchased
8	Responden 8	Lenovo	AMD	AMD	4 GB	DOS	Cheap	Not Purchased
9	Responden 9	Lenovo	AMD	AMD	4 GB	Windows	Middle	Purchased
10	Responden 10	Asus	AMD	On Board	2 GB	DOS	Cheap	Not Purchased
11	Responden 11	HP	Intel	Nvidia	2 GB	Windows	Middle	Purchased
12	Responden 12	Acer	Intel	Nvidia	2 GB	Windows	Middle	Purchased

Dikomentari [Asus1]: Please revise these paragraph, it is not necessary to mention the reference's authors in this section.

Answer : Done

13	Responden 13	Acer	AMD	AMD	8 GB	Windows	Expensive	Not Purchased
14	Responden 14	Apple	Intel	On Board	2 GB	Mac OS	Cheap	Not Purchased
15	Responden 15	Apple	Intel	On Board	4 GB	Mac OS	Middle	Purchased
16	Responden 16	Asus	Intel	Nvidia	4 GB	Windows	Middle	Purchased
17	Responden 17	Apple	Intel	On Board	4 GB	Mac OS	Cheap	Purchased
18	Responden 18	Axioo	Intel	On Board	2 GB	Windows	Cheap	Not Purchased
19	Responden 19	Dell	Intel	On Board	2 GB	Windows	Cheap	Purchased
20	Responden 20	Asus	AMD	On Board	2 GB	Windows	Cheap	Purchased

The C4.5 algorithm starts with the process of selecting the highest gain attribute as the root of the tree, then creates a branch for each value, then divides the case in branches, then repeats the process for each branch until all cases in the branch have the same class. To facilitate the application of methodology and system design, the flow of analysis and design is made as shown in Figure 1.

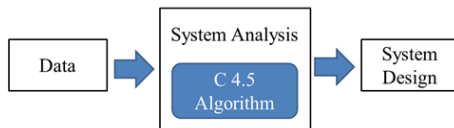


Figure 1. Flow of design and analysis

The flow chart is used to describe the classification process using the C4.5 algorithm can be seen in Figure 2.

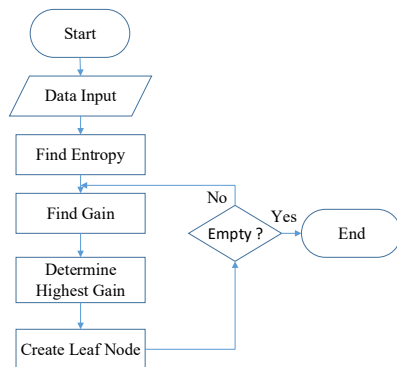


Figure 2. C 4.5 algorithms flowcart

To get accurate calculation results, calculations used Entropy and Gain for each variable [8]. Entropy measures uncertainty between random variables in a data [9]. The high Entropy value will affect the classification process [10]. The equation used to calculate Entropy and Gain, as follows:

$$Entropy(S) = \sum_{j=1}^k -p_j \log_2 p_j$$

- S : Case set
k : Number of S partition
Pj : Probability obtained from the total (Yes / No) divided by the total case

$$Gain(S,A) = Entropy(s) - \sum_{i=1}^n \frac{|s_i|}{|S|} * Entropy(s_i)$$

- S : Case set
A : Attribute
n : Number of A attribute partition
|Si| : Number of cases on the i partition
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In Table 2, Entropy and Gain calculations have been performed. The gain obtained will affect whether or not the next node will occur. Each internal node is a test node and corresponds to an attribute; the edges leaving a node correspond to the possible values taken on by that attribute [11]. When we calculate Gain in one of the attributes and get the result Gain is the largest of the other attributes, mark the attribute. Next we need to pay attention to the biggest attribute value of the biggest gain attribute to be used as a key on the next node. When the node occurs, the largest gain value is 1, then the node calculation ends. Gain with a value of 1 can be taken the largest attribute value from the number of "Purchased" in the attribute. Entropy and gain calculation results can be seen in Table 2.

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		DOS	5	2	3	0,971	
		Mac OS	3	2	1	0,918	
	Price					0,086	

		Cheap	8	3	5	0,954	
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		Expensive	4	2	2	1,000	
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	Brand						0,525
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		Lenovo	0	0	0	0,000	
	Processor						0,000
		Intel	8	4	4	1,000	
		AMD	2	1	1	1,000	
	VGA						0,236
		On Board	8	3	5	0,954	
		Nvidia	2	2	0	0,000	
		AMD	0	0	0	0,000	
	Operating System						0,174
		Windows	6	4	2	0,918	
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		Mac OS	1	0	1	0,000	
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Figure 1 illustrates the decision tree that is the result of Entropy and Gain calculations. The characteristics of decision trees consist of internal nodes, edges and leaf nodes [12]. Internal nodes are usually also called decision nodes namely nodes that represent a variable or a part of a variable. Edges are labels that explain the value or distance of values of a variable. Leaf nodes represent the results in decision making [13]. These three characteristics are inseparable entities. This decision tree can be used as a step to make decisions in choosing a laptop, can be seen in Figure 3.

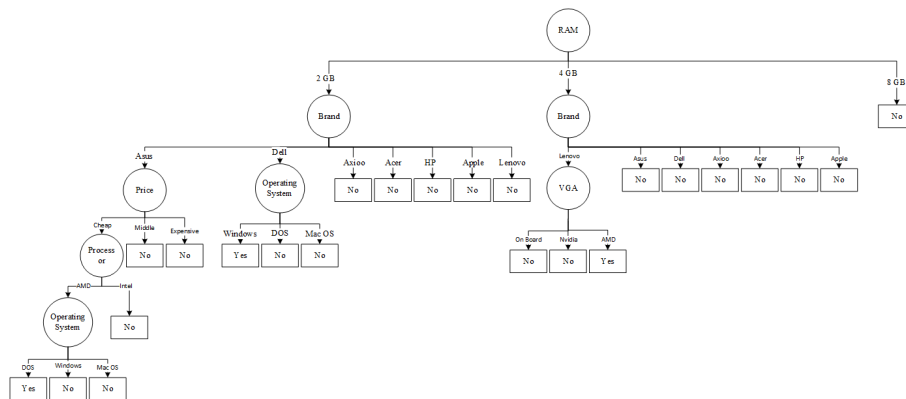


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CONFERENCE SCHEDULE

THE 2nd INTERNATIONAL CONFERENCE ON INFORMATICS, ENGINEERING, SCIENCE AND
TECHNOLOGY (INCITEST 2019)

18 JULY 2019, 17th FLOOR, UNIVERSITAS KOMPUTER INDONESIA

TIME	PROGRAM	DETAIL SCHEDULE	PIC
06.30-07.30	REGISTRATION	Registration Coffee Break	INCITEST TEAM (LT.16)
07.00-08.30	PARALLEL SESSION	Parallel Session 1 (16 rooms)	Session Chair
09.00-09.05	OPENING CEREMONY	Opening	MC
09.05-09.10		National Anthem Indonesia Raya	Unikom Protocol Team
09.10-09.15		UNIKOM at glance	Unikom Protocol Team
09.15-09.20		Speech of Conference Chair	Dr. Poni Sukaesih Kurniati, S.IP., M.Si.
09.20-09.25		Speech of Dean of Faculty of Engineering & Computer Science	Dr. Ir. Herman S, MBA
09.25-09.30		Pray	Unikom Protocol Team
09.30-10.0		PLENNARY SESSION	Jung Se Hoon, Ph.D (Korea)
10.00 -10.35	Assoc. Prof. Dr. Abdulkareem sh Mahdi Al-Obaidi (Malaysia)		Dr. Salmon P Martana
10.35-11.10	Dr. Yusrilla Kerlooza (Indonesia)		Dr. Salmon P Martana
11.10-11.45	Prof. Nursuriati Jamil (Malaysia)		Dr. Salmon P Martana
11.45-12.20	Prof. Nak Young Chong (Japan)		Dr. Salmon P Martana
12.20-12.45	Discussion Session		Dr. Salmon P Martana
12.45-12.50	Souvenirs for Keynote Speakers & Ministry of Research, Technology and Higher Education		Unikom Protocol Team
12.50-13.00	Group Foto Session		Unikom Protocol Team
13.00-13.45	LUNCH	Lunch	Unikom Protocol Team
13.45-15.15	PARALLEL SESSION	Parallel Session 2 (16 Rooms)	Session Chair
15.15-15.45		Coffee Break	Session Chair
15.45-17.15		Parallel Session 3 (16 Rooms)	Session Chair
17.15-17.30		Closing Ceremony	Session Chair

Note: Coffee break at 06.30 A.M and 15.15 PM

ROOM 12.011 UNIVERSITAS KOMPUTER INDONESIA

MODERATOR : Muhammad Aria, ST.,MT.

PERSON IN CHARGE : Yonathan Andri

TIME : 07.00 – 08.30

(5 minutes each presentation 5 minutes for question and answer)

No	Topic	Code	Presenter	Authors	Title
1	Electrical and Computer Engineering	ABS-110	Syahrul	Syahrul, M F Wicaksono, Rian Hilman	Design and implementation of the letter hijaiyah learning system independently for the visually impaired
2	Electrical and Computer Engineering	ABS-137	John Adler	John Adler, Garry Afrialdi	Detection System and Calculation of Score Shots on Shooting Based on MatLab
3	Electrical and Computer Engineering	ABS-160	Didit Andri Jatmiko	Didit Andri Jatmiko, Salita Ulitia Prini	Orientation Recognition Performance Evaluation of GT-511C3 Fingerprint Sensor
4	Electrical and Computer Engineering	ABS-167	K E Dewi	K E Dewi, E Rainarli	RVM optimization in automatic text summarization
5	Electrical and Computer Engineering	ABS-441	M Purwaningwulan	M Purwaningwulan, A Z Abidin	Implementation of Knowledge Management Systems in E-Commerce to Increase Satisfaction Regarding Applications among Customers
6	Electrical and Computer Engineering	ABS-215	Galih Hermawan	Galih Hermawan, Ihsan Faturohman, Nendi Isharmawan	Indonesian Text Translator into Database Structured Query Language with Multi Parameters using Natural Language Processing

ROOM 12.011 UNIVERSITAS KOMPUTER INDONESIA

MODERATOR : Muhammad Aria, ST.,MT.

PERSON IN CHARGE : Yonathan Andri

TIME : 13.45 – 15.15

(5 minutes each presentation 5 minutes for question and answer)

No	Topic	Code	Presenter	Authors	Title
1	Electrical and Computer Engineering	ABS-242	Ednawati Rainarli	Ednawati Rainarli, M.Si.	The Comparison of Machine Learning Model to Predict Bankruptcy: Indonesian Stock Exchange Data
2	Electrical and Computer Engineering	ABS-500	H Purnomo	H Purnomo, and R D Utami	Influence of Artificial Intelligence in Automotive Industry
3	Sciences	ABS-537	M Shobron	M Shobron, Deni Albar	Technology In Japanese Language Private
4	Sciences	ABS-72	Rini Setiati	Rini Setiati, Septoratno Siregar, Taufan Marhaendrajana, Deana Wahyuningrum	Sustainable Green Chemical Processing Of Surfactant Synthesized From Bagasse For Enhanced Oil Recovery Using Microwave Radiation
5	Sciences	ABS-89	Erna Susilawati	Erna Susilawati	The Influence Of Gadget Towards Social Media Addict And Procrastination Behavior Of College Students In Bandung
6	Sciences	ABS-125	Usep Mohamad Ishaq	Usep Mohamad Ishaq	Computer Science and Philosophy: In Search of a Nexus

7	Sciences	ABS-139	Wendi Zarman	Wendi Zarman	Information and Epistemological Problem in Digital World
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ROOM 12.011 UNIVERSITAS KOMPUTER INDONESIA

MODERATOR : Muhammad Aria, ST.,MT.

