

Chapter 1

INTRODUCTION

Background

During a pandemic like today, a virus called Coronavirus appears. This coronavirus is a virus that appears and often attacks the respiratory function in humans. Breathing is one of the most important elements for humans living in this world. Without breathing all humans in this world cannot carry out the activities in this life. Breathing is the process of exchanging gases in the form of oxygen and carbon dioxide in the lungs. Oxygen itself has a function that is quite important for our bodies, namely to convert glucose into energy needed to carry out activities. So, the use of oxygen is very important for our bodies, to get optimal energy for activities. One of the functions of breathing that is often attacked by this Coronavirus is the lungs. Before attacking the lungs, the Coronavirus first attacks the bronchial tubes that lead to the lungs from the trachea. When there is swelling in the bronchial tubes, there will be inflammation that interferes with the circulation of oxygen in our bodies. Currently, the Coronavirus has spread in all parts of the world, therefore we must take precautions against the people around us so that this Coronavirus chain can be quickly broken and lost. Because of this Coronavirus, people's activities have been disrupted, so people are uncomfortable and safe in carrying out activities outside the home. Therefore, the checks carried out must be more accurate and precise to find out whether the person is affected by the Coronavirus or not. For now, the prevention of Coronavirus is done by checking the body temperature of the public, but not checking the most crucial part in the spread of this virus, namely the human breath. The positive impact of this check is quite good because the spread of the virus has decreased significantly in several big cities, but has not completely disappeared. Therefore, with a sensor to detect a person's breath, the checks carried out are more optimal. The sensor used is a DHT 11 sensor with the algorithm applied, namely the Naive Bayes Classifier. The tool used as a microcontroller to take humidity and temperature data obtained from the DHT 11 sensor is Arduino UNO.

First, the DHT 11 sensor is connected to the available Arduino UNO. The sensor will take data in the form of Humidity and Temperature directly. After the data is obtained from the sensor, the data is transferred to a database containing tables to enter existing data. The data that has been obtained earlier will be classified using the Naive Bayes Classifier method. Before that, the data obtained was divided into 2 parts, namely Training Data and Testing Data. The function of the Naive Bayes Classifier itself is to determine the probability and probability of the data occurring next so that we can predict the next data and compare the predicted data obtained with the actual data that already exists. If the accuracy obtained is high, the level of data accuracy will be more optimal. But if the accuracy obtained is lower, then it means that the data obtained is not good enough. The background section discusses the background that must be stated. Write in narrative form by answering some basic questions. Does the first paragraph discuss what problem you want to solve? How the problem happen ?

The following paragraphs discuss how to solve it using an algorithm and data structure approach. While the last paragraph discusses the resulting solution that you offer. Because this is a final report, avoid the word "will" but must discuss the actual conditions.

Problem Formulation

- 1 How does the Naive Bayes Classifier work to classify data from sensors?
- 2 What are the accurate results obtained from the existing training data?

Scope

- 1 Data in the form of numbers from the DHT 11 sensor and Arduino UNO
- 2 The processed data is in the form of Humidity, Body Temperature, Rate and Classification.
- 3 Classification is only divided into two classes, namely YES and NO.

Objective

- 1 Get optimal accuracy to predict data accuracy
- 2 Able to apply methods to analyze the data obtained

