

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

Date	01 November 2022
Team ID	PNT2022TMID22887
Project Name	Gas Leakage Monitoring and Alerting System
Maximum Marks	4 Marks

Technical Architecture:

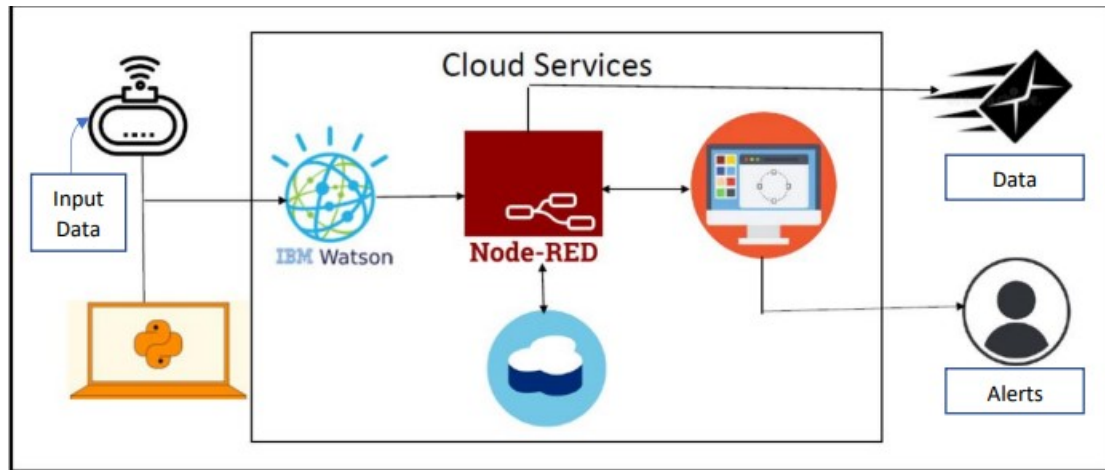


Table-1 : Components & Technologies:

S.No	Component	Description	Technology
1.	MQ-5 gas sensor	Used to assess gas concentration and detect explosive or dangerous gases	Detecting the gas leakage
2.	ESP8266 WIFI Module	Able to either offload all WI-FI networking tasks from the application processor or run an application.	Integrated TCP/IP Protocol stack.
3.	LED	Two lead semiconductor light source	Pn-junction diode, which emits light when activated.
4.	Buzzer	It is an audio signalling device.	Timers and confirmation of user input such as a mouse

5.	Arduino uno	Based on user-friendly hardware and software, an open source electronics platform	Integrated development environment (IDE)
6.	Cloud services	Database Service on Cloud	IBM DB2, IBM Cloudant etc.
7.	Python code	Frequently used computer programming languages for creating websites and software	Multi-paradigm programming language
8.	User application	Purpose of External API used in the application	IBM Weather API, etc.
9.	Specified mobile number	Logging in and looking up the website's essential information	Application etc.
10.	Internet	Networks interlinked	Worldwide system of computer networks
11.	Mango db	Database management system that is open source.	Open-source document database.

Table-2: Application Characteristics:

S.No	Characteristics	Description	Technology
1.	Open-Source Frameworks	Leaks indicators developing ,electronics radar	Feed actual time sensor data internet
2.	Security Implementations	Increasing as a result of a key in place for data leakage detection on an attack surface.	Continuous monitor your external attack surface.
3.	Scalable Architecture	Requirements necessity for detection.	Technology used
4.	Availability	High-quality tools that can identify leaks	Technology used
5.	Performance	Arduino response time will be fast	Technology used