PERSON IN CHARGE : Yonathan Andri

TIME : 15.45 – 17.15

(5 minutes each presentation 5 minutes for question and answer)

No	Topic	Code	Presenter	Authors	Title
1	Sciences	ABS-210	Supriyati	Supriyati, Ramadhan Syaeful Bahri, Edi Komarudin	Design Model Good Governance Based IFRS For SMEs At Islamic Boarding Schools To Building Competitive Advantage in Revolution Industry 4.0
2	Sciences	ABS-229	Maria Ulfa	Maria Ulfa, Reni Alfi Ardini, and Didik Prasetyoko	The Effect Of Temperature In The Application Of Mesoporous Nanomaterials Based On Carbon In Drug Delivery System With Ibuprofen
3	Industrial Engineering	ABS-18	Agus Riyanto	Agus Riyanto, Ina Primiana, Yunizar and Yudi Azis	Digital Branch: Banking Innovation in Indonesia to Face 4.0 Industry Challenges
4	Industrial Engineering	ABS-284	L Wulantika	L Wulantika, L F Simarmata	Agrimarket Marketing Communication Strategy through Agriculture-Based Online Shopping Application
5	Industrial Engineering	ABS-31	Dwi Suhartanto	Dwi Suhartanto, Nono Wibisono, Regina Agustina, Zefanya AC Loveldy, Laela Nabilah	Experience Quality and Value: An Assessment in the Creative Tourism Industry

6	Industrial Engineering	ABS-36	Utami Dewi Widianti	Utami Dewi Widianti, Tati Harihayati	Model of Supply Chain Management for Food Product Industry Companies
7	Industrial Engineering	ABS-46	Puspita Nurul Sabrina	Puspita Nurul Sabrina, Asri Maspupah, Fajri Rakhmat Umbara	E-Supply Chain Management Model for Garment & Textile Industry with Limitation of Technological Capabilities
8	Industrial Engineering	ABS-566	M Aria	M Aria	A Survey of Self-driving Urban Vehicles Development

ROOM 12.020 UNIVERSITAS KOMPUTER INDONESIA

MODERATOR : Dr. Henny, S.T., MT

PERSON IN CHARGE : M. Yusup

TIME : 07.00 – 08.30

(5 minutes each presentation 5 minutes for question and answer)

No	Topic	Code	Presenter	Authors	Title
1	Industrial Engineering	ABS-59	Ratna Sundari Johar Sukadi	Ratna Sundari Johar Sukadi, Dwi Suhartanto	The Adoption of Online Internet Banking in Islamic Banking Industry
2	Industrial Engineering	ABS-65	Ayu Fusva Indah Manik	<i>I.Made Aryantha Anthara & Enrico Salim</i>	The Role of Quality, Economic, and Image in Determining Customer Experience in Islamic Banking Industry
3	Industrial Engineering	ABS-76	I.Made Aryantha Anthara	I.Made Aryantha Anthara, Enrico Salim	The probability analysis of coffee sales using Markov theory
4	Industrial Engineering	ABS-92	Henny	Henny, Nisa Agnia, Hendry Hardianto	Analysis Quality Control Of Carded And Combed Yarns Using Six Sigma Method
5	Industrial Engineering	ABS-99	Nadia Silmi Kamila	Nadia Silmi Kamila, Dwi Suhartanto	The Application of Variance-based Structural Equation Modeling for Predicting the Intermediation Margin of Islamic Banking Industry
6	Industrial Engineering	ABS-106	Gabriel Sianturi	Gabriel Sianturi, Tijar Wijaya	Fuzzy Analytic Hierarchy Process Method for Selecting Design Concepts of Corn Shelling Machine

ROOM 12.020 UNIVERSITAS KOMPUTER INDONESIA

MODERATOR : Dr. Henny, S.T., MT

PERSON IN CHARGE : M. Yusup

TIME : 13.45 – 15.15

(5 minutes each presentation 5 minutes for question and answer)

No	Topic	Code	Presenter	Authors	Title
1	Industrial Engineering	ABS-120	Iyan Andriana	Iyan Andriana, Dadan Darmawan, Dwi Riyanto	The Influence Of Workload And Motivation On Employees Performance In Medical Manufacturing
2	Industrial Engineering	ABS-127	Dedi Sulistiyo S	Dedi Sulistiyo S	Simulation of the registration systems for new Indonesian Computer University students and their implications for service systems process performance
3	Industrial Engineering	ABS-142	Nai Haryati	Nai Haryati, Dian Imanina Burhany, Dwi Suhartanto	Assessing the Profitability of Islamic Banks: The Role of Bank Age and Bank Performance
4	Industrial Engineering	ABS-166	Fachrizar Cesar Putra1	Fachrizar Cesar Putra1, Suhardjono, Sampurno	The effect of overlap ratio and silicon carbide wheel grinder on vibration amplitude and surface roughness for material OCR12VM
5	Industrial Engineering	ABS-173	Maulida Dewi Firdaus Abdullah	Maulida Dewi Firdaus Abdullah	The Effect of Corporate Risk Disclosure toward Firm Value in Indonesia Sharia Stock Index (ISSI)
6	Industrial Engineering	ABS-192	Henny	Henny, Annisa Nurul Latifah, Handi Haryanto	The Application Lean Six Sigma Method By Using Dmaic Approach To Minimize Waste In

					The Production Of Saus Cabai And Sambal Terasi
7	Industrial Engineering	ABS-202	Santosa	Santosa, Alam Sagathi, Malda Situmorang, Maurena R	Simulation of first level health care facilities to reduce patient flow time

ROOM 12.020 UNIVERSITAS KOMPUTER INDONESIA

MODERATOR : Dr. Henny, S.T., MT

PERSON IN CHARGE : M. Yusup

TIME : 15.45 – 17.15

(5 minutes each presentation 5 minutes for question and answer)

No	Topic	Code	Presenter	Authors	Title
1	Industrial Engineering	ABS-204	Julian Robecca	Julian Robecca, Adi Pramana Putra	Trash Click Design Using House Of Quality
2	Industrial Engineering	ABS-211	Denti Sri Insani	Denti Sri Insani, Muhammad Muflih	Determinants of Islamic Bank Performance : Evidence from Indonesian Islamic Bank Industry
3	Architecture, Urban and Regional Planning, and Civil Engineering	ABS-20	Y D Setiyarto	Y D Setiyarto, H Y Fira	Behavior of Concrete Burned with High Temperature
4	Architecture, Urban and Regional Planning, and Civil Engineering	ABS-49	Dhini Dewiyanti	Dhini Dewiyanti, Sally Octaviana Sari	Appraising the Balance of Facade Building Over the Proportion Theory
5	Architecture, Urban and Regional Planning, and Civil Engineering	ABS-56	Wanita Subadra Abioso	Wanita Subadra Abioso	Invisible in Architecture Confront the Green Design
6	Architecture, Urban and Regional Planning, and Civil Engineering	ABS-60	Tri Widianti Natalia	Tri Widianti Natalia, Tatik Rohmawati	The relationships between the characteristics of pedestrian and the increase of facilitation of sidewalk

7	Architecture, Urban and Regional Planning, and Civil Engineering	ABS-61	Lia Warlina	Lia Warlina, Rudi Guntara	Agricultural Land Use Change into Tourism Area in Lembang Sub-District, West Bandung Regency, West Java Province, Indonesia
8	Architecture, Urban and Regional Planning, and Civil Engineering	ABS-79	Selfa Septiani Aulia	Selfa Septiani Aulia, Tubagus Furqon Sofhani	The Factors that Affect Collective Action of Farmers Organizations in Rural Areas (Study Location: Karawang)

ROOM L.030 UNIVERSITAS KOMPUTER INDONESIA

MODERATOR : Erna Susilawati, SS.,MM.

PERSON IN CHARGE : Dina Oktafiani

TIME : 07.00 – 08.30

(5 minutes each presentation 5 minutes for question and answer)

No	Topic	Code	Presenter	Authors	Title
1	Entrepreneurship & Technopreneurs	ABS-282	Febrian Budi Satia	Febrian Budi Satia, D A Wahab	Marketing Services in the Field of Photography and Videography Through Social Media
2	Entrepreneurship & Technopreneurs	ABS-540	Ivan Kurniawan	Ivan Kurniawan, Oktama Briantoro	Collaboration of Web Design and E-commerce as a Local Product Marketing Weapon
3	Entrepreneurship & Technopreneurs	ABS-285	Poni Sukaesih Kurniati	S Sahara, Poni Sukaesih Kurniati	E-Commerce risk during the transaction process
4	Entrepreneurship & Technopreneurs	ABS-542	Ivan Kurniawan	Fina Novyawati, Ivan Kurniawan	Driving Success of Youth Creative Business Based on Online Market Using Social Media
5	Entrepreneurship & Technopreneurs	ABS-543	Kankan Kasmana	Kankan Kasmana, F M Adipraja	The Benefits Of Using Bar Charts In Companies Websites
6	Entrepreneurship & Technopreneurs	ABS-544	Lia Warlina	Lia Warlina, M W Julian	Travel Attractions and Social Media as Marketing Strategy

ROOM L.030 UNIVERSITAS KOMPUTER INDONESIA

MODERATOR : Erna Susilawati, SS.,MM.

PERSON IN CHARGE : Dina Oktafiani

TIME : 13.45 – 15.15

(5 minutes each presentation 5 minutes for question and answer)

No	Topic	Code	Presenter	Authors	Title
1	Entrepreneurship & Technopreneurs	ABS-34	Lusianus Kusdibyo	Lusianus Kusdibyo	The effect of electronic service quality on customers satisfaction and loyalty in online shopping
2	Entrepreneurship & Technopreneurs	ABS-35	Yeffry Handoko Putra	Yeffry Handoko Putra	Marketing Strategy Using Collaboration of Social media and Market Place
3	Entrepreneurship & Technopreneurs	ABS-291	Sylvia Octa Putri	Prayoga, Sylvia Octa Putri	Promoting Bandung Small and Medium Enterprises (SMEs) Development through E-Commerce
4	Entrepreneurship & Technopreneurs	ABS-548	H D Yulianto	N Utami, H D Yulianto	Significant Influence of Information Technology on the Use of Modern Accounting Software
5	Entrepreneurship & Technopreneurs	ABS-38	Ira Siti Sarah	Ira Siti Sarah, Dwi Suhartanto, Tintin Suhaeni	Assessing hierarchical model of word of mouth in social media: its implication for entrepreneurs
6	Entrepreneurship & Technopreneurs	ABS-295	G A Widoseno	G A Widoseno, Taufan Hidayatullah	Influence of Public Transportation Applications for Foreign Tourists
7	Entrepreneurship & Technopreneurs	ABS-299	M F K Fadilla	M F K Fadilla, Nungki Heriyati	Influence Of Virtual Money On The Rupiah Currency

ROOM L.030 UNIVERSITAS KOMPUTER INDONESIA

MODERATOR : Erna Susilawati, SS.,MM.

