Project Design Phase-II
Technology Stack (Architecture & Stack)

Date	19 October 2022
Team ID	PNT2022TMID27330
Project Name	Project - Signs with Smart Connectivity for Better Road Safety
Maximum Marks	4 Marks

Technical Architecture:

The Deliverable shall include the architectural diagram as below and the information as per the table1 & table 2

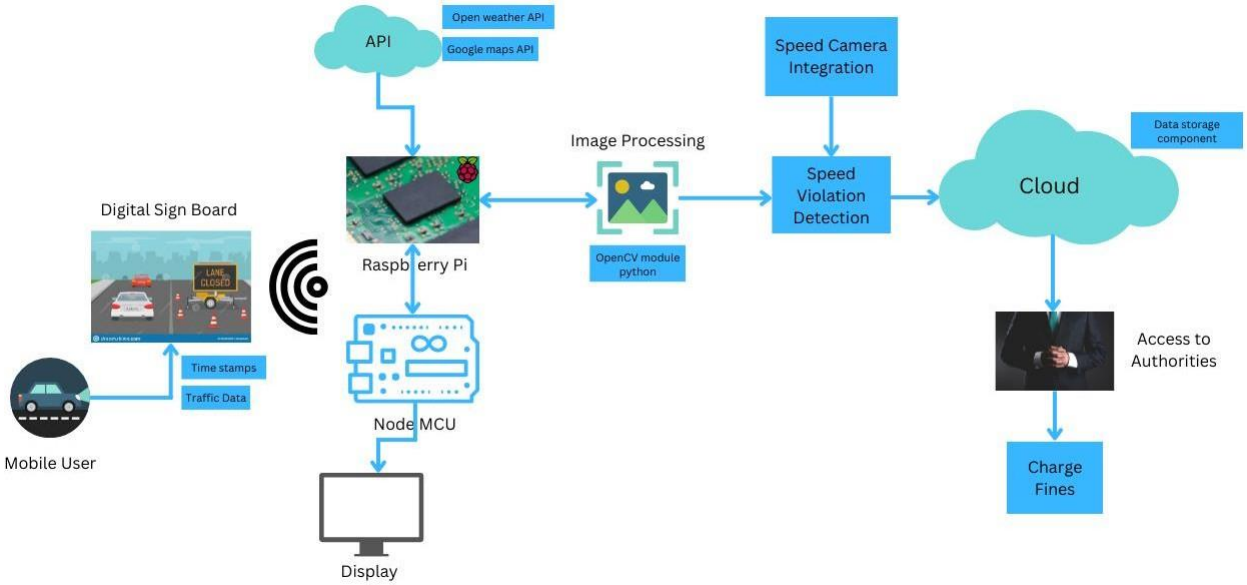

Table-1 : Components & Technologies:

S.No	Component	Description	Technology
1.	User Interface	Digital board UI	TTFL Display, Amoled
2.	Application Logic-1	Traffic Monitoring and Constructions indication ahead	Google Map API (Python)
3.	Application Logic-2	Speed Camera Integration for speed violation detection and data processing with Image Processing Technique	OpenCV Module (Python)
4.	Application Logic-3	Speed Limitations based on weather data	Weather API (Python)
5.	External API-1	Traffic Monitoring and Constructions ahead	Google Map API (Python)
6.	External API-2	Speed Limitations based on weather data	Weather API (Python)
7.	Machine Learning Model	Purpose of Machine Learning Model	Object Recognition Model, etc.
8.	Infrastructure (Server / Cloud)	Application Deployment on Local System / Cloud Local Server Configuration: Data Storage Cloud Server Configuration: Data Process	Local Data, IBM cloud (or) Google Drive

Table-2: Application Characteristics:

S. No	Characteristics	Description	Technology
1.	Open-Source Frameworks	Visual studio Code, Node-Red	Python
2.	Scalable Architecture	Implementation and Maintenance cost will be less, so that the product is highly scalable.	IoT Watson Platform
3.	Availability	It will available for working every 24/7.	IBM Cloud, Google Drive
4.	Performance	Acceptable performance with dynamic updation of data regarding weather, traffic, etc..	IBM Cloud, Google Drive

References:

https://nodered.org/

https://code.visualstudio.com/

https://www.ibm.com/cloud/architecture

https://drive.google.com