

## **ABSTRACT**

Many roads are uneven or perforated due to weather and truck factors that exceed the load, starting from city and district roads. Many of these problems lead to accidents and long congestion so that a tool that can detect the path of the hole automatically is needed, and get information from a hole detector. This tool is built to detect and record the depth of the hole, as well as the location of the location of the perforated road that can be installed on the vehicle. This system uses an Ultrasonic Sensor, GPS, and MicroSD Module. This sensor serves as a detector with a volume depth of a hole with a volume of 50 cm, on the GPS to provide the coordinates of the location of the perforated road. And the MicroSD Module functions to store the results of data from sensors and GPS, sensors are placed in the front bumper of the four wheels. Based on the results of the data collection, the system is expected to provide data on the perforated road to the City or Regency Government so that it can be repaired immediately.

Key Words: Road, Feed, Vehicle, Sensor, GPS