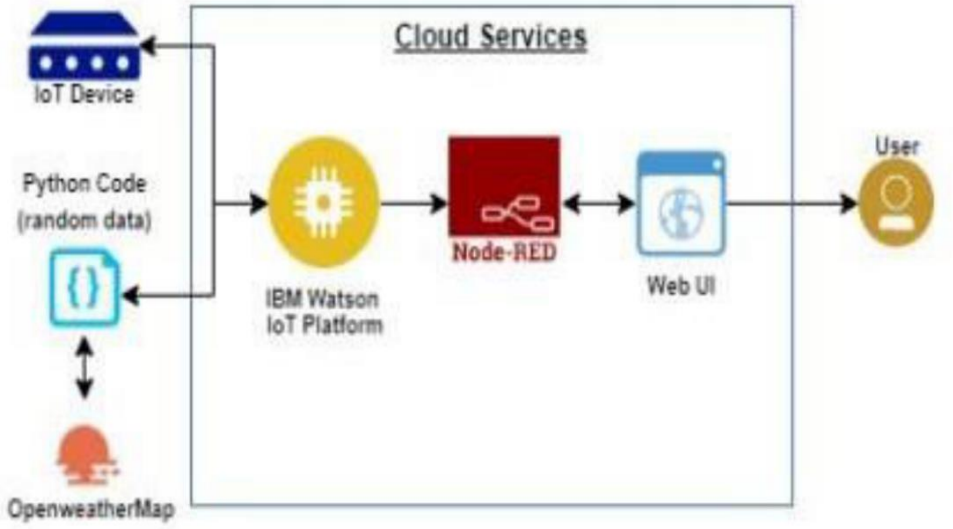
PROJECT DESIGN PHASE-II
TECHNOLOGY STACK (ARCHITECTURE & STACK)

Date	03 October 2022
Team ID	PNT2022TMID15148
Project Name	Project – SIGNS WITH SMART CONNECTIVITY FOR BETTER ROAD SAFETY
Maximum Marks	4 Marks

Technical Architecture:

SIGNS WITH SMART CONNECTIVITY FOR BETTER ROAD SAFETY



GUIDELINES:

1. Smart linked sign boards are used to replace static signboards.
2. These intelligent linked sign boards update automatically and obtain the speed restrictions from a web application utilising weather API.
3. The speed may rise or fall depending on weather changes.
4. The display of the diversion signs depends on the flow of traffic and potential fatalities.
5. The appropriate guide, warning, and service signs are also visible at hospitals and restaurants.
6. Rainfall causes the roads to become slick, and the speed restriction is lowered.
7. There is an online application that allows you to submit information about road detours, accident-prone regions, and informational sign boards. This information is obtained and shown on the sign boards appropriately.
8. With the use of buttons, many operating modes may be chosen.

Table-1: Components & Technologies:

S. No	Component	Description	Technology
1.	User Interface	The capability may be accessed by the user via fixed-distance digital sign boards.	IoT, Python
2.	Application Logic-1	For analysing massive amounts of data, IBM Watson is a data analytics processor that employs natural language processing.	IBM Watson
3.	Application Logic-2	A tool for flow-based programming that connects hardware, APIs, and web services	IBM Node red
4.	Cloud Database	For the execution of mission-critical workloads, IBM Cloud offers solutions that allow higher levels of compliance, security, and administration, using tried-and-true architectural patterns and delivery techniques.	IBM Cloud
5.	External API-1	Currently, a range of meteorological data, including current conditions, predictions, and historical records, are available through the OpenWeatherMap API.	Open weather API

Table-2: Application Characteristics:

S. No	Characteristics	Description	Technology
1.	Security Implementations	Has a database with robust security that requires certain credentials to access it	Cyber Resiliency Strategy
2.	Scalable Architecture	With the aid of the Internet, the architecture is connected. Increasing bandwidth can expand the operational range	Internet

S. No	Characteristics	Description	Technology
3.	Availability	Accessible always and locations Whenever the user is logged onto the network, which is always.	IBM Cloud
4.	Performance	Allows a lot of people to use the technology at the same time.	IBM Cloud