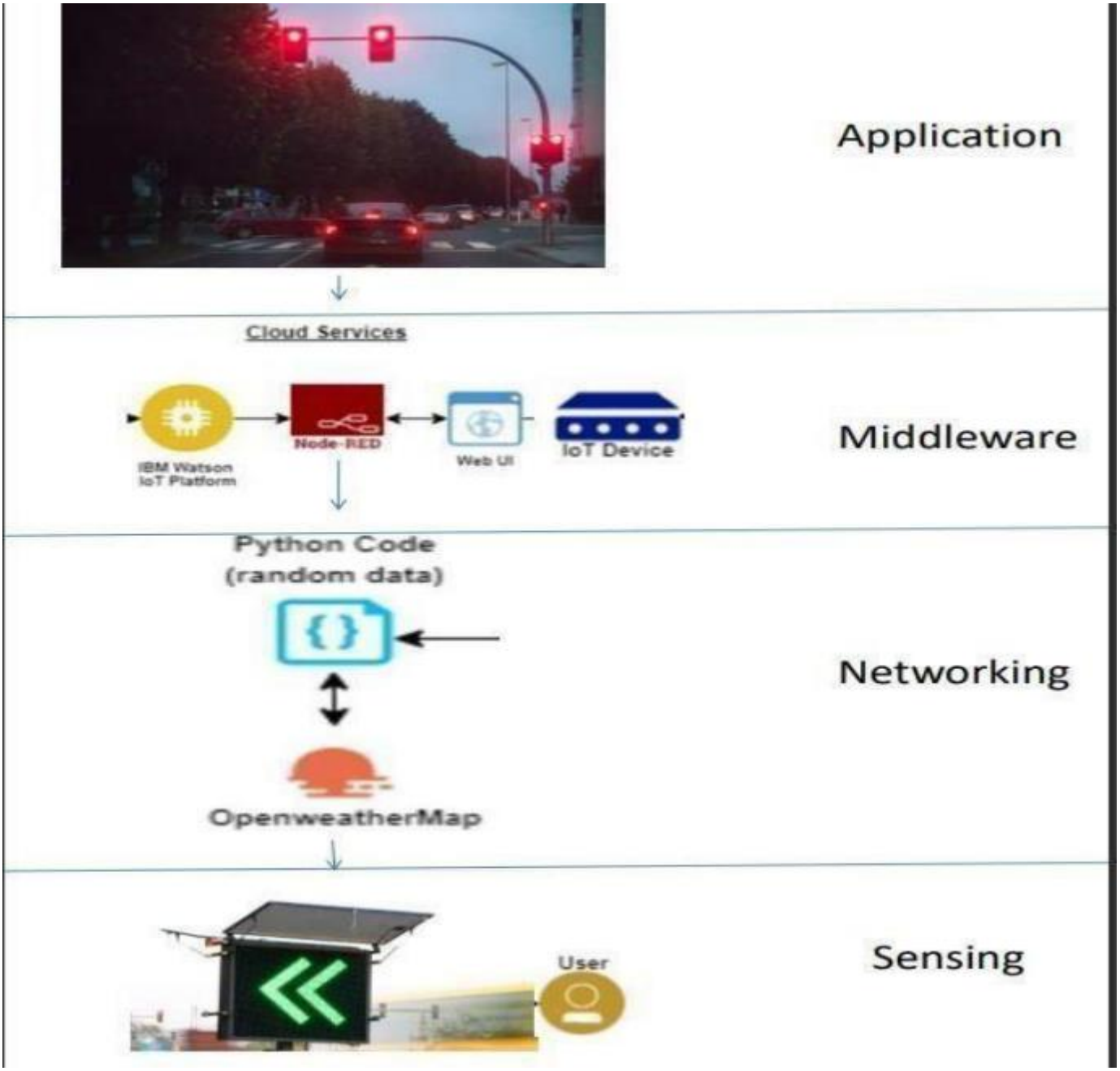
ProjectDesignPhase-II
TechnologyStack(Architecture&Stack)

Date	15October2022
TeamID	PNT2022TMID30265
ProjectName	Signs with Smart Connectivity for Better Road Safety
MaximumMarks	4Marks



GUIDELINES:

- To replace the static sign boards,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.
- If there is rainfall then the roads will be slippery and the speed limit would be decreased.
- There is a web app through which you can enter the data of the Road diversions, accident prone are as and the information sign Boards can be entered through web app.This data is retrieved and displayed on the sign boards accordingly.
- Different modes of operations can be selected with the help of buttons.

S.no	Component	Description	Technology
1.	User Interface	User can able to access The feature through the digital sign boards placed at fixed distance	IoT, Python
2.	Application Logic-2	IBM Watson is a data analytics processor that uses natural language processing,for processing vaststores of data	IBM Watson
3.	Application Logic-3	A flow based programming tool for wiring together hardware devices,api,online services	IBM Node red
4.	Cloud Database	IBM Cloud provides solutions that enable higher levels of compliance,security,and management,with proven architecture patterns and methods for rapid delivery for	IBM Cloud

		running mission-critical work loads	
5.	ExternalAPI-1	The OpenWeather Map API currently provides a wide variety of weather data including current weather,forecasts,history record	Open weather API

Table-2:ApplicationCharacteristics

S.No	Characteristics	Description	Technology
1.	Security Implementations	Has a strong security to the database that cant be accessed without a particular credentials	Cyber resiliency strategy
2.	Scalable Architecture	The architecture is connected with the help of Internet.The range of operation can be increased by increasing bandwidth	internet.
3.	Availability	Available anytime and everywhere24/7 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