PERSON IN CHARGE : Dina Oktafiani

TIME : 15.45 – 17.15

(5 minutes each presentation 5 minutes for question and answer)

No	Topic	Code	Presenter	Authors	Title
1	Entrepreneurship & Technopreneurs	ABS-526	Mari Maryati	Mari Maryati, Mega Erika	Relationship Between Online Shopping Site Ads with Buying and Selling Interests on Online Shopping Sites
2	Entrepreneurship & Technopreneurs	ABS-271	A R Komala	A R Komala, I kusnanan	Influence E-Banking Services To Costumer Satisfaction
3	Entrepreneurship & Technopreneurs	ABS-527	T Handayani	P Fahmi, T Handayani	Online Marketing of Coffee Products
4	Entrepreneurship & Technopreneurs	ABS-528	D Effendi	D Effendi, A R R Januar, M I Rismaya, L Lestary	Optimizing Online Shop Business Opportunities Through Media Endorse
5	Entrepreneurship & Technopreneurs	ABS-468	Andri Sahata Sitanggang	Andri Sahata Sitanggang, M R Akbar	Influence of Japanese Culture on the Development of Indonesias Creative Industry
6	Entrepreneurship & Technopreneurs	ABS-278	M F.Fadhilah	M F.Fadhilah , Satria Indra Praja	Marketing Strategy Sales of Goods and Services through Social Media
7	Entrepreneurship & Technopreneurs	ABS-280	Bobi Kurniawan	Bobi Kurniawan, A D Novia	Effectiveness of Online Media as a Wedding Organizer Promotion Tool

8	Entrepreneurship & Technopreneurs	ABS-536	Tatan Tawami	Tatan Tawami, A N Yulianti	Become a Multilingual by Means of Artwork
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Room 9.015 Universitas Komputer Indonesia

MODERATOR : Imelda, S.T., M.T

PERSON IN CHARGE : Shidqie Alisyafiq

TIME : 07.00 – 08.30

(5 minutes each presentation 5 minutes for question and answer)

No	Topic	Code	Presenter	Authors	Title
1	Informatic and Information System	[ABS-53]	Mochammad Agri Triansyah	Mochammad Agri Triansyah(*a), Dr. Yeffry Handoko Putra, S.T, MT (b)	the effect of the profile on the auditor certification try out (CISA) using a Computer based test
2	Informatic and Information System	[ABS-54]	Ridwan Nurhadiansyah	Ridwan Nurhadiansyah	Highway Roughness Index Forecasting with Combination Grey Forecasting Model and Similarity Spatial Data (Case Research : Pondok Aren - Serpong Highways)
3	Informatic and Information System	[ABS-82]	Imelda Pangaribuan	I. Pangaribuan ; A. Rahman ; S. Mauluddin	CNEMAS Application Measurement
4	Informatic and Information System	[ABS-83]	Catherin Pandin	Catherin Pandin, Rifqi Fahrudin	Application of data mining for Indonesian products export in South Korea using clustering: Indonesia Trade Promotion Center Busan
5	Informatic and Information System	[ABS-85]	B Indrawan	B Indrawan, I D Sumitra	Enterprise Architecture for Higher Education using EAP based Tri Dharma Perguruan Tinggi

6	Informatic and Information System	[ABS-304]	Dedi S Soegotto	D S Soegotto (a*), Rismaya (b)	Design Of Information System Sales Based Web
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ROOM 9.015 Universitas Komputer Indonesia

MODERATOR : Imelda, S.T., M.T

PERSON IN CHARGE : Shidqie Alisyafiq

TIME : 13.45 – 15.15

(5 minutes each presentation 5 minutes for question and answer)

No	Topic	Code	Presenter	Authors	Title
1	Informatic and Information System	[ABS-62]	Almer Hassan Ali	Almer Hassan Ali, Rendy Ade Nugraha	Application of Distributed Databases for Fertilizer Management Information Systems at PT. Bonecom Agro Nusantara
2	Informatic and Information System	[ABS-320]	Deden Abdul Wahab	Tryadi Christianto (a*), D A Wahab (b)	Data Mining utilization in Determining Strategic Business Area Restaurants by Using C4.5 Algorithm
3	Informatic and Information System	[ABS-64]	Gilbert Gutabaga Hungilo	Gilbert Gutabaga Hungilo, Gahizi Emmanuel, Jaouja Maiga, Albertus Joko Santoso	Fuzzy Logic Control Application: Design and Simulation for Washing Machine
4	Informatic and Information System	[ABS-67]	Andini Setya Arianti	Andini Setya Arianti	Analysis on User Interface Readability: A Case Study of Instagram
5	Informatic and Information System	[ABS-68]	Olivine A. Supriadi	Olivine A. Supriadi	User Interface Design of Mobile-based Commerce
6	Informatic and Information System	[ABS-69]	Adhitia Erfina	Adhitia Erfina* and Yeffry Handoko Putra	Irony Sentence Detection Techniques Using Fuzzy Historical Classifier

7	Informatic and Information System	[ABS-305]	Bobi Kurniawan, S.Kom, M.Kom	Bobi Kurniawan (a*), Erzy P F (b)	Furniture Online Shopping Using Augmented Reality
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ROOM 9.015 Universitas Komputer Indonesia

MODERATOR : Imelda, S.T., M.T

PERSON IN CHARGE : Shidqie Alisyafiq

TIME : 15.45 – 17.15

(5 minutes each presentation 5 minutes for question and answer)

No	Topic	Code	Presenter	Authors	Title
1	Informatic and Information System	[ABS-88]	F Sidqi	F Sidqi (abc), ID Sumitra (b)	Forecasting Product Selling Using Single Exponential Smoothing and Double Exponential Smoothing Methods (Case study: XYZ Store)
2	Informatic and Information System	[ABS-90]	Roni Aminudin	Roni Aminudin;Yeffry Handoko Putra	Poverty Line Forecasting Model Using Double Exponential Smoothing Holt's Method
3	Informatic and Information System	[ABS-93]	Bayu Rima Aditya	Bayu Rima Aditya (a), Yohana Menzelthe (b)	IT Audit Guidance: Side by Side Comparison
4	Informatic and Information System	[ABS-84]	F Nugroho	F Nugroho (abc)	Keywords Recommender for Scientific Papers Using Semantic Relatedness and Associative Neural Network
5	Informatic and Information System	[ABS-81]	Dr. Marliana Budhiningtyas Winanti	M B Winanti, A A S Nurjanah and I Pangaribuan	DESIGNING OF APPLICATION FOR LEARNING SUNDANESE CULTURES
6	Informatic and Information System	[ABS-78]	Rangga Sidik, S.Kom, M.Kom	R Sidik(a*), V F Lestari(a), M B Winanti(a)	Controlling production activities using information systems to improve cost efficiency

7	Informatic and Information System	[ABS-362]	Bobo Kurniawan	Bobo Kurniawan (a*), Atris Novita (b)	Developing Application Android Based For Japanese Language Learning
8	Enterpreneurship & Technopreneurship	[ABS-306]	Dedi S Soegoto	D S Soegotto (a*), Titio Prasetyo (b)	Application of Online Ticket as a Method in Purchasing Bus Tickets

ROOM 7.015 UNIVERSITAS KOMPUTER INDONESIA

MODERATOR : Usep Mohamad Ishaq, S.Si.,M.Si.

PERSON IN CHARGE : Raiswati Untsa

TIME : 07.00 – 08.30

(5 minutes each presentation 5 minutes for question and answer)

No	Topic	Code	Presenter	Authors	Title
1	Entrepreneurship & Technopreneurs	ABS-313	R Dwisanty	R Dwisanty, S S Shiam	Opportunities for Social Media Students in Online Business
2	Entrepreneurship & Technopreneurs	ABS-569	Andrias Darmayadi	Andrias Darmayadi, Adam Januar Rizkiawan	Development of New Media in Marketing World
3	Entrepreneurship & Technopreneurs	ABS-570	D S Soegotto	D S Soegotto, I Ramadhan	Implementation of Cryptocurrency Trading on Marketplace
4	Entrepreneurship & Technopreneurs	ABS-315	R Zulfikar	R Zulfikar, A Asnawi	Social Media Opportunities as a Culinary Business
5	Entrepreneurship & Technopreneurs	ABS-571	Rahma Wahdiniwaty	Rahma Wahdiniwaty, Prayoga Putra Ananta	Role of Social Media in Sale of Jersey
6	Entrepreneurship & Technopreneurs	ABS-574	Poni Sukaesih Kurniati	M R Pratama, Poni Sukaesih Kurniati	Internet Factors Affecting Business Progress

ROOM 7.015 UNIVERSITAS KOMPUTER INDONESIA

MODERATOR : Usep Mohamad Ishaq, S.Si.,M.Si.

PERSON IN CHARGE : Raiswati Untsa

TIME : 13.45 – 15.15

(5 minutes each presentation 5 minutes for question and answer)

No	Topic	Code	Presenter	Authors	Title
1	Entrepreneurship & Technopreneurs	ABS-327	S Wiganepdo	S Maryamah, S Wiganepdo	Application of Component Acoustic Phonetic to Identify Sound Wave of Sundanese
2	Entrepreneurship & Technopreneurs	ABS-329	W Novianti	A Susan, W Novianti	Benefits of Technology for Business
3	Entrepreneurship & Technopreneurs	ABS-331	Adam Mukharil Bachtiar	Adam Mukharil Bachtiar, Rani Nur Hanifah	Bitcoin influence on E-commerce
4	Entrepreneurship & Technopreneurs	ABS-332	W Novianti	R Rivanto, W Novianti	Role of Communication Strategies on Social Media in Maintaining Company Service Quality
5	Entrepreneurship & Technopreneurs	ABS-333	D S Soegoto	D S Soegoto, A O Istiqomah	Communication Strategy of the Role of English Language in Entrepreneurship through the Effectiveness of Brochure
6	Entrepreneurship & Technopreneurs	ABS-335	T Raharjoeningrum	K L Silaban, T Raharjoeningrum	E-Commerce in forming Brand Image using Media Publication
7	Entrepreneurship & Technopreneurs	ABS-337	Asih Prihandini	B J Sihite, Asih Prihandini	The Importance of Information Technology in Supporting The Education World to Become An Entrepreneur

ROOM 7.015 UNIVERSITAS KOMPUTER INDONESIA

MODERATOR : Usep Mohamad Ishaq, S.Si.,M.Si.

PERSON IN CHARGE : Raiswati Untsa

TIME : 15.45 – 17.15

(5 minutes each presentation 5 minutes for question and answer)

No	Topic	Code	Presenter	Authors	Title
1	Entrepreneurship & Technopreneurs	ABS-338	A T Utomo	E S Soegoto, A T Utomo	Marketing Strategy Through Social Media
2	Entrepreneurship & Technopreneurs	ABS-344	Bobi Kurniawan	Bobi Kurniawan, R Riyanto	Development of E-Commerce in Smartphone Sales
3	Entrepreneurship & Technopreneurs	ABS-471	M Aria	M Aria, S P Fajriansyah	Business E-Commerce Strategy to Increasing Profits
4	Entrepreneurship & Technopreneurs	ABS-352	Rahma Wahdiniwaty	Rahma Wahdiniwaty, Dinda A Rustam	Patriarchy as a Barrier to Women Entrepreneurs in Indonesia
5	Entrepreneurship & Technopreneurs	ABS-100	Mamun Sutisna	Mamun Sutisna, Arifyan Dwi Prayogo, Ira Siti Sarah	Evaluating website repeat usage using webqual 4.0: a guide for e-commerce business
6	Entrepreneurship & Technopreneurs	ABS-357	D A Wahab	D A Wahab, T F Putra	The Influence of Social Media on Company Development
7	Entrepreneurship & Technopreneurs	ABS-363	Juanda	D B Destriana, Juanda	Social Media Influence For Society

8	Entrepreneurship & Technopreneurs	ABS-365	N Rikma Dewi	M D Putri, N Rikma Dewi	Online Business Influence on Unemployment in Indonesia
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ROOM 10.015 UNIVERSITAS KOMPUTER INDONESIA

MODERATOR : Agus Mulyana, S.Kom.,MT.

PERSON IN CHARGE : Assyfa O. Istiqomah

TIME : 07.00 – 08.30

(5 minutes each presentation 5 minutes for question and answer)

No	Topic	Code	Presenter	Authors	Title
1	Entrepreneurship & Technopreneurs	ABS-512	S Rahmawati	S Rahmawati, I Rochmawati	Information and Communication Technology Development for Entrepreneurs
2	Entrepreneurship & Technopreneurs	ABS-257	E Suhayati	E Suhayati, I Riandani	Accounting Application for Small Medium Enterprises
3	Entrepreneurship & Technopreneurs	ABS-258	E Suhayati1, A Rudiana	E Suhayati1, A Rudiana	Development of Entrepreneurial Characteristics and a Good Business System in Rural Communities
4	Entrepreneurship & Technopreneurs	ABS-259	A Febriansyah	A Febriansyah, F Hartanto	Maximizing Appropriate Technology to Advance Development in Indonesian Economic Through Industrial Revolution 4.0
5	Entrepreneurship & Technopreneurs	ABS-515	<i>Muhammad Nur Huda</i>	<i>Eddy Soeryanto Soegoto, Muhammad Nur Huda</i>	Utilization of Social Media as Online Business Marketing Media
6	Entrepreneurship & Technopreneurs	ABS-518	<i>S Wiganepdo</i>	<i>S Wiganepdo, R Azizah</i>	How to Use E-Commerce in Life by Using Benefit and Impact

ROOM 10.015 UNIVERSITAS KOMPUTER INDONESIA

MODERATOR : Agus Mulyana, S.Kom.,MT.

