

## **1. Introduction**

### **1.1 Background**

The development of technology at this time is very rapidly developing. Electronic media is one of the most influential and reliable media in seeking information and communicating. Almost every second there are new innovations to technology. The rapid pace of information makes humans have to be able to create technology that can be useful for other humans. [1]

A motorcycle is a two-wheeled vehicle driven by an engine. The location of both wheels is inline straight and at high speeds the motorcycle remains stable due to gyroscopic force. Whereas at low speeds, the stability or balance of the motorcycle depends on the handlebar settings by the rider. The use of motorcycles in Indonesia is very popular because the price is relatively cheap, affordable for most people and the use of fuel, as well as the operational costs are quite economical. [5]

Based on the description above, with the use of a very popular motorcycle, the number of thefts and having the same type of motorcycle as other people is fairly high, and sometimes there are acquaintances from motorcycle owners who want to borrow it, so in this Final Project will implement GPS Tracking on motorcycles to find out the position or coordinate points where the motorcycle is located.

### **1.2 Topics and Their Limitations**

Based on the background above, the issues that can be raised are as follows:

1. How does it work to use a microcontroller to do position tracking.
2. What is required to run the tool on a microcontroller.
3. How many meters of latitude longitude accuracy can be between the message and the reference point

In the design of this tool, there are several limitations to the problem, including:

1. The time to send messages to the device depends on the telephone signal and provider.
2. The GPS satellite signal obtained depends on the position and sometimes it takes a long time to get a signal.
3. Arduino and SIM800I V2 Module as system.
4. Message replies from the tool are only sent to the owner's number.

### **1.3 Purpose**

From the problems raised in the Problem Formulation, there are several objectives of this study, as follows:

1. Make it easier to know the position of the Motorcycle.
2. Make it easier to find a motorcycle when experiencing problems or disasters such as theft.

### **1.4 Writing Organization**

The first section describes the background of the problem, the topic and the limitations that were resolved along with

with the purpose of research. The second part explains the theories that support the research work. The third part describes the implementation of the methods raised in the study. In the fourth part, it explains the results and analysis that have been obtained from the implementation of the method being worked on. As for the fifth part, it explains the conclusions of the results obtained in the research work.