**Domain:** Hardware (IoT based)

**Problem Statement:** To build a system for detection, counting and fixing of potholes using Image processing techniques and IoT.

**Current System:**

The current system manually detects and repair the potholes,resulting in the longer timer for repairs. If not identified early,smaller potholes leads to bigger potholes. This’ll cause huge damage to the vehicle and will cause a lot of accidents. The increase of potholes results in the decrease in the speed of vehicle thereby resulting in increase of traffic. The delay in traffic gives a mental stress to commuters and elderly citizens alike. This delay in traffic causes the difficulty for ambulances to pick patients. With the increase of potholes there’s an increase in the delay of transportation of goods, thereby reducing the growth of Indian economy.

**Proposed system:**

The system will count the number of potholes present on the roads where the system is installed and upload the data to the database in real time. This identification and counting will be done by using image processing techniques. After the data is uploaded on the database a bot will be deployed to the site where the pothole is identified, for the filling of the potholes. The pothole will be filled using thermosetting plastics for quick and efficient repairs. The idea is of filling the pot holes before they get any bigger than threshold size. Small potholes (12 inches diameter ,2 inches depth) can be easily fixed using the thermosetting plastic. The fixing of the pothole will be done by the automated bot and after the work is complete, the information will be updated in the system. For the bigger potholes already present, the image processing software will distinguish it from the smaller potholes to be fixed by the bot, and a message will be sent to the right authorities for the filling of the bigger potholes and once the fixing is completed the information will be uploaded in the database.