PERSON IN CHARGE : Assyfa O. Istiqomah

TIME : 13.45 – 15.15

(5 minutes each presentation 5 minutes for question and answer)

No	Topic	Code	Presenter	Authors	Title
1	Entrepreneurship & Technopreneurs	ABS-263	<i>Deden Abdul Wahab</i>	<i>Deden Abdul Wahab, M N Alifa</i>	Influence of a Business in the Digital Era To Profitability
2	Entrepreneurship & Technopreneurs	ABS-479	S Wiganepdo	S Wiganepdo, M S Dwintanissa	Benefit of E-Commerce for Travel and Tourism Industry
3	Entrepreneurship & Technopreneurs	ABS-520	Irman Tarmawan	Rika Rienita Wahyuli, Irman Tarmawan	Marketing Strategy Through Social Media In Consumer Buying Interest
4	Entrepreneurship & Technopreneurs	ABS-265	S K Rahayu	S K Rahayu, F N Fatima	Marketing Communication Strategy in E-Commerce
5	Entrepreneurship & Technopreneurs	ABS-522	Deni Albar	Rukma Permana, Deni Albar	Building an Online Store for Students
6	Entrepreneurship & Technopreneurs	ABS-269	S Wiganepdo	S Wiganepdo , T Setiani	Utilization of the Internet As Media Promotion Marketing
7	Entrepreneurship & Technopreneurs	ABS-270	L Puspitawati	L Puspitawati, P Gurning	Electronic payment for Micro, Small and Medium Enterprises in Developing Countries

ROOM 10.015 UNIVERSITAS KOMPUTER INDONESIA

MODERATOR : Agus Mulyana, S.Kom.,MT.
 PERSON IN CHARGE : Assyfa O. Istiqomah
 TIME : 15.45 – 17.15

(5 minutes each presentation 5 minutes for question and answer)

No	Topic	Code	Presenter	Authors	Title
1	Entrepreneurship & Technopreneurs	ABS-481	L Warlina	L Warlina, A Alkhadad	Role of Financial Application in Supporting Business
2	Entrepreneurship & Technopreneurs	ABS-483	T Tawami	T Tawami, P T Sopyana	Indigenous Japanese Food and Chances in Indonesia
3	Entrepreneurship & Technopreneurs	ABS-302	Lina Rahmawati	L Rahmawati, S H Mayawati	Eco-Friendly Catering Business for This Era
4	Entrepreneurship & Technopreneurs	ABS-486	T Fidowati	I Rahmadi, T Fidowati	Products Branding and Online Shopping Sites Branding on Internet by Online Media Broadcasters
5	Entrepreneurship & Technopreneurs	ABS-487	I Pangaribuan	I Pangaribuan, I S Putri	Digital Marketing for New Media Business Development
6	Entrepreneurship & Technopreneurs	ABS-488	H D Yulianto	H D Yulianto, O Pratiwi	Facilitate Accounting Science with Technological Development
7	Entrepreneurship & Technopreneurs	ABS-489	T Tawami	T Tawami, A Rahman	Internet Role Entrepreneurship Indonesia

8	Entrepreneurship & Technopreneurs	ABS-492	Y Sutisnawati	Y Sutisnawati, W K Maulani	Big Data Impact In Development E-Commerce
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ROOM 11.016 UNIVERSITAS KOMPUTER INDONESIA

MODERATOR : Dr. Ir. Wanita Subadra Abioso, M.T.

PERSON IN CHARGE : Yayang Moh. Izmazatnika

TIME : 07.00 – 08.30

(5 minutes each presentation 5 minutes for question and answer)

No	Topic	Code	Presenter	Authors	Title
1	Architecture, Urban and Regional Planning, and Civil Engineering	ABS-108	Tatang Suheri	Tatang Suheri, Sparisoma Viridi	Agent-based modelling driven by gravity model in simulating growth of an economic point between two cities due to opening of new route in case of a highway
2	Architecture, Urban and Regional Planning, and Civil Engineering	ABS-373	Cherry Dharmawan	Cherry Dharmawan, M Alviano	Pre-fabricated Material for Modular House
3	Architecture, Urban and Regional Planning, and Civil Engineering	ABS-375	Cherry Darmawan	P K Mahbub, Cherry Darmawan	Fire Safety System Building
4	Architecture, Urban and Regional Planning, and Civil Engineering	ABS-157	Salmon Martana	Salmon Martana	Pura As A Fortress, Defence Thought In Religious Balinese Traditional Buildings
5	Architecture, Urban and Regional Planning, and Civil Engineering	ABS-446	<i>L Rahmawati</i>	<i>L Rahmawati, F Faturahman</i>	The Application of Variance-based Structural Equation Modeling for Predicting the Intermediation Margin of Islamic Banking Industry
6	Entrepreneurship & Technopreneurs	ABS-456	Suryatno Wiganepdo	A Sucipto, Suryatno Wiganepdo	Development of E-Commerce on Flight Ticket Sales (E-Ticketing)

ROOM 11.016 UNIVERSITAS KOMPUTER INDONESIA

MODERATOR : Ir. Wanita Subadra Abioso, M.T.

PERSON IN CHARGE : Yayang Moh. Izmazatnika

TIME : 13.45 – 15.15

(5 minutes each presentation 5 minutes for question and answer)

No	Topic	Code	Presenter	Authors	Title
1	Architecture, Urban and Regional Planning, and Civil Engineering	ABS-218	V Pratiwi	V Pratiwi, B P Yakti, A Rizaldi, I R Moe, D P Koesrindartono	Flood Control Study Using 2D Numerical Model in Cipabuaran Channel, Kali Sabi Watershed, Tangerang City
2	Entrepreneurship & Technopreneurs	ABS-445	I Gustiana	K C Mariano, I Gustiana	Benefits of E-Commerce Marketing For Handicraft Wayang Golek
3	Entrepreneurship & Technopreneurs	ABS-439	S Supriyati	S Supriyati, Elisye Nurfiqo	Effectiveness Of Payment Gateway In E-Commerce
4	Entrepreneurship & Technopreneurs	ABS-442	I D Sumitra	I D Sumitra, Abdurrahman	Importance of Website In Business Promotion
5	Entrepreneurship & Technopreneurs	ABS-443	R Zulfikar	R Zulfikar, and S R Rahmatillah	E-Business as an Entrepreneur's Creativity Strategy
6	Entrepreneurship & Technopreneurs	ABS-444	D W Firdaus	D W Firdaus, R K Aryanti	The Influence of Financial Technology in Financial Transactions
7	Entrepreneurship & Technopreneurs	ABS-462	D S Soegotto	D S Soegotto , E Hervina	Influence of Information and Communication Technology and Entrepreneurship Education on Business Interest
8	Entrepreneurship & Technopreneurs	ABS-255	A Kurniawan	A Rachmanto, A Kurniawan	Application of E-Commerce On Fashion Shop

ROOM 11.016 UNIVERSITAS KOMPUTER INDONESIA

MODERATOR : Ir. Wanita Subadra Abioso, M.T.

PERSON IN CHARGE : Yayang Moh. Izmazatnika

TIME : 15.45 – 17.15

(5 minutes each presentation 5 minutes for question and answer)

No	Topic	Code	Presenter	Authors	Title
1	Entrepreneurship & Technopreneurs	ABS-451	Hetty Hasanah	Hetty Hasanah, R A Tirtana	Advantage E-Commerce Technology in Ornamental Plant Bussiness
2	Entrepreneurship & Technopreneurs	ABS-454	R F Syafariani	R F Syafariani, N Raihanah	Coin Lockers As A Technology-Based Public Facility
3	Entrepreneurship & Technopreneurs	ABS-465	P S Kurniati	P S Kurniati, R Anggraeni	The Role of Technology in the Culinary Business
4	Entrepreneurship & Technopreneurs	ABS-457	I Gustiana	Y Narulita, I Gustiana	Influence of public enthusiasm on Japanese culture to anime 34. merchandise online entrepreneur
5	Entrepreneurship & Technopreneurs	ABS-466	L Warlina	L Warlina, I Habibi	Analysis E-Commerce Handicraft of Website-Based
6	Entrepreneurship & Technopreneurs	ABS-460	A Nursikuwagus	A Nursikuwagus, D Cahyadi	What is Benefit of Electronic Commerce Product Marketing for Doll Craft Products
7	Entrepreneurship & Technopreneurs	ABS-207	Laela Nabilah S	Laela Nabilah S, Dwi Suhartanto, Sadrakh Sabda Prayoga,	Solar House System (SHS) Adoption among Rural Community

				Zefanya Alanza Christabel Loveldy	
8	Entrepreneurship & Technopreneurs	ABS-464	A Nursikuwagus	A Nursikuwagus, C T H Sagala	Impact of Electronic Commerce Technology for Students

ROOM 12.010 UNIVERSITAS KOMPUTER INDONESIA

MODERATOR : John Adler, M.Si

PERSON IN CHARGE : M. Shultan Pasha

TIME : 07.00 – 08.30

(5 minutes each presentation 5 minutes for question and answer)

No	Topic	Code	Presenter	Authors	Title
1	Electrical and Computer Engineering	ABS-39	T N Nizar	T N Nizar, S Supatmi, E P Putro	SIFT Descriptor Robustness Analysis to Brightness Changes of Robowaiter Vision Sensor System
2	Electrical and Computer Engineering	ABS-135	Tri Rahajoeningroem	Tri Rahajoeningroem, Muhamad Anton Riyanto	Security System Implementation of Safe Deposit Box Using Iris Pattern
3	Electrical and Computer Engineering	ABS-50	Rodi Hartono	Rodi Hartono, T N Nizar	Speed Control of A Mobile Robot Using Fuzzy Logic Controller
4	Electrical and Computer Engineering	ABS-114	Jana Utama	Jana Utama, Galih Palada	Prosthetic Arm Controller Based on Brainwaves Spectrum EEG Sensor
5	Electrical and Computer Engineering	ABS-118	Budi Herdiana	Budi Herdiana, D Gunawan	Improvement of Model Automatic Tracker Strength Signal Antenna Based On Azimuth and Elevation Control Approach
6	Electrical and Computer Engineering	ABS-514	Dedi S Soegotto	D S Soegotto, A H Pratama	Influence of E-Learning in the method of learning web programming

ROOM 12.010 UNIVERSITAS KOMPUTER INDONESIA

MODERATOR : John Adler, M.Si

PERSON IN CHARGE : M. Shultan Pasha

TIME : 13.45 – 15.15

(5 minutes each presentation 5 minutes for question and answer)

No	Topic	Code	Presenter	Authors	Title
1	Electrical and Computer Engineering	ABS-3	Sutono	Sutono, Selvia Lorena BR Ginting, Mochamad Fajar Wicaksono, Syahrul, Kurniadi Resti Tembo	Implementation Of Rfid, Metal Detectors And Missed Calls In The Design Of Automatic Portals In Housing Complex
2	Electrical and Computer Engineering	ABS-5	S Supatmi	S Supatmi, ID Sumitra	Fingerprint Identification using Bozorth and Boyer-Moore Algorithm
3	Electrical and Computer Engineering	ABS-6	Mochamad Fajar Wicaksono	Mochamad Fajar Wicaksono, Syahrul, Sutono, Myrna Dwi Rahmatya	Design of cargo vehicle monitoring with renewable energy and geofencing for lane restrictions
4	Electrical and Computer Engineering	ABS-277	R Silva	R Silva , Y Sutisnawati	Benefits of Social Media to Improve The Sales of Product
5	Electrical and Computer Engineering	ABS-293	T A Wulandari	T A Wulandari , Y I Nugraha	Influence of Information Systems on Local Product Companies
6	Electrical and Computer Engineering	ABS-91	M Aria	M Aria	Real-Time 2D Mapping and Localization Algorithms for Mobile Robot Applications

