BAB I
PENDAHULUAN

1.1. Latar Belakang

COVID-19 (Coronavirus Disease 2019) was first identified in Wuhan, China and spread to other countries between December 2019 and early 2020 [1]. In March 2020, WHO (World Health Organization) designated this outbreak as a pandemic that has an impact on the economy, loss of jobs and income due to quarantine [2]. Indonesia is one of the countries affected by the spread of COVID-19 with the first case announced on March 2, 2020 [3].

COVID-19 has had a significant impact in Indonesia. Across the country, economic, social and health sectors have been impacted by the pandemic. The increase in COVID-19 cases and deaths in the healthcare sector is putting the healthcare system under pressure. Amid rising cases in hospitals across Indonesia, there is a shortage of medical equipment and medical personnel. The Indonesian economy has also been affected by the pandemic, as many businesses have been forced to reduce production or even close, causing job losses and economic uncertainty. As of July 6, 2020, the government of the Republic of Indonesia has reported 64,958 Covid-19 cases, including 3,141 deaths, and 29,919 patients have recovered [4]. In the healthcare sector, the number of cases and deaths due to COVID-19 is increasing, putting a huge strain on the healthcare system. One of the regions in Indonesia has confirmed two positive cases of COVID-19 on March 19, 2020 which has been conveyed by the Gebernur of South Sulawesi that one of them was positively affected from performing Umrah worship and one of them was a student who came from Jakarta [5].

The method of using data from Andra Farm - Go Green involves a multiple linear regression algorithm to analyze the dataset obtained. The main objective of this research is to predict the COVID-19 mortality rate in Jakarta using the multivariable regression machine learning method. By using multivariable regression, this research seeks to model and understand the factors that affect the mortality rate due

to COVID-19 in Jakarta. This can help the government make more effective decisions regarding health services after the pandemic.

1.2. Perumusan Masalah

Based on the above background, this research has the following problem formulation:

1. How to predict the death rate due to COVID-19 in Jakarta using multiple linear regression algorithm?
2. What factors influence the death rate from COVID-19 in Jakarta?

1.3. Tujuan

Based on the problem formulation above, the objectives of this study are as follows:

1. Knowing how to predict the death rate due to COVID-19 in Jakarta using multiple linear regression algorithm.
2. Knowing the factors that influence the death rate from COVID-19 in Jakarta.

1.4. Manfaat

Based on the objectives to be achieved, this research has benefits that can be presented as follows:

1.4.1. Secara Teoritis

Theoretically, it is expected that this research will increase the understanding of the COVID-19 clustering process by designing and implementing the K-Means machine learning method. Therefore, this research serves as valuable knowledge for future researchers who wish to explore this field.

1.4.2. Secara Praktis

From a practical perspective, this research enables more efficient and effective clustering of COVID-19-related data with the K-Means method. This enables taking more appropriate actions and curtailing the negative effects of the spread of COVID-19 disease through more accurate data analysis.

1.5. Batasan masalah

This research has problem limitations to narrow the scope of research so that it can be more focused and can be better understood. The problem limitations are as

follows:

1. The dataset used in this research comes from the COVID-19 data source available through Andra Farm - Go Green.
2. This research does not consider algorithmic models other than Multivariable Regression.
3. External data such as population gemographic data or social factors that may affect the spread of COVID-19 are not included in this study.

1.6. Jadwal Kegiatan

The implementation schedule was created as a guide to assess progress in achieving the milestones that had been set. The implementation schedule is as follows.

Kegiatan	**Bulan**					
Literature study and journal analysis	1	2	3	4	5	6
Data retrieval						
Preprocessing dan visualisasi data						
Method implementation and data analysis						
Final Report						

Table 1 Activity Schedule