

ABSTRAK

An accident is the tragedy of a vehicle crashing into whatever is in front of it causing damage to the vehicle and can even result in minor, severe injuries, or death for road users and vehicle users. In this problem, the author provides a solution by making a research that can make it easier for the company to inform the police and the nearest medical personnel in handling accidents with the tilt sensor on the vehicle using the MPU6050 accelerometer sensor. The MPU6050 accelerometer is a sensor that has two functions in it, namely an accelerometer with a micro electro mechanical system (MEMS) and a gyroscope on a chip. Piezoelectric Vibration Sensor Module is a sensor to detect vibrations around the device. The flame sensor module is a fire detection sensor. In this study, a sensor is also needed that can determine the location of the accident, namely GPS NEO 6m. information is sent to the telegram application. The MPU6050 accelerometer sensor detects every 20 degree tilt value, piezoelectric will detect vibration, and the flame sensor detects whether there is a fire, then it will be indicated to be a collision detector where the vibration value when the value of 1000 is detected an accident then the GPS will provide the location of the scene in the form of a google maps link and then sent via telegram to the user. For the accident notification system after being tested 15 times successfully sending messages with a message delivery time to telegram of 4 seconds. The circumstances of the accident are divided into 4, namely the first vibration getting a value of $> = 600$ tilt with a value of $> = 20$, then the accident occurred with the car upside down. The second vibration obtained $> = 1000$ tilt $< = 0$, it will be declared that the car had an accident with a hard impact. The third vibration obtained < 600 tilt < 20 flame sensor detects a fire or is expressed by the number 1 then the vehicle is on fire in the engine and each of these conditions if, exceeding the specified value, it will send a notification to the telegram.

Keywords: MPU6050 accelerometer, NEO 6m GPS, accident information, Piezoelectric Vibration Sensor