Team ID	PNT2022TMID52316
Project Name	Project – Signs With Smart Connectivity For Better Road Safety

Technical Architecture:

Traffic Monitoring System

Cloud Services

IBM Watson Platform

Node-Red

Web UI

LED Display

smart sign board

Python Code

OpenWeather

User Mobile Notification
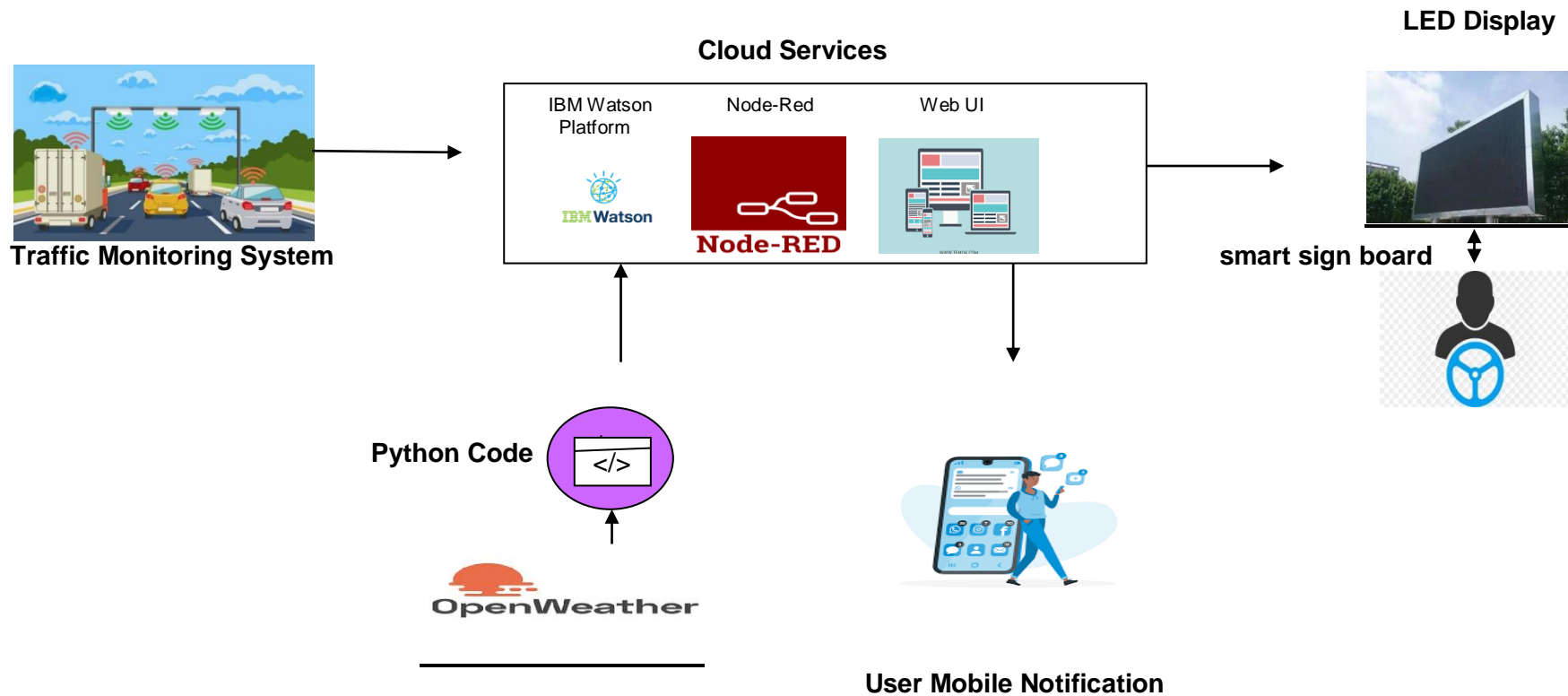
GUIDELINES:

- Smart Connectivity based signboards are used to replace static signboards.

- Based on situations, like high traffic, construction or branch on the road etc the diversion signs are changed.

- Sign boards in the vicinity of schools, hospitals, restaurants etc have signs displayed accordingly.

- Speed limitations can be sent through a web app, which gets weather conditions from weather API and changed in the signboards.

- Many different operation can be updated like finding the number of passengers in a vehicle, helps in finding stolen vehicles easily.

Table-1 : Components & Technologies:

S.No	Component	Description	Technology
1.	User Interface	How user interacts with application e.g. Web UI, Mobile App, Chatbot etc.	HTML, CSS, JavaScript / Angular Js / React Js etc.
2.	Application Logic-1	Logic for a process in the application	Java / Python
3.	Application Logic-2	Logic for a process in the application	IBM Watson STT service
4.	Application Logic-3	Logic for a process in the application	IBM Watson Assistant
5.	Database	Data Type, Configurations etc.	My SQL, No SQL, etc.
6.	Cloud Database	Database Service on Cloud	IBM DB2, IBM Cloud ant etc.
7.	File Storage	File storage requirements	IBM Block Storage or Other Storage Service or Local File system
8.	External API-1	Purpose of External API used in the application	IBM Weather API, etc.

Table-2: Application Characteristics:

S.No	Characteristics	Description	Technology
1.	Security Implementations	Strong security system that anyone without login credentials and hackers are not allowed to enter the work.	Firewall, Firebase, cyber resiliency strategy
2.	Scalable Architecture	Easy to expand the operating range by increasing the bandwidth of the network.	IOT, Internet
3.	Availability	Available anytime and everywhere 24/7 as has the user is signed into the network.	IBM Cloud
4.	Performance	Supports a large number of users to access the technology simultaneously	IBM Cloud