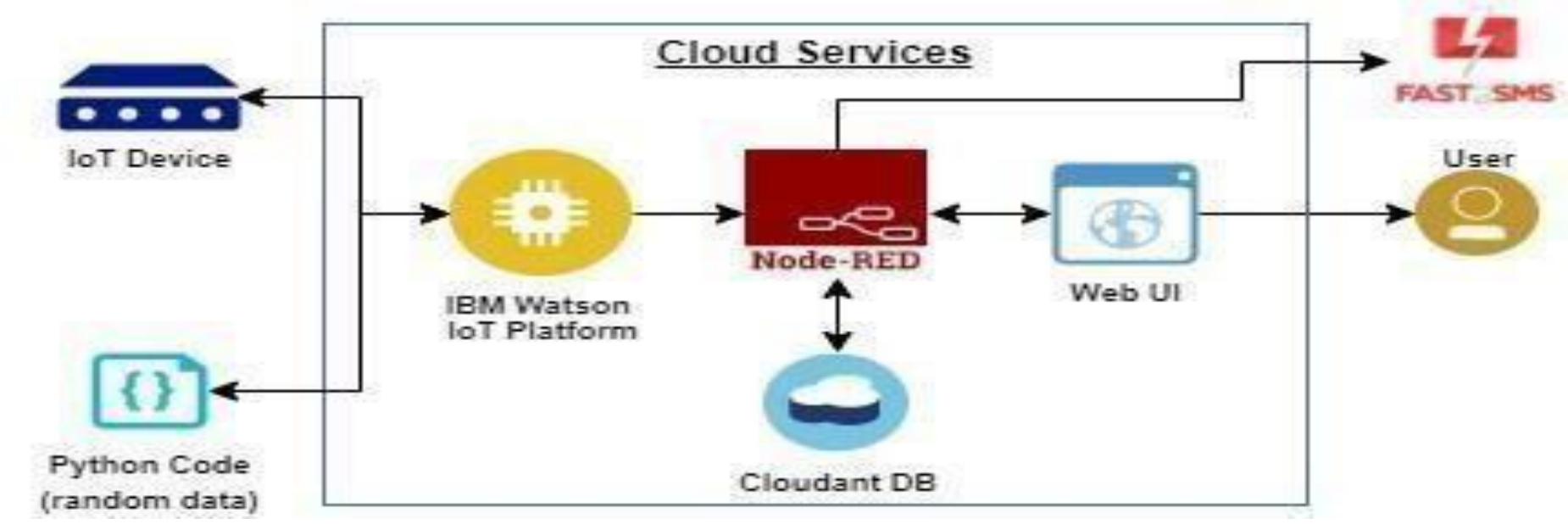
**Project Design Phase-II Technical**

TEAM ID: **PNT2022TMID52302**

Project Name: **Gas Leakage Monitoring & Alerting System For Industries**

# Architecture

**Technical Architecture**



| S.No | Characteristics | Description | Technology |
|---|---|---|---|
| 1. | Open-Source Framework | Frameworks for connecting to the Raspberry Pi and Node Red that are open source | Working with Raspberry PI Wiring Pi, Pigpio, Gpiozero, Rpi. GPIO |
| 2. | Scalable Architecture | Justify the scalability of architecture (3 – tier, Micro-services) | Data , models, operate at size, speed , consistency and complexity |
| 3. | Availability | Application accessibility (e.g. use of load balancers, distributed servers etc.) | Numerous area leakage detection. |
| 4. | Performance | Design considerations for the application's performance (requests per second, use of sensors, etc.). | Full and effective detection using Raspberry pi for Industries. |

**Table-1 : Components & Technologies:**

| S.No | Component | Description | Technology |
|---|---|---|---|
| 1. | User Interface | Web UI or Website | HTML, CSS. |
| 2. | Application Logic-1 | Sensor initialization | Node RED |
| 3. | Leakage detector | To identify gas leaks in industries and make arrangements | Non-dispersive infrared sensors, or NDIR |
| 4. | Infrastructure (Server / Cloud) | Application deployed on cloud server | IBM Watson IoT Platform |