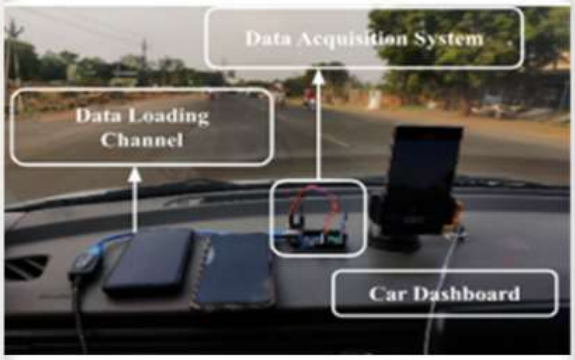
IITI DRISHTI CPS FOUNDATION
IIT INDORE

TECHNOLOGY DEVELOPMENT PROGRAM

SMART CITIES AND SOCIETIES



Automated Road Monitor

Assessment of road condition and repair cost estimation using a cyber-physical system

Issue Being Addressed

- If the deteriorated road is not inspected and repaired on time it will result in increased accidents, higher fuel consumption, and poor ride quality
- Maintenance cost also increases if there is any delay in repair due to the lack of information about the current road health

Key Feature of The Technology/Product /App Which Is Being Developed

- Automating road health monitoring
- Approximate cost estimation that can be used for tender preparation
- Development of a machine-learning-based novel algorithm for detecting and classifying road damages

Impact & Benefit

- An improved road quality
- Minimization of environmental impact associated with road construction and maintenance activities
- Enhanced air quality and reduced noise pollution
- Conservation of natural resources
- The implementation of the developed framework and timely monitoring will reduce road accidents, improve ride quality, and will reduce the extra fare resulting from the high maintenance cost

Team

- **PI:Dr. Guru Prakash**
  Assistant Professor
- **Dr. Lalit Borana**
  Associate Professor
- **Dr. Abhishek Rajput**
  Associate Professor
- **Mr. Johnson Singh**
  Project Associate
- **Revanth Dugalam**
  PhD Student
- **Krati Sethi**
  Project Associate

Targeted Customers & End Users

- National Highways Authority of India (NHAI)
- State government
- Central government and
- Private consultancy
- Construction companies

Commercialization Status

- Integrated Image Recognition and Interpretation (IRI) with Machine Learning (ML) to enhance data frequency to 1 meter

SHORT TERM PROJECT SCHEME