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

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Team ID	PNT2022TMID15984
Project Name	Hazardous Area Monitoring For Industrial Plant Powered By IOT
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Technical Architecture:

The Deliverable shall include the architectural diagram as below and the information as per the table1 & table 2

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 / Raspberry Pi
2.	Application Logic-1	Logic for a process in the application	Java / Python
3.	Application Logic-2	Logic for a process in the application	Raspberry Pi
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 Service	Database Service on Cloud	IBM DB2, IBM Cloudant etc.
7.	File Storage	File storage requirements	IBM Block Storage or Other Storage Service
8.	Sensor nodes	Purpose of External API used in the application	IBM Weather API, Temperature Sensor etc.
9.	Alarm	Purpose of External API used in the application	Alarm and controller, wearable devices, watch tower
10.	Machine Learning Model	Purpose of Machine Learning Model	Object Recognition Model, etc.

Table-2: Application Characteristics:

S.No	Characteristics	Description	Technology
1.	Open-Source Cloud Storage	Open source cloud storage data is available and accessible 24×7 from a remote location	ownCloud, Nextcloud, Pydio Cells and Seafile
2.	Security Implementations	Protection against aggressive work enviroment	Real Time Monitoring and Control Systems
3.	Scalability	Extending coverage and generic solution across all components listed above	IIOT Sensors
4.	Availability	Real Time APIs for immediate data transfer	Python, Raspberry PI GUI
5.	Performance	Maintenance with most minimal intervention in On-Site Process	IIOT

References:

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