7	Electrical and Computer Engineering	ABS-345	D E Surya	D E Surya, H Hermawan	Universitas Komputer Indonesia Students Understanding of the Types of Online Advertising in Meeting Their Information Needs
8	Entrepreneurship & Technopreneurs	ABS-439	J C Wibawa	J C Wibawa , K R Dewi	Implementation of Data Mining Sales of Milk Using the Apriori Algorithm Method

ROOM 12.010 UNIVERSITAS KOMPUTER INDONESIA

MODERATOR : John Adler, M.Si

PERSON IN CHARGE : M. Shultan Pasha

TIME : 15.45 – 17.15

(5 minutes each presentation 5 minutes for question and answer)

No	Topic	Code	Presenter	Authors	Title
1	Electrical and Computer Engineering	ABS-555	Susmini Indriani Lestaringati	Susmini Indriani Lestaringati, Aldo Agusdian	CDMA Channel Resources Allocation with Applied Token Sub-Queuing for Wireless Multi-Service Packet Switch Traffics
2	Electrical and Computer Engineering	ABS-57	Arief Rama Syarif	Arief Rama Syarif , Windu Gata, Mochamad Wahyudi, Syifa Humaira	Classifier Algorithm with Attribute Selection and Optimization for Intrusion Detection System
3	Electrical and Computer Engineering	ABS-314	M Solihat	M Solihat, A W Goran	Developing Entrepreneurship Ideas Through Information and Communication Technology Knowledge
4	Electrical and Computer Engineering	ABS-572	S Ekawati	S Ekawati, S Atin	Fostering Entrepreneurship Spirit and Role of Information Technology
5	Electrical and Computer Engineering	ABS-573	Y R Pratama	Y R Pratama, Sufaatin, I Afrianto	Predicting Student Interests Against Laptop Specifications Through Application of Data Mining Using C4.5 Algorithms
6	Electrical and Computer Engineering	ABS-71	Nelly Indriani Widiastuti	Nelly Indriani Widiastuti	Convolution Neural Network For Text Mining And Natural Language Processing

7	Electrical and Computer Engineering	ABS-42	Mujhan ilmi	Mujhan ilmi	The integration of Passive Infrared Sensor with the Closed-Circuit Television: Smart Toilet Room case study of the Universitas Komputer Indonesia campus new building
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ROOM L.021 UNIVERSITAS KOMPUTER INDONESIA

MODERATOR : Fellicia

PERSON IN CHARGE : Natasha Puspa

TIME : 07.00 – 08.30

(5 minutes each presentation 5 minutes for question and answer)

No	Topic	Code	Presenter	Authors	Title
1	Entrepreneurship & Technopreneurs	ABS-370	R Wahdiniwaty	R Wahdiniwaty, G G Esertha	E-commerce Technology In Agricultural World
2	Entrepreneurship & Technopreneurs	ABS-379	Taufan Hidayatullah	Yunia Oktaviani Prihatini, Taufan Hidayatullah	Building Sports Equipment Businesses Among Students Through Media As A Trend
3	Entrepreneurship & Technopreneurs	ABS-126	Ratnawaty Marginingsih	Ratnawaty Marginingsih, Wiwik Widiyanti, Isnurrini Hidayat Susilowati, Julia Retnowulan and Iin Soraya	Mobile Payment As Financial Transactions In The Digital Era: An Empirical Analysis
4	Entrepreneurship & Technopreneurs	ABS-383	Riswono Soegotto	Sinthia Anggraeni, Riswono Soegotto	The Importance of Computer-Based Accounting Recording in Online Retail Business
5	Entrepreneurship & Technopreneurs	ABS-384	S D Anggadini	G W Rahman, S D Anggadini	Online Shop Sales Based on E-Commerce
6	Entrepreneurship & Technopreneurs	ABS-386	Bobi Kurniawan	Bobi Kurniawan, A Alvin	E-Commerce Use of Agriculture for Creating a New Business Opportunity

ROOM L.021 UNIVERSITAS KOMPUTER INDONESIA

MODERATOR : Fellicia

PERSON IN CHARGE : Natasha Puspa

TIME : 13.45 – 15.15

(5 minutes each presentation 5 minutes for question and answer)

No	Topic	Code	Presenter	Authors	Title
1	Entrepreneurship & Technopreneurs	ABS-387	Sylvia Octa Putri	Sylvia Octa Putri	Modest Fashion Technopreneur and Indonesia Micro-Economic Diplomacy
2	Entrepreneurship & Technopreneurs	ABS-389	R Hartono	S Mulyani, R Hartono	Vending Machine and The Influence on Life in Indonesia
3	Entrepreneurship & Technopreneurs	ABS-390	Vani	M.A Sugema, Vani	Does advertise products online can affect your sales?
4	Entrepreneurship & Technopreneurs	ABS-391	Ambarsih Ekawardani	J Rohmawan, Ambarsih Ekawardani	Utilizing Marketplaces as a Business Opportunity in the Field of Services in the Industry 4.0 era
5	Entrepreneurship & Technopreneurs	ABS-397	Tatan Tawami	Herlianti, Tatan Tawami	Become a Successful Entrepreneur with the Application of Simple Accounting applications.
6	Entrepreneurship & Technopreneurs	ABS-403	Bobi Kurniawan	Bobi Kurniawan, R Nugraha	Development of a security information system in a hospital
7	Entrepreneurship & Technopreneurs	ABS-404	H Purnomo	N Deria, H Purnomo	The Potential of Social Media as a Medium of Promoting Home Service For Millenial Era
8	Entrepreneurship & Technopreneurs	ABS-301	A Rizaldi	A Rizaldi, Y R Fauziah	Analysis of Culinary Business Marketing Strategy Through Online Media

ROOM L.021 UNIVERSITAS KOMPUTER INDONESIA

MODERATOR : Fellicia
 PERSON IN CHARGE : Natasha Puspa
 TIME : 15.45 – 17.15

(5 minutes each presentation 5 minutes for question and answer)

No	Topic	Code	Presenter	Authors	Title
1	Entrepreneurship & Technopreneurs	ABS-422	H Purnomo	M A Jasysurrahman, H Purnomo	Technology development of Online Wallet (cashless payment) transactions in E-Commerce
2	Entrepreneurship & Technopreneurs	ABS-426	R Yunanto	R Yunanto, G A Paizal	Business Model Analysis of E-Commerce in Online Business
3	Entrepreneurship & Technopreneurs	ABS-472	N Hasti	N Hasti, G Kusnia	The Role Of Technology For Interior Design Sectors In Creative Economic Development
4	Entrepreneurship & Technopreneurs	ABS-433	D Andriani	D Andriani, N H Sofviani	Role Of Marketplace On Distro Industry
5	Entrepreneurship & Technopreneurs	ABS-434	S Supriyati	S Supriyati, Lievia Angelin	Utilization Of E-Commerce In Starting Titling Service
6	Entrepreneurship & Technopreneurs	ABS-435	I D Sumitra	I D Sumitra, Sonni Utama	The Effect of Online-based Sales on Hotel Accomodation
7	Entrepreneurship & Technopreneurs	ABS-437	D A Wahab	F G Ferdianato, D A Wahab	Framework for Creating E-Commerce or E-Learning Websites

8	Entrepreneurship & Technopreneurs	ABS-438	M Iffan	M Iffan,J Bastian	Utilization of Mutual Funds to Support Food Self-Sufficiency and Increase The Economy of The Village
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Room 12.015 Universitas Komputer Indonesia

MODERATOR : Adam Mukharil Bachtiar, S.Kom.,MT.

PERSON IN CHARGE : Agung Fajraldi

TIME : 07.00 – 08.30

(5 minutes each presentation 5 minutes for question and answer)

No	Topic	Code	Presenter	Authors	Title
1	Informatic and Information System	[ABS-190]	Aprianti Puti Sujana, S.Kom., M.Kom	A. P. Sujana, A. Y. Prastyawan	Implementation Attendance System Using Raspberry Pi
2	Informatic and Information System	[ABS-2]	Myrna Dwi Rahmatya, S.Kom., M. Kom	Myrna Dwi Rahmatya (a*), Mochamad Fajar Wicaksono (b)	Design of Student Attendance Information System with Fingerprints
3	Informatic and Information System	[ABS-4]	Irfan Dwiguna Sumitra, S.Kom., M.Kom	ID Sumitra, S Supatmi	Applied of Mamdani Fuzzy Inference System Using Three Parameters For Flood Events Forecasting
4	Informatic and Information System	[ABS-8]	Sopian Alviana	S Alviana, I D Sumitra	Measuring The Success Rate of The Detection Signature Based and Anomaly Based on Enterprise Computer Network Attacks Using The Root Mean Square Error
5	Informatic and Information System	[ABS-266]	Bobi Kurniawan, S.Kom., M.Kom	Bobi Kurniawan (a*), Nadya Minerva Gunawan (b*)	Utilization of Technology in Online Businesses College Students
6	Informatic and Information System	[ABS-11]	Fenny,Syafariani R, S.SI, M.Stat	Fenny,Syafariani R. , A Devi	Web Based Academic Information System

ROOM 12.015 Universitas Komputer Indonesia

MODERATOR : Adam Mukharil Bachtiar, S.Kom.,MT.

PERSON IN CHARGE : Agung Fajraldi

TIME : 13.45 – 15.15

(5 minutes each presentation 5 minutes for question and answer)

No	Topic	Code	Presenter	Authors	Title
1	Informatic and Information System	[ABS-15]	Afdoli Fahmi	Afdoli Fahmi (abc), Yeffry Handoko Putra (bd)	Database Migration Strategies and Techniques to Minimize Unexpected Disfunctionality
2	Informatic and Information System	[ABS-40]	Bobo Kurniawan, S.Kom., M.Kom	B Kurniawan, S Alviana	The effectiveness of Smart Workinary for sending attendance data and information based on paperless systems
3	Informatic and Information System	[ABS-43]	Lusi Melian, S.Si, MT	Lusi Melian, Untung Tri Anggara, Agus Nursikuwagus	E-Event for Public Relation Services in IoT using Object Oriented Method
4	Informatic and Information System	[ABS-14]	Eko Budi Setiawan, S.Kom, M.Kom	Eko Budi Setiawan, Angga Setiyadi	Quality Analysis of Mobile Web Server
5	Informatic and Information System	[ABS-28]	Agus Nursikuwagus, S.Kom, M.Kom	Agus Nursikuwagus, Lusi Melian, Tono Hartono	Enhancing Fuzzy Topsis to Improve Prediction Student On Selection Properly Majors at Vocational School
6	Informatic and Information System	[ABS-45]	Tono Hartono, S.Kom., M.Kom	Tono Hartono, Fariz Rizki Ramadhan	E-Transaction Services for Retail Business Process in IoT using Object Analysis and Design
7	Informatic and Information System	[ABS-47]	Rifqi Fahrudin	Rifqi Fahrudin, Irfan Dwiguna Sumitra	Forecasting Inflation Using Seasonal Autoregressive Integrated Moving

					Average Method For Estimates Decent Living Costs
8	Informatic and Information System	ABS-553	Norshuhani Zamin	[1] Norshuhani Zamin, [2] Norita Md. Norwawi [3] Nurul Kharmila Abdullah, [4] Husein Zolkepli, [5] Mohd Shah Mahmood, [6]Mohd Dzulkhairi Mohd Rani, [7] Nurul Azmawati Mohamed, [8] Azuan Ahmad	Forensic Medicine Speech Recognition System in Malay Language using Deep Learning Approach – A case study in Malaysia
			Norshuhani Zamin	<i>[1] Norshuhani Zamin, [2] Norita Md. Norwawi, [3] Muhammad Zharif Amin, [4] Manisah Mohd Ali</i>	RoboTherapist: A Sustainable Approach to Teach Basic Expressions for Special Needs Children in Malaysia

ROOM 12.015 Universitas Komputer Indonesia

MODERATOR : Adam Mukharil Bachtiar, S.Kom.,MT.

