Opening

"Good morning/afternoon everyone. My name is ……. and I will be presenting on [Presentation Topic] with my mentor and thank you sir for being the examiner.

"Before we get started, I'd like to outline the structure of the presentation for you. We'll be covering [Key Points of Presentation] in the following order..."

Narasi 1

Gambar 1 from 2015 to 2020, In west Sumatera gambar 2 because gambar 3. Based on these problem, electricity companies must understand customer’s electricity use characteristics to maximise electricity distribution. For example, gambar 4

Narasi 2

This thesis focuses on developing hybrid model of electricity consumption customer segmentation in west sumatera. For this purpose, the research questions are formulated as follows :

RQ1 objectives goal to rq1 , RQ2 objectives goal to rq2

Narasi3

Kalimat RM which consist of gambar

To emphasize the focus of this study, RS are defined as follows:

Narasi4

Previous studies in ………… have explored the various dimensions of the clustering problem, They use the context of electricity use in predicting future electricity consumption. Several clustering models, K-Means has explored customer grouping by considering pattern of electricity use.

Based summary the litrev, we conclude as follow:

Narasi5

Previous studies at .........., many of them used the marketing context as a case study. K-means clustering and CLV explore the grouping of customers by considering the specified product preferences and predicting customer behavior in purchasing the products offered by the company. Based on the literature review, we conclude as follows:

Narasi6

Previous research, marketing strategy in customer segmentation was determined based on the CLV result, then we can evaluate target that aims to develop customer service improvement strategies based on the concept of CRM. There are two programs of the customer relationship strategy, Suis exists. Conttt is available

Narasi7

To identify gaps and position this study, this study reviewed 22 literatures as follows “kalimatslide”.

To the best our knowledge, it is difficult to find only one study that combines the concept of clustering with CLV and CRM. “next sentence”.

Narasi8

This research is a pragmatism study that uses deductive inference to evaluate propositions considering existing literature. It designs a research strategy to test the proposed predictive analytics model (developed based on the read academic literature) in a specific segment of customer electricity consumption in West Sumatra, Indonesia.

The next three layers (i.e., choice of methodology, research strategy and time horizon) focus on the research design. In terms of methodology choice, this study is quantitative research. We use quantitative data collection techniques followed by quantitative analysis procedures. In the analysis procedure, we also used quantitative methods in which the dataset used (West Sumatra PLN Zone customer transaction data) was analysed.

This research is a single case study that focuses on a topic or phenomenon in a real environment (Understanding electricity consumption patterns is essential to effectively manage the increasing demand for electricity). The research was conducted over a longitudinal time horizon, involving time series data from January 2019 to December 2020. Finally, we used quantitative data collection to gather secondary data from PT PLN Persero West Sumatra Zone.

Narasi9

The research framework adopted and modified by Shmueli and Koppius (2011) is a standard approach for building predictive analysis models. It involves the following steps: Data collection, data preparation, Choose of Variables, Clustering Model, Marketing Strategy Definition.

Narasi10

This may involve collecting data from PLN. The data provided is customer transaction data from January 2019 to December 2020, which consists of sixteen million five hundred and four two hundred and two eight customers and 107 data variables. In this research, we used customer data in July 2020.

Narasi11

In this step, the data is cleaned and prepared for analysis. This may include tasks such as data profiling and data cleaning.

This study focuses on the field area and business customers due to the highest electricity consumption.

Narasi12

This analysis is used to handle duplicate data rows or missing data rows. The data cleaning aims to find potential predictors in the dataset. results of data focus and data cleaning obtained 13 variables with Five hundred eight thousand nine hundred thirty-four from data profiling and data cleaning results. The data will be used for model development.

Narasi13

This step involves selecting the variables that will be used in the analysis. That table are nine possible variables used in the clustering model, because the study focuses on identifying customer segmentation on power based on peak and non-peak loads are main features of clustering model.

Narasi14

Clustering model: In this step, the data is grouped into clusters based on similarities . This may involve using techniques such as k-means clustering or hierarchical clustering. Kalimat slide , the step defined as follow :

Narasi15

The final step, the results of the analysis are used to define a marketing strategy. This may involve identifying target market segments, developing promotional campaigns, or designing marketing materials.

CLV is one way of defining customer value. The model calculates the distance between the data point and the central cluster. Before calculating clv , The weight value is obtained using calculations from the AHP, which solves complex multi-criteria problems in a hierarchy . It is helpful for integrated and fuzzy issues based on human brain assessment.

after the weight value is found then calculate it based on the clv formula, Based on the CLV results, we can then determine the appropriate service improvement strategies based on the concept of CRM.

Narasi16

This section will explain the results carried out in accordance with the research framework.

The first step of analysis is choosing a combination of potential variables to be processed into a cluster model, in determining the combination of selected variables with a high total variance value.

The total variance value is obtained from the sum between dimension 1 and dimension 2. Dimension is the data variance value obtained from the K-Means process with the combination of variables shown in Table.

The blue colour indicates the variance between power (P), non-peak load (NPL), and peak load (PL) features, leading to the high data variance value of 97.7%. In complement, the dissimilarity between each cluster has an error value of around 2.3%.

Next, we determine the number of clusters (k) using the elbow method. The magnitude of the total within-clusters sums of squared decline radically when we alter the number of clusters (k) from 3 to 4.

Narasi17

Due to the uncertainty of the selection of group 3 and group 4, we visualize which of these is more feasible. As a result, we chose cluster equal to 3 because in cluster equal to 4 there are outliers (groups with dark purple dots) that have unclear boundaries with other clusters (groups with light green dots). Finally, we consider that the three clusters are indeed in the correct grouping.

Table ……… the details of the three-cluster using K=3.

Narasi18

Before that, it is necessary to calculate the weight value using the AHP formula. We use power, peak load and peak off load calculated weight of CLV. we calculate the CLV value per group by multiplying the clustering features variable. Finally, the values can be ranked after finding CLV in each customer segmentation

Narasi19

The last step is to define the corresponding marketing strategy based on the CLV result. As depicted in Table, we characterise each cluster based on its profitability:

Narasi20

The two main research questions will be summarized as follows:

................... Data profiling is used to focus on field areas and electricity consumption business customers. Data cleaning is used to remove duplicate data and missing data is removed.

Third, from the 13 variables obtained from the data preparation, the variables that match the predictors and predictions needed to be processed in the hybrid model of customer segmentation will be selected.

Narasi21

The following ...... will be explained in 3 aspects

Not without limitations, this study opens opportunities for further research

That all from my presentation. Thank you for attention.