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

Date	15 October 2022
Team ID	PNT2022TMID50070
Project Name	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

Example: signs with smart connectivity for better road safety

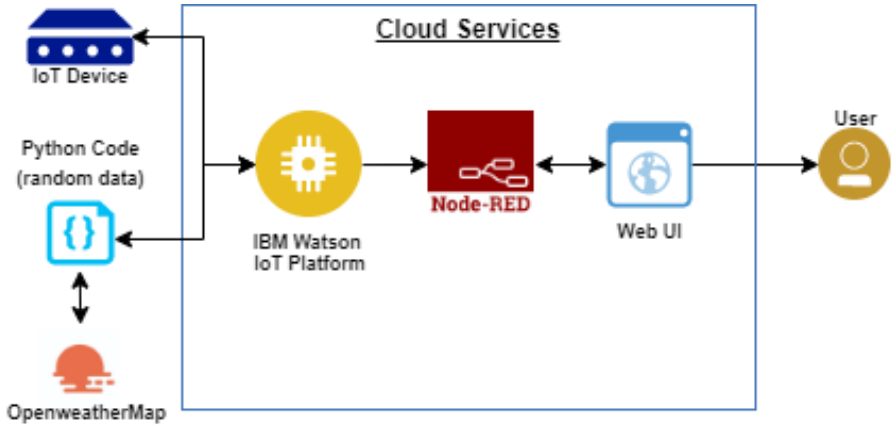

Table-1 : Components & Technologies:

S.No	Component	Description	Technology
1.	User Interface	The point of human-computer interaction and communication in a device. e.g. web UI, webpage, app	Smart traffic light and traffic control system, artificial intelligence, telematics and automotive technology.
2.	Application Logic-1	The logic governing what a computer program is trying to accomplish	High-level programming include **Java / Python**
3.	Application Logic-2	Since application logic is user-device, any glitches will directly affect consumers.	E-pen application technology
4.	Application Logic-3	Researchers and professionals to understand and analyze complex domains is to classify objects.	OBDs technology
5.	Database	All data is collected directly from relevant national data providers in the IRTAD countries.	Road safety related databases and technology used to collect crash data in the western cape, as well as technology available,
6.	Cloud Database	Paper-based construction safety management system and practice are described, together with a review of the potential application of cloud based information.	Free-to-use online web server.
7.	File Storage	A hierarchical storage methodology used to signs and store data on a computer hard drive	Facilitates the storage of unstructured data.
8.	External API-1	The roads a vehicle was travelling along and provides additional metadata about those roads, such as speed limits.	Authentication requirements.
9.	External API-2	API allows you to map GPS coordinates to the geometry of the road, and to determine the speed limit along those road segments.	API is available via a simple HTTPS interface.
10.	Machine Learning Model	Neural networks is the most used machine learning technique for crash prediction.	Crash Perdiction
11.	Infrastructure (Server / Cloud)	System database is geographically oriented which suits location based infrastructure. Highly flexible to support different types of safety fuctions.	4G and 5G cellular networks.

Table-2: Application Characteristics:

S.No	Characteristics	Description	Technology
1.	Open-Source Frameworks	A template for software development that is designed by a social network of software developer.	GNU/Linux and Android
2.	Security Implementations	A farm security method which is right now going that is more unplanned typical way adopted time consuming and as well as laborious	RIFD Technology
3.	Scalable Architecture	The safe system approach to road safety emphasizes safety-by-design through ensuring safe vehicles, road networks, and road users.	Our interest in this work is to complement the approach with a short-to-medium term dynamic assessment of road safety.
4.	Availability	The present transport system has minimized the distance but it has on the other hand increased the life risk.	Mobile network and fast data transmission solution can be used for, provide real-time weather information and warnings.
5.	Performance	Light detection and ranging gun is a weightless and simple tool, which enables law officials to catch and book vehicles that crosses the speed limit.	The technology enables you to control traffic, catch the lawbreakers, and provide road safety.