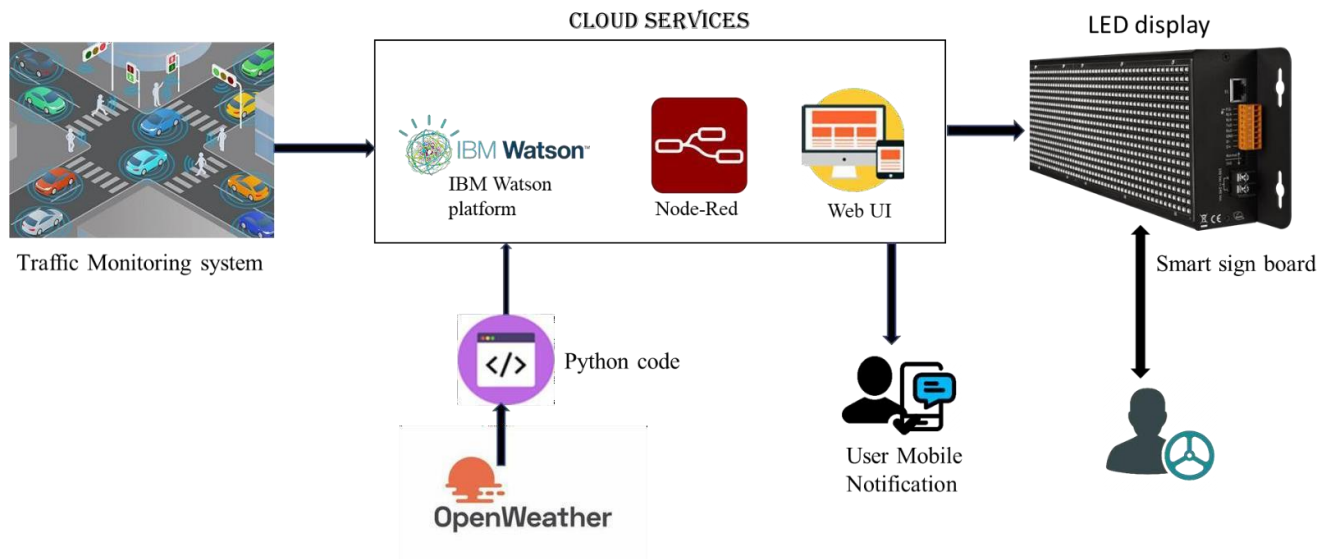


Project Design Phase-II Technology Stack (Architecture & Stack)

| | |
|---------------|--|
| Date | 8.11. 2022 |
| Team ID | PNT2022TMID17040 |
| 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



GUIDELINES:

- To replace the static signboards, smart connected sign boards are used.
- These smart connected sign boards get the speed limitations from a web app using weather API and update automatically.
- Based on the weather changes the speed may increase or decrease.
- Based on the traffic and fatal situations the diversion signs are displayed.
- Guide(Schools), Warning and Service(Hospitals, Restaurant) signs are also displayed accordingly.
- Different modes of operations can be selected with the help of buttons.

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. | MySQL, NoSQL, etc. |

| | | | |
|----|----------------|---|--|
| 6. | Cloud Database | Database Service on Cloud | IBM DB2, IBM Cloudant etc. |
| 7. | File Storage | File storage requirements | IBM Block Storage or Other Storage Service or Local Filesystem |
| 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 network. | 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 long as the user is signed into the network. | IBM Cloud |
| 4. | Performance | Supports a large number of users to access the technology simultaneously. | IBM cloud |