

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

Date	17 October 2022
Team ID	PNT2022TMID35932
Project Name	Hazardous Area Monitoring in Industrial Plant powered by IOT
Maximum Marks	4 Marks

Technical Architecture:

The Deliverable shall
table1 & table 2

include the architectural diagram as below and the information as per the

USER

IBM CLOUD

ADMIN

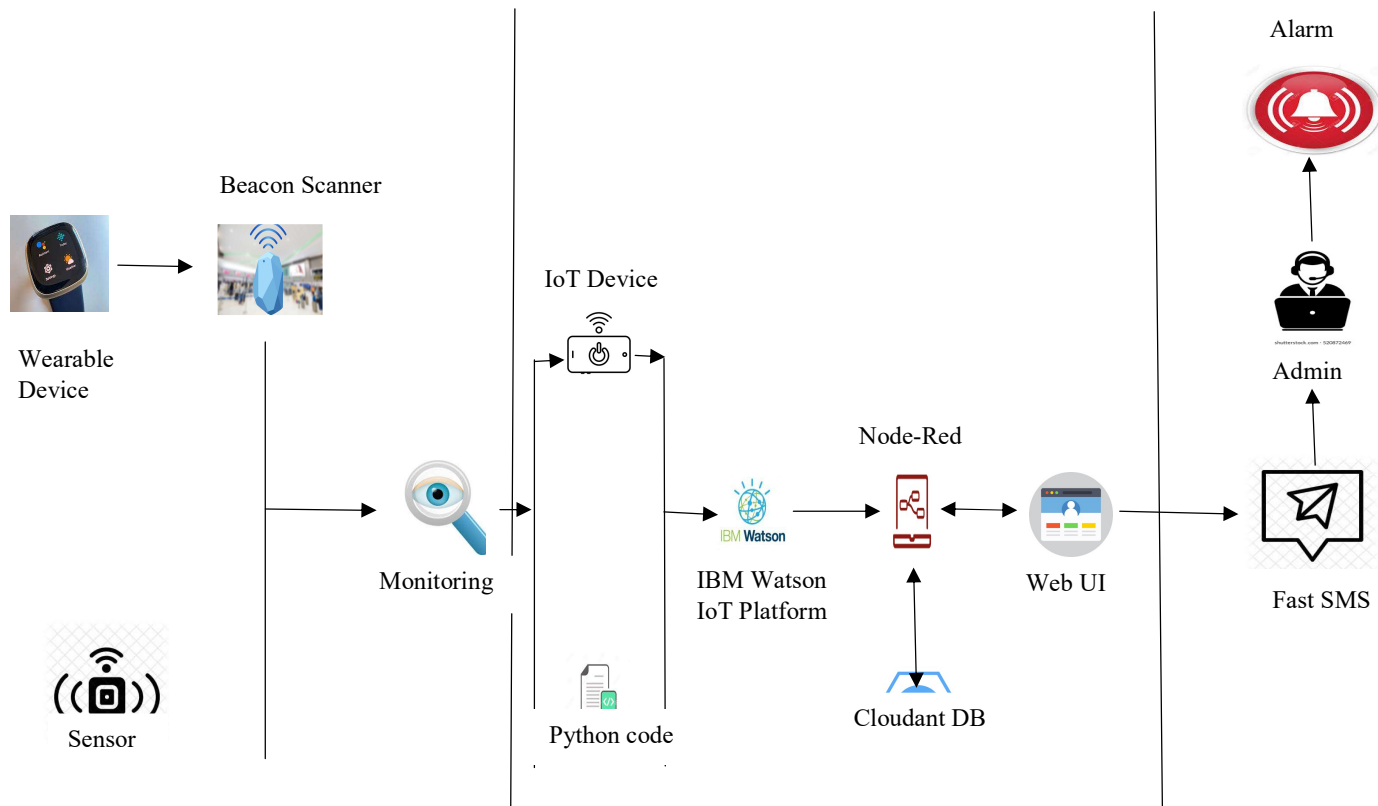


Table-1 : Components & Technologies:

S.No	Component	Description	Technology
1.	User Interface	Web UI	HTML, JavaScript
2.	Application Logic-1	To interface the sensors with arduino uno and for its communication with the Internet gateway	Arduino/embedded C
3.	Application Logic-2	For the mobile app	Python
4.	Application Logic-3	Scanner to get the user condition	IBM Watson IoT
5.	Database	For managing the database and retrieving data	MySQL
6.	Cloud Database	Database Service on Cloud	IBM Cloudant etc.
7.	File Storage	App code is stored along with the API keys	IBM Block Storage
8.	External API-2	To create username credentials for login	Username API
9.	Machine Learning Model	Alert rising system	Object Recognition Model, etc.
10.	Infrastructure (Server / Cloud)	To manage data to and from the server	Node Red

Table-2: Application Characteristics:

S.No	Characteristics	Description	Technology
1.	Open-Source Frameworks	We are using the MIT App inventor as our open source framework	MIT App Inventor
2.	Security Implementations	SHA 256 and other network protocols with security protocols will be used	SHA-256
3.	Scalable Architecture	The IBM cloud provides a robust framework which can be used to scale the framework to a large inter-connected network.	IBM Cloud
4.	Availability	The load balancers can be implemented to make sure the framework sustains the traffic generated without compromising the performance.	IBM Load balancer
5.	Performance	This is used to increase the performance of hosted application.	IBM instance