

CHAPTER I INTRODUCTION

I.1 Background

The Covid-19 disease caused by the SARS-CoV-2 virus is spreading rapidly in various countries so that on March 11, 2020 it was declared a pandemic by the World Health Organization. There's a pandemic Covid-19 has had a devastating impact on various sectors. The rapid spread and danger of Covid-19 need to be addressed immediately. One way to prevent the spread of this virus is by developing a vaccine (Rachman and Pramana, 2020). In 2020 several countries have carried out vaccinations, one of them Indonesia. Deputy Minister of Health of the Republic of Indonesia, dr. Dante Saksono Harbuwono said the implementation policy mass vaccination can accelerate the government in achieving the target of Covid-19 vaccination coverage. Vaccination mass officially started on January 13, 2021 (Ministry of Communication and Information of the Republic Indonesia, 2021).

The coronavirus disease 2019 (COVID-19) pandemic has swept the globe, infecting millions of people and killing hundreds of thousands. Globally, SARS-CoV-2 has infected at least 161.1 million people and killed over 3.3 million people as of May 2021. While isolation and other transmission–mitigation strategies prevented most people from being infected, these measures would, ironically, leave the people vulnerable to SARS-CoV-2 due to their lack of immunity (Jayasurya et al., 2022).

COVID-19 has been widely acknowledged as the most serious global health pandemic of the century. A new infectious respiratory virus was first discovered in Wuhan, China, in December 2019, and was later identified as COVID-19 in 2020. The pandemic has so far caused devastation on the world's wealthiest countries as well as low and middle-income countries (Ferdous et al., 2022).

COVID-19 pandemic and gain herd immunity, a vaccination rate of at least 65% - 67% have to be achieved. According to official data, nearly 200 million people around the world have been vaccinated so far. Although vaccination activities have only started in recent months, it has been determined that their progress is far behind the optimum level needed to ensure herd immunity. When the difficulties in the production and supply of accepted vaccines are overcome, and vaccines, which are

expected to be approved, begin to be administered, the level of vaccination will definitely increase (Aygün et al., 2022).

Discussion about mass vaccination had become trending on Twitter social media, especially at the beginning implementation. This is due to the emergence of problems regarding the implementation process of the Covid-19 mass vaccination. The existing problems gave rise to various responses from the public regarding the implementation of good vaccinations positive or negative feedback. Opinions that exist on Twitter can be used to do sentiment analysis of the Covid-19 vaccination by classifying opinions and opinions into two class, namely negative and positive (Setifani et al., 2020).

Since the government announced the Covid-19 vaccination in Indonesia, the public has been faced with various dilemmas in implementing this policy. Looking at community activities on social media, there are still calls for groups to reject the Covid-19 vaccine and the other respondents refused to receive the first Covid-19 vaccine.

With so many cases supporting and rejecting this Covid-19 vaccination, sentiment analysis is needed to map public impressions. Public discussion about Covid-19 vaccination can be found in offline-online media, social media and conversations that occur in groups or forums. In this study, social media Twitter was chosen as the data source to analyze sentiment towards the public's impression of the Covid-19 vaccination. The data obtained from Twitter is processed by cleansing it with several steps or methods and then it is mapped into training data so that it can predict the latest data to come. This sentiment analysis method is needed to map the public's impressions so that it does not have an adverse impact which results in incorrect information about Covid-19 vaccinations for the community itself. Information about the sentiment of covid-19 vaccination is also needed in making policies in carrying out covid-19 vaccinations.

I.2 Problem Statement

Based on the existing background, the following problem statement is made:

1. How to analyze sentiment using the Naïve Bayes classification method?
2. How significant the accuracy of Naïve Bayes algorithm to tackle the sentiment in covid vaccination?

I.3 Research Objectives

Research objectives of this study are as follows:

1. Benefits and impact of sentiment analysis on covid-19 vaccination based on social media twitter.
2. Finding out classification using the Naïve Bayes method.

I.4 Research Scopes

Research scopes of this study are as follows:

1. The dataset/data source from twitter using crawling on January 2023 until February 2023.
2. Vaccination process research in Indonesia only.
3. Block programming using RapidMiner as a tool to collect and make dataset classification from twitter social media.
4. The data collection timeline is in the form of keywords consisting of vaksinasi covid, vaksin booster, vaksin booster 1, vaksin booster 2, vaksin booster pertama, vaksin booster kedua, vaksin astrazeneca, vaksin moderna, vaksin Pfizer, vaksin sinovac.

I.5 Research Benefit

Research benefits of this study are as follows:

1. To learn more deeply about sentiment vaccine covid in Indonesia.
2. In Indonesia, the percentage of people who hold neutral, positive, or negative attitudes toward vaccines.

3. With an immune system that has recognized the virus, if a person's immune system fails and they are then exposed, then the impact or symptoms of the virus will be weakened.

I.6 Systematic of Writing

This final project is described with the following systematic of writing:

Chapter I Background

This chapter contains a description of the context of the problem, the background of the problem, the formulation of the problem which aims to solve the problem by creating an integrated system consisting of humans with materials and/or equipment/machines and/or information and/or energy, limitations of the final assignment, benefits final project, and writing systematics.

Chapter II Literature Review

This chapter contains literature that is relevant to the problems taken and also discusses the results of reference books/research/other references that can be used to design and solve problems. At least there is more than one methodology/method/framework included in this chapter to solve the problem or minimize the gap between the existing condition and the target. At the end of this chapter, an analysis of the selection of the methodology/method/framework must be explained to determine the methodology/method/framework to be used in this final project.

Chapter III Methods of Research

The completion methodology is an explanation of the method / concept / framework that has been selected in the Literature Review chapter. In the final task This chapter describes the steps of the final project in detail including: the stages of formulating problems, formulating hypotheses, developing models, identifying and operationalizing variables, compiling questionnaires, designing

data collection and processing, conducting instrument tests, designing data processing analysis in integrated system design framework for solving problems.

Chapter IV Data Collection and Processing

All activities in the framework of designing an integrated system for solving problems can be written in this chapter. Activities carried out can be in the form of collecting and processing data, testing data, and designing solutions.

Chapter V Analysis and Evaluation of Implementation Result

In this chapter, the results of the design, findings, analysis and data processing are presented. In addition, this chapter also contains validation or verification of the results of the solution, so that the results actually solve the problem or reduce the gap between the existing condition and the target to be achieved. Sensitivity analysis can also be used in this chapter to better understand the results of the final project which can be applied both specifically in the context of the thesis and in general in similar contexts (eg companies in similar sectors). In addition, other evaluation methods can be applied to validate the results as needed.

Overall, this chapter discusses in detail the results of working on solutions and their reflections on the objectives of the final project. For the final assignment that focuses on designing information systems/applications, the naming of this chapter follows the SDLC (Systems development life cycle) implementation stages used in the final assignment.

Chapter VI Conclusions and Suggestion

This chapter explains the conclusions from solving the problems that were carried out as well as the answers to the formulation of the

problems in the introductory section. Suggestions for solutions are put forward in this chapter for the next final project.