PERSON IN CHARGE : Agung Fajraldi

TIME : 15.15 – 17.15

(5 minutes each presentation 5 minutes for question and answer)

No	Topic	Code	Presenter	Authors	Title
1	Informatic and Information System	[ABS-48]	Angga Setiyadi, S.Kom, M.Kom	Angga Setiyadi (a*), Eko Budi Setiawan (b*)	Blindscanner Server and Batch Programming Implementation in the Process of Automatically Scan Documents
2	Informatic and Information System	[ABS-324]	Nelly Indriani Widiastuti, S.Kom, M.Kom	A Novitasyari 1 * , N I Widiastuti2	Cashless in Online Transportation Applications for Services Business
3	Informatic and Information System	[ABS-356]	Dedi S Soegoto	D S Soegotto (a*) , I H Firmansyah (b)	Utilize Video Games For Learning Method
4	Informatic and Information System	[ABS-360]	Juanda	E M Adigraha (a) Juanda (b)	Influence of Social Media in Attracting Tourist Interest
5	Informatic and Information System	[ABS-318]	Muhamad Aria	Y Sofyan (a*), M Aria (b)	Application of Digitalization System (Information System) on Reporting of Public Complaint Handling
6	Informatic and Information System	[ABS-112]	Indriyanto	Indriyanto (ac), I D Sumitra (b)	Measuring the Level of Plagiarism of Thesis using Vector Space Model and Cosine Similarity Methods
7	Informatic and Information System	[ABS-144]	Syahrul Mauludin, S.Kom, M.Kom	Syahrul Mauluddin, Rangga Sidik	Reverse Engineering in Student Mark Recapitulation Application

8	Informatic and Information System	[ABS-96]	Reinhart Simanjuntak	Reinhart Simanjuntak	Comparasion Performace K-Means and Jaccard for Document Similarity
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Room 12.019 Universitas Komputer Indonesia

MODERATOR : Ken Kinanti Purnamasari, S.Kom.,MT

PERSON IN CHARGE : Anisa Ega

TIME : 07.00 – 08.30

(5 minutes each presentation 5 minutes for question and answer)

No	Topic	Code	Presenter	Authors	Title
1	Informatic and Information System	[ABS-131]	Dewi Kurniasih	Dewi Kurniasih and Angga Setiyadi	Geographic Information System for Mapping New Entrepreneurs in West Java
2	Informatic and Information System	[ABS-134]	Maulana Lingga Saputra	Maulana Lingga Saputra, Ana Hadiana	Evaluating The Performance Employee of Bank BJB with Technique for Ordered Preference By Similarity To Ideal Solution (TOPSIS)
3	Informatic and Information System	[ABS-394]	Ambarsih Ekawardhani	M F Timara (a*), Y A Ekawardhani (b)	Use of Android Applications towards Small and Medium Enterprise Operations
4	Informatic and Information System	[ABS-140]	I Saepurrahman	I Saepurrahman & I D Sumitra, M.Kom, Ph.D	Designing Enterprise Architecture for Sports Information System Platform Using The Open Group Architecture Framework (TOGAF) Architecture Development Method
5	Informatic and Information System	[ABS-143]	Nizar Rabbi Radliya	Nizar Rabbi Radliya(1), Muhammad Rajab Fachrizal(2), Azhar Risalati Rabbi(3)	Monitoring Application for Clean Water Access and Clustering using K-Means Algorithm

6	Informatic and Information System	[ABS-399]	Angga Setiyadi	H E Samudra*, A Setiyadi	BUILDING ENGLISH LEARNING APPLICATION IN UNIVERSITY BASED ON WEB AND MOBILE
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ROOM 12.019 Universitas Komputer Indonesia

MODERATOR : Ken Kinanti Purnamasari, S.Kom.,MT

PERSON IN CHARGE : Anisa Ega

TIME : 13.45 – 15.15

(5 minutes each presentation 5 minutes for question and answer)

No	Topic	Code	Presenter	Authors	Title
1	Informatic and Information System	[ABS-401]	Tatik Fidowaty	S Hendriansyah, T Fidowaty	E-COMMERCE ROLE OF FABRIC INDUSTRIES
2	Informatic and Information System	[ABS-146]	Agus Mulyana	Agus Mulyana, Iqbal Syahrul Siddiq	Urban Air Pollution Monitoring System For Mapping Areas Based on Pollutant Level
3	Informatic and Information System	[ABS-151]	Anggun Fergina	Anggun Fergina (a), Dr. Irfan Dwiguna Sumitra (b)	Designing Enterprise Architecture Planning in Mobile News Applications Using TOGAF ADM
4	Informatic and Information System	[ABS-408]	Senny Luckyardi	N T S Aisyah (a*), S Luckyardi (b)	Development of Information Systems and Accounting Software
5	Informatic and Information System	[ABS-153]	Riani Lubis	Riani Lubis, Sufa Atin	Hospital IKM System Riani Lubis, Sufa Atin
6	Informatic and Information System	[ABS-155]	Julian Chandra Wibawa	Julian Chandra Wibawa, Eko Prasetyo, Rauf Fauzan	Maintenance Helpdesk Information System in Retail Companies
7	Informatic and Information System	[ABS-156]	Rio Yunanto	Rio Yunanto	Designing of Recommendation Engine for Recyclable Waste Mobile App

ROOM 12.019 Universitas Komputer Indonesia

MODERATOR : Ken Kinanti Purnamasari, S.Kom.,MT

PERSON IN CHARGE : Anisa Ega

TIME : 15.45 – 17.15

(5 minutes each presentation 5 minutes for question and answer)

No	Topic	Code	Presenter	Authors	Title
1	Informatic and Information System	[ABS-161]	N A Pratama	N A Pratama (a), I D Sumitra (b)	Designing Enterprise Architecture for Marketing Advertising Media System Based On TOGAF Architecture Development Method at PT. X
2	Informatic and Information System	[ABS-162]	L Azizi	L Azizi 1, I D Sumitra 2	Designing of Enterprise Architecture for Interior Furniture Production Based on TOGAF 9.1
3	Informatic and Information System	[ABS-198]	A Heryandi	<i>A Heryandi, I Afrianto</i>	Online Diploma Supplement Information System Modeling for Indonesian Higher Education Institution
4	Informatic and Information System	[ABS-168]	Bella Hardiana	Bella Hardiyana, Julian Chandra Wibawa	Designing a Geographical Information System for Houses Not Feasible As Supporters of Policy Decisions
5	Informatic and Information System	[ABS-169]	Selvia Lorena Br Ginting	Selvia Lorena Br Ginting (a*), Yogie Rinaldy Ginting (b), Sutono (a), Arif Rahman (a)	Data Mining: The Classification Method to Predict the Types of Motorcycle Spare Parts to be Restocked
6	Informatic and Information System	[ABS-171]	Priati Assiroj	Priati Assiroj (a*), HLHS Warnars (b), R Kosala	The Form of High Performance Computer: A Survey

				(c), B Rani (d), S Supangat (e), A I Kistijantoro (f), E Abdurrachman (g)	
7	Informatic and Information System	[ABS-172]	Andri Sahata Sitanggang	Andri Sahata Sitanggang, Sabrina Virgin Kusumaningrum	E-TRACKING APPLICATION FOR REPORTING INFORMATION SYSTEM
8	Informatic and Information System	[ABS-310]	M Iffan	<i>M Iffan (a) E Farida (b)</i>	The Role of Internet as a Local Tourism Promotion Strategy

Room 12.021 Universitas Komputer Indonesia

MODERATOR : Nelly Indriani W., S.Si.,MT.

PERSON IN CHARGE : Ajeng Resti H

TIME : 07.00 – 08.30

(5 minutes each presentation 5 minutes for question and answer)

No	Topic	Code	Presenter	Authors	Title
1	Informatic and Information System	[ABS-75]	Apriani Puti Purfini	a p purfini,r yunanto	Target marketing strategies for university : profiling potential school
2	Informatic and Information System	[ABS-77]	A Setiawan	A Setiawan (abc), YY Kerlooza (bd)	A Study on Designing Authorization Procedures for Multi-Channel and Public Participation Based Population Administration System
3	Informatic and Information System	[ABS-80]	T Hariyati	T Harihayati, UD Widianti	Knowledge Management Model for Nursing Services of Hospital
4	Informatic and Information System	[ABS-95]	Prabaswara Muktikanana Seta	Prabaswara Muktikanana Seta, Yeffry Handoko Putra	The Ability Scoring Model of Software Support Engineers Based on Technical and Communication Skills
5	Informatic and Information System	[ABS-97]	A Samsudin	A Samsudin(1), A Hadiana(2)	Enterprise Architecture Model Using Enterprise Architecture Planning for Services in National Land Agency
6	Informatic and Information System	[ABS-98]	Maulana Sidiq	Maulana Sidiq (a*), Irfan Dwiguna Sumitra (b)	STRATEGIC INFORMATION SYSTEMS PLANNING USING THE TOGAF ADM (CASE STUDY: UNIVERSITY OF GALUH CIAMIS)

ROOM 12.021 Universitas Komputer Indonesia

MODERATOR : Nelly Indriani W., S.Si.,MT.

PERSON IN CHARGE : Ajeng Resti H

TIME : 13.45 – 15.15

(5 minutes each presentation 5 minutes for question and answer)

No	Topic	Code	Presenter	Authors	Title
1	Informatic and Information System	[ABS-101]	Tati Ernawati	Tati Ernawati, Mochamad Fachmi Fachrozi, Diana Dwi Syaputri	Analysis of Intrusion Detection System Performance for PSAD, Portsentry and Suricata
2	Informatic and Information System	[ABS-358]	Inta Budi Setya Nusa	Inta Budi Setya Nusa 1, R F Jamaludin 2*	Effectiveness of Website-Based Licensing Service System through Electronic Government in Increasing Service User Satisfaction
3	Informatic and Information System	[ABS-103]	G T Mardiani 1,*	G T Mardiani 1,*	Design of Communication Planning Infrastructure in IT Projects Communication Management
4	Informatic and Information System	[ABS-104]	Dony Waluya Firdaus	Dony Waluya Firdaus	Develop Accounting Information Systems of Sales in Village-Owned Enterprise (BUMDesa Satia), Case Study in Palasari Village of Sumedang District, Indonesia
5	Informatic and Information System	[ABS-113]	S. C. Cahyono	S. C. Cahyono (a*)	Comparison of Document Similarity Measurements in Scientific Writing using Jaro-Wrinkler Distance Method and Doc2Vec Method

6	Informatic and Information System	[ABS-117]	H Maulana	H Maulana, R Andriana, H Kanai	Development of the 3-Dimensional Map in the Bandung Regency Government Complex H Maulana, R Andriana, H Kanai
7	Informatic and Information System	[ABS-122]	Dian Permata Sari	Dian Permata Sari 1), Pangaribuan, Imelda 2)	EVALUATION OF ONLINE PAYMENT WEBSITE

ROOM 12.021 Universitas Komputer Indonesia

MODERATOR : Nelly Indriani W., S.Si.,MT.

PERSON IN CHARGE : Ajeng Resti H

TIME : 15.45 – 17.15

(5 minutes each presentation 5 minutes for question and answer)

No	Topic	Code	Presenter	Authors	Title
1	Informatic and Information System	[ABS-378]	Dina Fatimah	Muhammad Rizki Fauji (a)*, Dina Fatimah (b)	Web Based Information System on Travel Ticket Booking
2	Informatic and Information System	[ABS-123]	Taryana Suryana	T Suryana, A M Bachtiar, C S Budi	Implementation of Microservices Architecture on Comrades Backend
3	Informatic and Information System	[ABS-124]	D Dhamayanti	D Dharmayanti, A M Bachtiar, M A D Santoso	DATA VISUALIZATION OF PLANT RESISTANT TOWARDS PLANT DISEASE AT EAST WEST SEED INDONESIA INC
4	Informatic and Information System	[ABS-130]	Y Soegoto	Y Soegoto	Design a payroll information system; a case study in Cv. IdCard Bandung
5	Informatic and Information System	[ABS-128]	Richi Dwi Agustia	Richi Dwi Agustia (a*), Dhamayanti Ratna Wulan (a)	Implementation of WebAssembly Technology as Media Visual Learning to help High School Children in Human Body System Learning
6	Informatic and Information System	[ABS-382]	Dina Fatimah	Yudha Pratama(a)*, Dina Fatimah(b)	Tutoring Registration Web Based Information System
7	Informatic and Information System	[ABS-380]	Irfan Dwiguna Sumitra	F A Prasetio1*, and I D Sumitra2	Technology Information as an Opportunity to Build a Business

8	Entrepreneurship & Technopreneurs	[ABS-495]	Yayah Sutisnawati	Y Sutisnawati (a), M Reski (*b)	Looking for Data Pattern of Transactions using Apriori Algorithm with the Association Rule Method
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Room 12.022 Universitas Komputer Indonesia

MODERATOR : Dedeng Hirawan, S.Kom.,M.Kom.

