TOP STUDENT PROJECTS

Best innovations from VTU, Gokak

PROJECT TITLE

Pathole detection system

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PATHOLE
DETECTION SYSTEM

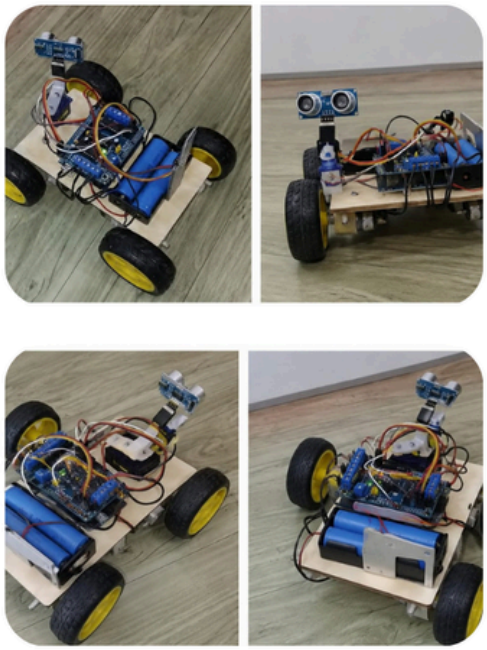


PROBLEM STATEMENT

Potholes on roads can cause accidents, vehicle damage, and traffic congestion. Manual inspection is time-consuming, so an automated detection system is needed. Such a system can enable faster identification of road defects, allowing timely maintenance and improving overall road safety.

SOLUTION

The Pothole Detection System uses an ultrasonic sensor to detect potholes by measuring the distance between the road surface and the sensor. When a pothole is detected, the system records the information and helps authorities identify damaged roads for timely maintenance, improving road safety and reducing vehicle damage. The system enables efficient road condition monitoring, allowing quicker response and repair of hazardous road sections. It reduces the need for frequent manual inspections, saving time and operational costs. Additionally, the system contributes to better road infrastructure management by providing accurate and timely pothole detection data.



SCAN ME

Technology stacks:

Raspberry Pi + Camera + GPS Module	React.js	FastAPI (Python)
YOLOv8 + CNN + OpenCV	MongoDB	Firebase