Technical Architecture:

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

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| Date | 03 october 2022 |
| Team ID | PNT2022TMID48419 |
| Project Name | SmartFarmer - IoT Enabled Smart Farming Application |
| Maximum Marks | 4 Marks |

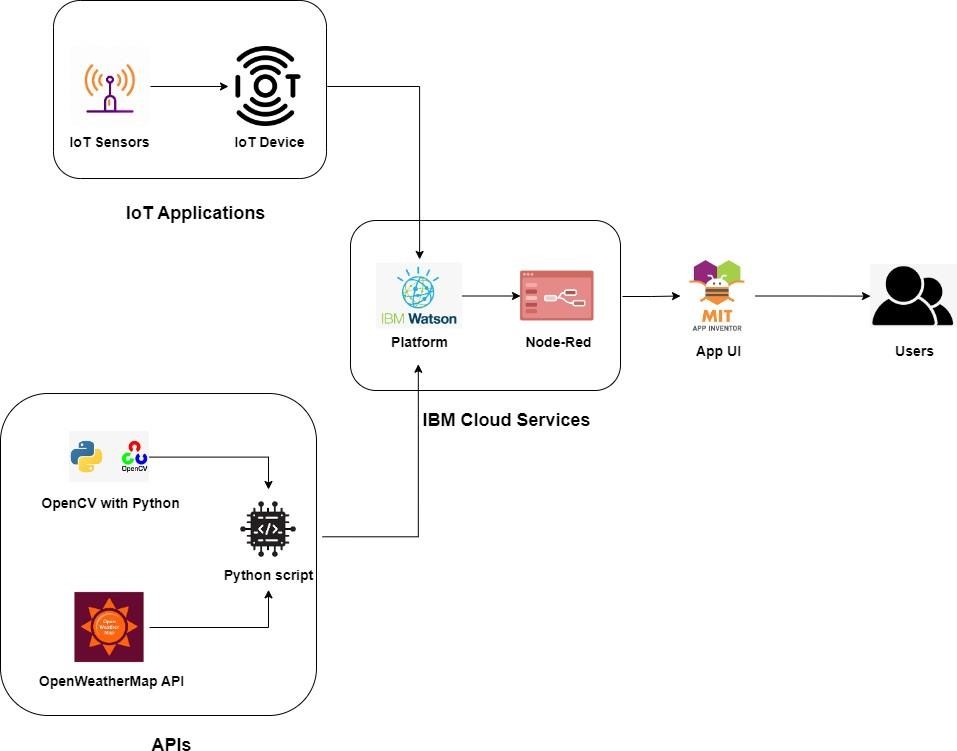


Table-1 : Components & Technologies:

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| **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 / React Js etc. |
| 2. | Application Logic-1 | Logic for a process in the application | Java / Python |
| 3. | Application Logic-2 | Logic for a process in the application | IBM Watson STT service |
| 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 Database | Database Service on Cloud | IBM DB2, IBM Cloudant etc. |
| 7. | File Storage | File storage requirements | IBM Block Storage or Other Storage Service or Local Filesystem |
| 8. | External API-1 | Purpose of External API used in the application | IBM Weather API, etc. |
| 9. | External API-2 | Purpose of External API used in the application | Aadhar API, etc. |
| 10. | Machine Learning Model | Purpose of Machine Learning Model | Object Recognition Model, etc. |
| 11. | Infrastructure (Server / Cloud) | Application Deployment on Local System / Cloud Local Server Configuration:  Cloud Server Configuration : | Local, Cloud Foundry, Kubernetes, etc. |

Table-2: Application Characteristics:

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| **S.No** | **Characteristics** | **Description** | **Technology** |
| 1. | Open-Source Frameworks | OpenWeatherMap , NODE-RED, IBM WATSON, MIT App Inventor | IoT, internet |
| 2. | Security Implementations | Powerful security system for everyone'speace of mind  No access data Hackers cannot accessnetwork | Firewall, Firebase, cyber resiliency,strategy |
| 3. | Scalable Architecture | EASY TO EXTEND THE NETWORK WITH THE AID OF THE BANDWIDTH OF THE NETWORK | IBM Cloud |
| 4. | Availability | Available every time and everywhere 24/7so long as the consumer is signed into thenetwork. | IBM Cloud |
| 5. | Performance | AIDS MASSIVE RANGE OF USERS TO USE TECHNOLOGY | IBM Cloud |