PERSON IN CHARGE : Salsabila Suci

TIME : 07.00 – 08.30

(5 minutes each presentation 5 minutes for question and answer)

No	Topic	Code	Presenter	Authors	Title
1	Informatic and Information System	[ABS-107]	Tias Syahromi	Tias Syahromi, I D Sumitra	Forecasting hotel expenses using the Arima method
2	Informatic and Information System	[ABS-232]	Muhamad Fadli	Muhamad Fadli (a), Irfan Dwiguna Sumitra, Ph.D (b)	Analysis of Applications and Framework of Bandung Smart City
3	Informatic and Information System	[ABS-233]	Dedeng Hirawan	Dedeng Hirawan (a*), Ana Hadiana (b), Adi Abdurakhim (b)	The Prototype of Traffic Violation Detection System Based on Internet of Things
4	Informatic and Information System	[ABS-234]	Hendra setiawan M.Kom	Hendra setiawan M.Kom, Satria M.kom, Sabar Hanadwiputra M.kom, Kikim Mukiman M.Kom, Adi Suwarno M.kom	CLASSIFICATION ALGORITHM C4.5 BASED ON PARTICLE SWARM OPTIMIZATION TO DETERMINE THE DELAY ORDER PRODUCTION PATTERN
5	Informatic and Information System	[ABS-235]	Rizal Bagus Nur Achmad	Rizal Bagus Nur Achmad	Comparison of GOST and RSA Algorithms

6	Informatic and Information System	[ABS-238]	Aries Saifudi	Aries Saifudin (a*, b), Yaya Heryadi (b), Lukas (b)	Ensemble Undersampling to Handle Unbalanced Class on Cross-Project Defect Prediction
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ROOM 12.022 Universitas Komputer Indonesia

MODERATOR : Dedeng Hirawan, S.Kom.,M.Kom.

PERSON IN CHARGE : Salsabila Suci

TIME : 13.45 – 15.15

(5 minutes each presentation 5 minutes for question and answer)

No	Topic	Code	Presenter	Authors	Title
1	Informatic and Information System	[ABS-116]	Dadan Arifin	Dadan Arifin and Ana Hadiana	Techniques for Predicting the Failure of Student Studies Using the Decision Tree method
2	Informatic and Information System	[ABS-109]	Rani Puspita Dhaniawaty, S>Kom, M.Kom	Rani Puspita Dhaniawaty	Evaluation Maturity Level IT Risk Management of Metatrader Software Using Risk IT Framework With Domain Risk Governance (RG)
3	Informatic and Information System	[ABS-115]	Adam Mukharil Bachtiar, S.Kom, M.Kom	A M Bachtiar, D Dharmayanti, E G Ramadhan	Analysis of Interaction Design Model in Content Marketing Domain Using Design Sprint Method
4	Informatic and Information System	[ABS-170]	Annisa Paramitha Fadillah	Annisa Paramitha Fadillah(*), Dian Fitriana	Design of project data management information systems
5	Informatic and Information System	[ABS-175]	A A Nurrasyid	A A Nurrasyid (1), I D Sumitra (2)	Analysis the Satisfaction Level by Using the Application of Elementary School Learning Media Based on Android with the Customer Satisfaction Index Method

6	Informatic and Information System	[ABS-231]	Edi Komarudin	Edi Komarudin, Supriyati, Ramadhan Syaeful Bahri	Design Model Of Forum Islamic Boarding School Application Based On Enterprise System
7	Informatic and Information System	[ABS-430]	Poni Sukaesih Kurniati	P S Kurniati1, R Herikson2*	Web-Based Ordering Information System on Food Store

ROOM 12.022 Universitas Komputer Indonesia

MODERATOR : Dedeng Hirawan, S.Kom.,M.Kom.

PERSON IN CHARGE : Salsabila Suci

TIME : 15.15 – 17.15

(5 minutes each presentation 5 minutes for question and answer)

No	Topic	Code	Presenter	Authors	Title
1	Informatic and Information System	[ABS-176]	Muhammad Rajab Fachrizal	Muhammad Rajab Fachrizal, Nizar Rabbi Radliya, Arisandi Manik	Development of E-Recruitment as a Decision Support System for Employee Recruitment
2	Informatic and Information System	[ABS-199]	Alif Finandhita	Alif Finandhita, Hanhan Maulana	Development of Smart Environment Systems Model for The Optimization of Agriculture Products
3	Informatic and Information System	[ABS-432]	Dedi Kurniawan	Muhamad Hafiyan Ali(a*), Dedi Kurniawan(b*)	Design of Information Systems Web-Based Car Parking Place Mall
4	Informatic and Information System	[ABS-178]	Iyan Gustiana	I Gustiana*, N Hasti, Wahyuni	Society 5.0: Optimization of Socio Technical System in Poverty Reduction
5	Informatic and Information System	[ABS-180]	Rizali Ahmad Nugraha	Rizali Ahmad Nugraha	Information System Architecture Planning with TOGAF-ADM (Study Case PT. Corocot Digital Creative)
6	Informatic and Information System	[ABS-181]	Rauf Fauzan	RAUF FAUZAN, VALENTINUS YUDHA PAMUNGKAS,	The Designing Of Asset Management Information System At Sekolah Tinggi Pariwisata Bandung

				JULIAN CHANDRA WIBAWA	
7	Informatic and Information System	[ABS- 223]	Poni Sukaesih Kurniati	Poni Sukaesih Kurniati;Suryanto	ANALYSIS OF ACCOUNTING INFORMATION SYSTEM IN THE LOCAL GOVERNMENT OF BANDUNG CITY, WEST JAVA PROVINCE, INDONESIA
8	Entrepreneurship & Technopreneurs	[ABS- 503]	A P Purfini	D Rosa, A P Purfini	Analysis Effect Quality of Accounting Information Systems to Support Company Performance

Room 12.025 Universitas Komputer Indonesia

MODERATOR : Agus Nursikuwagus, ST.,MM.,MT.

PERSON IN CHARGE : Rizky Jumansyah

TIME : 07.00 – 08.30

(5 minutes each presentation 5 minutes for question and answer)

No	Topic	Code	Presenter	Authors	Title
1	Informatic and Information System	[ABS-249]	Yaddarabullah	Yaddarabullah (a*); Muhammad Farras Muttaqin (b); Muhammad Rafiansyah (c)	Service-Oriented Architecture for E-Marketplace Model Based on Multi-Platform Distributed System
2	Informatic and Information System	[ABS-250]	Kankan Kasmana	Kankan Kasmana	The Practice of Santet (Witchcraft) Business Through Internet in Indonesia
3	Informatic and Information System	[ABS-227]	Asep Rahmat Sudrajat	Asep Rahmat Sudrajat, Sumiyati	The Effect of Consumer Interest on Islamic Bank and Conventional Bank Mobile Banking: An Analysis Using Google Trends
4	Informatic and Information System	[ABS-225]	Aries Saifudin	Aries Saifudin (a*,b), Spits Warnars Harco Leslie Hendric (b), Benfano Soewito (b), Ford Lumban Gaol (b), Edi Abdurachman (b), Yaya Heryadi (b)	Tackling Imbalanced Class on Cross-Project Defect Prediction Using Ensemble SMOTE

5	Informatic and Information System	[ABS-453]	Wati Aris Astuti	Wati Aris Astuti(a), Anissa Prananda Dewi(b*)	Analysis of the Benefits of Social Media as a Creative Marketing Strategies
6	Informatic and Information System	[ABS-450]	Surtikanti	Surtikanti 1, R H Mustofa 2*	Effect Of E-Money On Financial Transactions And Impact On Society Economic Growth

ROOM 12.025 Universitas Komputer Indonesia

MODERATOR : Agus Nursikuwagus, ST.,MM.,MT.

PERSON IN CHARGE : Rizky Jumansyah

TIME : 13.45 – 15.15

(5 minutes each presentation 5 minutes for question and answer)

No	Topic	Code	Presenter	Authors	Title
1	Informatic and Information System	[ABS-239]	Achmad Chotib	Achmad Chotib	ELECTRONIC SYSTEM ARCHITECTURE PLANNING THROUGH INATRADE PORTAL USING TOGAF ADM IN THE DIRECTORATE OF EXPORT AND IMPORT FACILITATION, DIRECTORATE GENERAL OF FOREIGN TRADE, MINISTRY OF TRADE (Case Study: Indonesian Ministry of Trade Office, Central Jakarta)
2	Informatic and Information System	[ABS-206]	Iskandar Ikbal	Iskandar Ikbal, Syahrul Mauluddin	Usability Measurement of Classroom Booking Information System Integrated with Course Scheduling Information System Using Use Questionnaire
3	Informatic and Information System	[ABS-501]	Vitta Pratiwi	Vitta Pratiwi (a*) D Juniel (b)	Importance of Business Correspondence for Micro-Business
4	Informatic and Information System	[ABS-251]	Deffy Susanti	Deffy Susanti	APPLICATION OF DATA MINING TO ANALYZE THE CONSUMERS THAT ARE SHARED TO BECOME A CLASS TO SUPPORT THE DECISION

					SUPPORT SYSTEM (DSS) IN TB. 80 MAJALENGKA
5	Informatic and Information System	[ABS-491]	Nia Karniawati	I Yanuarti (a*), N Karniawati (b)	Content Marketing Through Online Media For The Development Of A Business
6	Informatic and Information System	[ABS-10]	Ridwan Fadjar Septian	Ridwan Fadjar Septian (a) Geraldi Catur Pamuji (b)	Risk Analysis of Dutch Healthcare Company Information System using ISO 27001:2017, NEN:7510-2 and COBIT 5
7	Informatic and Information System	[ABS-524]	Tatan Tawami	A P Darusalam (a*) , Tatan Tawami (b)	Social Media as a Japanese Marketing Tools

ROOM 12.025 Universitas Komputer Indonesia

MODERATOR : Agus Nursikuwagus, ST.,MM.,MT.

PERSON IN CHARGE : Rizky Jumansyah

TIME : 15.45 – 17.15

(5 minutes each presentation 5 minutes for question and answer)

No	Topic	Code	Presenter	Authors	Title
1	Informatic and Information System	[ABS-191]	Wahyuni	W Wahyuni and I Gustiana	Designing Indonesia Geographic Application
2	Informatic and Information System	[ABS-189]	Mia Fitriawati	M Fitriawati ¹ and R H Lestari ²	Design of the Information System for Kindergarten Learning Evaluation used Kanban Methodology
3	Informatic and Information System	[ABS-213]	K. K. Purnamasari	K. K. Purnamasari	K-MEANS AND K-MEDOIDS FOR INDONESIAN TEXT SUMMARIZATION
4	Informatic and Information System	[ABS-193]	Novrini Hasti	N Hasti, S Lesari, I Gustiana	WEB-BASED INTERNSHIP INFORMATION SYSTEM
5	Informatic and Information System	[ABS-196]	Rita Komalasari	Rita Komalasari	Poverty Management Information System Application And Implementation
6	Informatic and Information System	[ABS-197]	Windu Gata	Windu Gata, Hafifah Bella Novitasari, Ridan Nurfalalah, Rani Hernawati , Muhammad Jafar Shidiq	ANALYSIS OF LINEAR REGRESSION ALGORITHM TO PREDICT ADMINISTRATION, PRODUCTION AND DELIVERY TO ACCURACY OF DELIVERY OF PRODUCTS IN COSMETIC INDUSTRY, PT CEDEFINDO

7	Informatic and Information System	[ABS-7]	Herman S Soegoto	Herman S. Soegoto, Yeffry Handoko, Deden A. Wahab, Yusrila Y. Kerlooza, Rahma Wahdiniwaty,	The Influence of Online Transaction on Increasing The Profit of SME Using Structural Equation Modeling
8	Entrepreneurship & Technopreneurs	[ABS-504]	A P Purfini	A R Wulandari, A P Purfini	Role of Online Business Technology in Mindset of Students

Room 12.026 Universitas Komputer Indonesia

MODERATOR : Irawan Afrianto, ST.,MT.

