**Project Design Phase-II**

**Technology Stack (Architecture & Stack)**

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| Date | 15 October 2022 |
| Team ID | PNT2022TMID22506 |
| Project Name | AI POWERED NUTRITION ANALYZER FOR  FITNESS ENTHUSIASTS |
| Maximum Marks | 4 Marks |

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

|  |  |  |  |
| --- | --- | --- | --- |
| **S.No** | **Component** | **Description** | **Technology** |
| 1. | App | User interacts with application for the prediction of Nutrition | Python, Java, HTML, SQLite, Android studio |
| 2. | Database | Data Type, Configurations and data will be stored | MySQL, JS |
| 3. | Cloud Database | Database Service on Cloud | IBM DB2, IBM Cloudant etc. |
| 4. | File Storage | File storage requirements | Cloud -- > drive |
| 5. | Machine Learning Model | Purpose of Machine Learning Model | ANN, CNN, RNN |
| 6. | Notification | Notification will be sent from the server | SendGrid |

**Table-2: Application Characteristics:**

|  |  |  |  |
| --- | --- | --- | --- |
| **S.No** | **Characteristics** | **Description** | **Technology** |
| 1. | Open-Source Frameworks | Open-source frameworks used | SendGrid, Python, JQuery |
| 2. | Security Implementations | Request authentication using encryption | Encryptions, SSL certs |
| 3. | Scalable Architecture | The scalability of architecture consists of 3 tiers | Web Server – HTML, CSS ,Javascript  Application Server – Python Flask  Database Server – IBM Cloud |
| 4. | Availability | Availability is increased by loads balancers in cloud VPS | IBM Cloud hosting |
| 5. | Performance | The application is expected to handle up to 4000 predications per second | IBM Load Balance |

# TECHNICAL ARCHITECTURE



