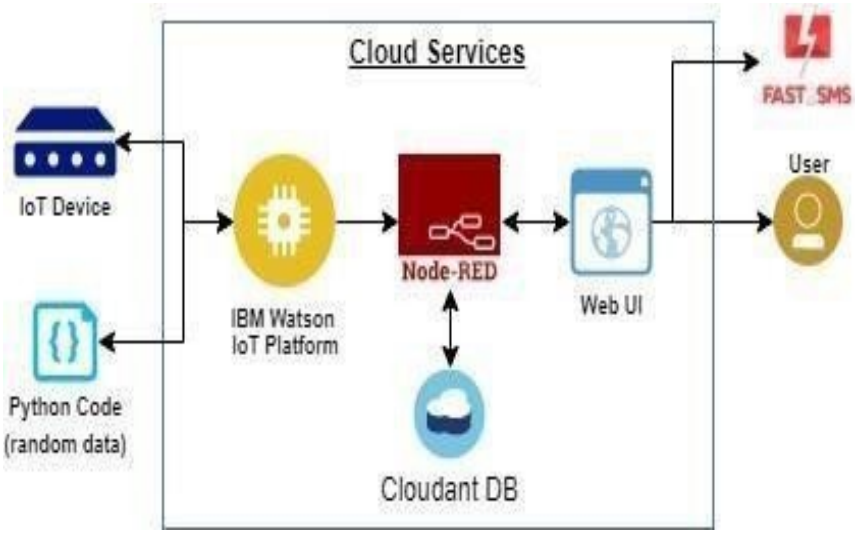
Project Design Phase- II Technology Stack
(Architecture &Stack)

Project	**Industry Specific Intelligent Fire Management System**
Team ID	**PNT2022TMID12796**

Technical Architecture:

The Deliverables hall include the architectural diagram as below and the informations per the table1&table2



Guidelines:

1. Include all the processes(As an application logic/Technology Block)
2. Provide infrastructural demarcation(Local/Cloud)
3. Indicate external interfaces(third party API’ set c.)
4. Indicate Data Storage components/ services
5. Indicate interface to machine learning models(if applicable)

Table-1: Components&Technologies:

S.No	Component	Description	Technology
1.	User Interface	Web UI ,Node-RED, MITapp	IBM IoT Platform, IBM Node red, IBM Cloud
2.	ApplicationLogic-1	Create Ibm Watson IoT platform and create node- red service	Ibm Watson ,ibm cloudant service, ibm node-red
3.	ApplicationLogic-2	Develop python script to publish and subscribe to IBM IoT Platform	python
4.	ApplicationLogic-3	Build a web application using node-red service	IBM Node-red
5.	Database	Data Type, Configuration set c.	MySQL
6.	Cloud Database	Database Service on Cloud	IBMDB2, IBM Cloudant
7.	File Storage	Developing mobile application to store and receive the sensors information and to react accordingly	Web UI, python
8.	ExternalAPI-1	Using this IBM fire management API we can track the temperature of the incident place and where the fire had been attacked.	IBM fire management API
9.	ExternalAPI-2	Using this IBM Sensors it detects the fire, Gas leaks, temperature and provides the activation of sprinklers to web UI	IBM Sensors
10.	MachineLearningModel	Using this we can derive the object recognition model	Object Recognition Model
11.	Infrastructure(Server/Cloud)	Application Deployment on Local System / Cloud Cloud Server Configuration	IBM cloudant, IBM IoT Platform

Table-2:ApplicationCharacteristics:

S.No	Characteristics	Description	Technology
1.	Open-Source Frameworks	MIT app Inventor	MIT License
2.	Security Implementations	IBM Services	Encryptions, IBM Controls
3.	Scalable Architecture	sensor-IoT Cloud based architecture	Cloud computing and AI
4.	Availability	Mobile ,laptop, desktop	MIT app
5.	Performance	Detects the Fire, gasleak, temperature	sensors