PERSON IN CHARGE : Herry Saputra

TIME : 07.00 – 08.30

(5 minutes each presentation 5 minutes for question and answer)

No	Topic	Code	Presenter	Authors	Title
1	Informatic and Information System	[ABS-17]	Geraldi Catur Pamuji	Geraldi Catur Pamuji; Ana Hadiana; Riani Lubis	Knowledge Management System Architecture Design at PT. Informatika Reka Mandiri
2	Informatic and Information System	[ABS-19]	Anna Dara Andriana	Anna Dara Andriana (a*), Rani Susanto (b)	Selecting the best employee using analytic hierarchy process (AHP)
3	Informatic and Information System	[ABS-21]	Rudy Asrianto	Rudy Asrianto (a*), Yusrila Kerlooza (b)	System Performance Measurement Using Web Server Log Files Method and Sinks Seven Performance Criteria in Multichannel System Architecture
4	Informatic and Information System	[ABS-23]	Irawan Afrianto	Irawan Afrianto, Rangga Gelar Guntara	Implementation of User Centered Design Method in Designing Android-based Journal Reminder Application
5	Informatic and Information System	[ABS-24]	Ilan Aliansi Zahra	Ilan Aliansi Zahra, Yeffry Handoko Putra.	FORECASTING METHODS COMPARATION BASED ON SEASONAL PATTERNS FOR PREDICTING MEDICINE NEEDS WITH ARIMA METHOD, SINGLE EXPONENTIAL SMOOTHING.

6	Informatic and Information System	[ABS-26]	Sufa'atin	Sufa Atin , Riani Lubis	Implementation of Critical Path Method (CPM) in Project Designing and Scheduling
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ROOM 12.026 Universitas Komputer Indonesia

MODERATOR : Irawan Afrianto, ST.,MT.

PERSON IN CHARGE : Herry Saputra

TIME : 13.15 – 15.15

(5 minutes each presentation 5 minutes for question and answer)

No	Topic	Code	Presenter	Authors	Title
1	Informatic and Information System	[ABS-29]	S. Nurhayati	S. Nurhayati	Application of the Analytic Hierarchy Process (AHP) Method to Evaluate Employee Performance at PT. XYZ
2	Informatic and Information System	[ABS-30]	Ihsan Tresna	Ihsan Tresna S, Ana Hadiana	Development of Enterprise Architecture Planning For School Based Management In Public High School
3	Informatic and Information System	[ABS-32]	Trihanondo	Trihanondo, Donny; Endriawan, Didit	Website Development of Indonesian Art Higher Education Institutions Historical Archive
4	Informatic and Information System	[ABS-288]	Sony Mulyawan Setiana	S M Setiana (a*), D Maysarah (b)	Reality Role of Language Improving E-commerce
5	Informatic and Information System	[ABS-37]	Ilham Basri K	Ilham Basri K.,Dr. Irfan Dwiguna Sumitra	Comparison of Forecasting the Number of Outpatients Visitors Based on Naïve Method & Exponential Smoothing
6	Informatic and Information System	[ABS-51]	Esa Firmansyah	Esa Firmansyah (a *), Dwi Yuniarto (a), Dody Herdiana (a), Mulya Suryadi (a),	Integrating the Readiness and IS-Impact Constructs in the Rural Area Context: A Model Development

				Aang Subiyakto (b), Aedah Binti Abd Rahman (c)	
7	Informatic and Information System	[ABS-41]	Bobi Kurniawan	Bobi Kurniawan	Use of Smartapps for Paperless System Based Administration Service

ROOM 12.026 Universitas Komputer Indonesia

MODERATOR : Irawan Afrianto, ST.,MT.

PERSON IN CHARGE : Herry Saputra

TIME : 15.15 – 17.45

(5 minutes each presentation 5 minutes for question and answer)

No	Topic	Code	Presenter	Authors	Title
1	Informatic and Information System	[ABS-58]	L P Hasugian	L P Hasugian (a*), S L B Ginting (b), T M Rahayu (c), S Mauluddin (a), I Pangaribuan (a)	Information System Model for Recyclable Waste Mapping to Help Increase Waste Pickers Income
2	Informatic and Information System	[ABS-70]	A Hadiansyah	A Hadiansyah (a), I D Sumitra (b)	Forecasting Paint Products Using Artificial Neural Network Algorithm at PT. HIJ for Revenue Target
3	Informatic and Information System	[ABS-328]	Angga Setiyadi	A Priladha1*, A Setiyadi 2	Designing Information System Recruitment Professional Gamers Web-Based
4	Informatic and Information System	[ABS-73]	R Susanto	R Susanto; A D Andriana	Employee Recruitment Analysis with Weighted Product Model
5	Informatic and Information System	[ABS-74]	Wahyuddin	Wahyuddin S(1,2), Fauzi Insan Estiko(3,4), Estiko Rijanto(5,1).	Analysis of Factors Affecting Tuition Fee in a Private University: A Data Mining Using VAR Model
6	Informatic and Information System	[ABS-308]	Bobi Kurniawan	B Kurniawan (a*), M F Abdul (b)	Designing Food Ordering Application Based on Android

7	Informatic and Information System	[ABS-558]	Poni Sukaesih Kurniati	Poni Sukaesih Kurniati (a*), Ayu Puspitasari (b)	Website – Based Vehicle Traffic Monitoring System
8	Entrepreneurship & Technopreneurs	[ABS-506]	A S Yunita	<i>A S Yunita (a*), I Pangaribuan (b)</i>	Vending Machine Business as a Solution to Feminine Hygiene Products Necessary

Room 16.017 Universitas Komputer Indonesia

MODERATOR : Dr. Wendi Zarman, M.Si.

PERSON IN CHARGE : Theresia Valentina

TIME : 07.00 – 08.30

(5 minutes each presentation 5 minutes for question and answer)

No	Topic	Code	Presenter	Authors	Title
1	Informatic and Information System	[ABS-214]	Resad Setyadi	Resad Setyadi, Aedah binti Abd Rahman, and Aang Subiyakto	Statistical and Interpretative Analyses For Testing Customer Trust Questionnaires on IT Governance
2	Informatic and Information System	[ABS-216]	Suryanto	Suryanto	ANALYSIS OF REGIONAL FINANCIAL INFORMATION SYSTEMS AS A MEDIA OF REGIONAL FINANCIAL MANAGEMENT TRANSPARENCY IN INDONESIA
3	Informatic and Information System	[ABS-217]	R A Hermawan	R A Hermawan (a*), I D Sumitra, Ph.D (b)	Reporting Information System of School Data from Regional Coordinator with TOGAF ADM for Ministry of Education, Youth and Sport (DISDIKPORA) Karawang
4	Informatic and Information System	[ABS-475]	Dewi Kurniasih	W Fibriyanti (a*), Dewi Kurniasih (b)	Building a Business Using E-commerce Technology
5	Informatic and Information System	[ABS-221]	D Herdiana	D Herdiana (abc)	Determining the best location of Cash Recycle Machine (CRM) using Simple Additive Weighting (SAW) Method

6	Informatic and Information System	[ABS-567]	Senny Luckyardi	J A Asyraf (a)*, S Luckyardi (b)	Effectiveness of Online Based Fundraising Sites
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ROOM 16.017 Universitas Komputer Indonesia

MODERATOR : Dr. Wendi Zarman, M.Si.

PERSON IN CHARGE : Theresia Valentina

TIME : 13.45 – 15.15

(5 minutes each presentation 5 minutes for question and answer)

No	Topic	Code	Presenter	Authors	Title
1	Informatic and Information System	[ABS-220]	Diana Effendi	Diana Effendi(a*), Beri Noviansyah(b), Lena Lestary(c)	Critical Success Factors for Evaluation Enterprise Architecture Implementation
2	Informatic and Information System	[ABS-1]	Budi Arifitama	Budi Arifitama (a*), Ade Syahputra (a), Silvester Dian Handy Permana (a),Ketut Bayu Yogha Bintoro (a)	Mobile Augmented Reality For Learning Traditional Culture Using Marker Based Tracking
3	Informatic and Information System	[ABS-182]	A. Friyanto	A. Friyanto	Analysis Method HTTPS Packet Inspection in Intrusion Prevention Systems Device
4	Informatic and Information System	[ABS-179]	H Irmayanti	H Irmayanti	Analysis Of Raw Material Ordering With Economic Order Quantity (EOQ) Method
5	Informatic and Information System	[ABS-174]	Hidayat	Hidayat (a*); Fityan Ali Munshi (a)	Designing of Eid al-Adha Qurban Meat Stock Information System to Optimize Its Distribution

6	Informatic and Information System	[ABS-183]	Melyani	Melyani Melyani(a*,b*),Raymond Kosala (b), Benny Ranti (b), Suhono Supangkat (c*), Ford Lumban Gaol(b)	Business Model Platform for Smart Home for Technology Planning Task Force
7	Informatic and Information System	[ABS-564]	Herman S. Soegoto	Herman S. Soegoto	THE APPLICATION OF INTEGRATED EXECUTIVE INFORMATION SYSTEM

ROOM 12.026 Universitas Komputer Indonesia

MODERATOR : Dr. Wendi Zarman, M.Si.

PERSON IN CHARGE : Theresia Valentina

TIME : 15.45 – 17.15

(5 minutes each presentation 5 minutes for question and answer)

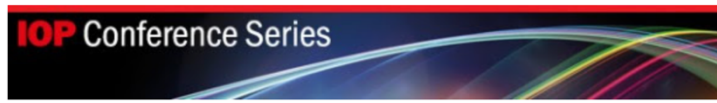
No	Topic	Code	Presenter	Authors	Title
1	Informatic and Information System	[ABS-184]	Irfan Maliki	Irfan Maliki, Fascal Spty Jarockohir	Facial Expressions Recognition Using Markov Stationary Feature - Vector Quantization And Support Vector Machine Method
2	Informatic and Information System	[ABS-186]	Winanti	Winanti(a,b*), Ford Lumban Gaol(c*), Meyliana(d*), Harjanto Prabowo(c*)	A Survey Positive Engangementof Learning Community for Informal Education to Support Community
3	Informatic and Information System	[ABS-205]	Fifinella Rahma	Fifinella Rahma, Anisa Herdiani, Nungki Selviandro, Dwitika Diah Pangestuti	Analysis and Implementation of Ontology Based Text Classification on Criminality Digital News
4	Entrepreneurship & Technopreneurs	[ABS-565]	Ryanti Derwentiana Nazhar	I R Almira , *R D Nazhar	Marketing Communication of Beauty Products through Social Media
5	Entrepreneurship & Technopreneurs	[ABS-568]	Hadi Purnomo	H Purnomo(a), S Khalda (b*)	Influence of Financial Technology on National Financial Institutions

6	Entrepreneurship & Technopreneurs	[ABS-560]	John Adler	John Adler (a*), Sesilia Candra (b)	Business Opportunity From Becoming A Youtuber
7	Entrepreneurship & Technopreneurs	[ABS-287]	Feny Febrianty	<i>F Febrianty (a*), R Ricardo (b)</i>	Social Media for Japanese Learning
8	Entrepreneurship & Technopreneurs	[ABS-496]	Yayah Sutisnawati	R M Dewi (a*) , Y Sutisnawati (b)	E-Commerce Marketing Communication Strategies on Consumer Buying Interest

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