

Original Image

Grayscale

Image Refining

Median Filter De-noising

Gaussian Blurring & Smoothing

Sobel Edge Detection

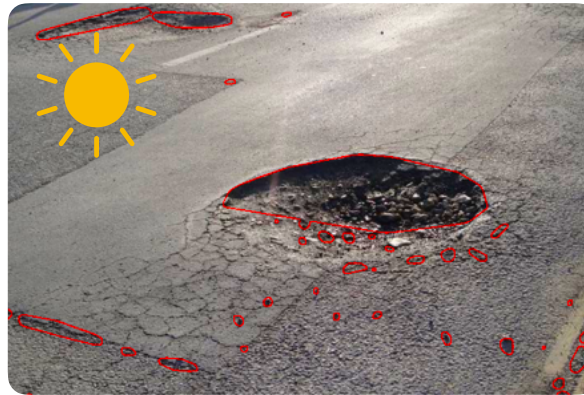
Otsu Thresholding

Image Conversion

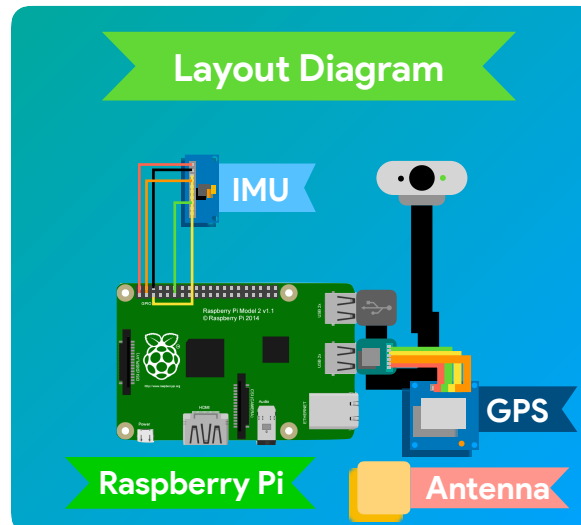
C-Means

Final Edges

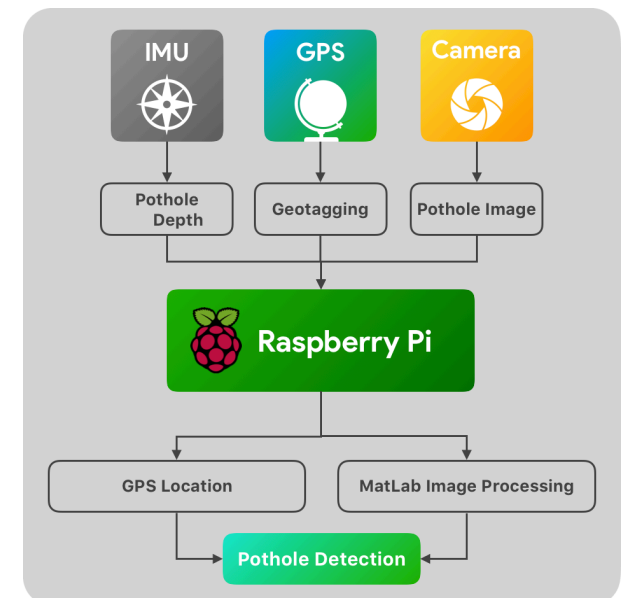
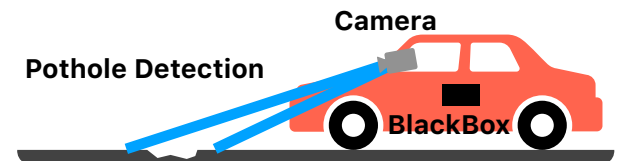
Overlaying



Layout Diagram



Advanced Smart Road  
Analysis &  
Deformation  
Detection System



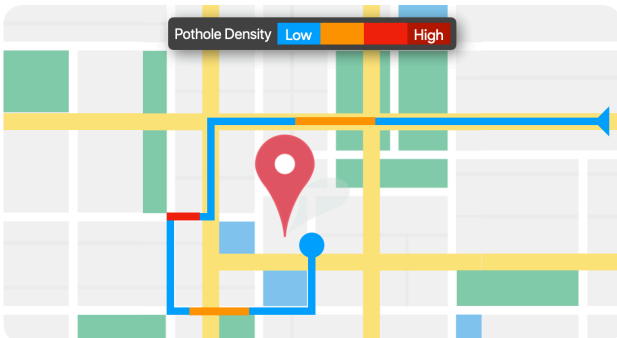
## Field Experts



**Mechanics**

**Automotive Engineers**

**And many more...**



## Impact

↓ **PREVIOUSLY**

↓ **NOW**

### **Consumers**

- ▶ No data of pothole location
- ▶ Injuries & deaths while driving over bumpy roads
- ▶ Pregnant women, senior citizens, and other disabled people affected

- ▶ Database of pothole locations
- ▶ Live pothole data and updates
- ▶ Pothole density maps
- ▶ Routes tailored to avoid potholes

### **Government**

- ▶ Unnecessary manpower used
- ▶ Inaccurate/unavailable road data
- ▶ Overspending on road repairs

- ▶ Automatic, accurate road surveying
- ▶ No need to visit site for surveying
- ▶ Live, verified data
- ▶ Data collected in remote locations

### **Social**

- ▶ Deaths due to potholes
- ▶ Vehicle damage

- ▶ Fewer potholes
- ▶ Smoother roads
- ▶ Fewer accidents and road fatalities
- ▶ Less traffic, congestion, & pollution