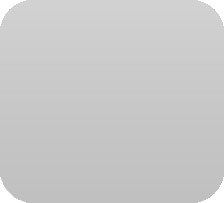
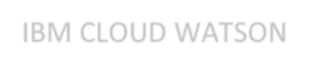
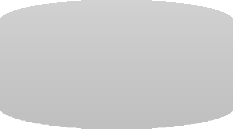
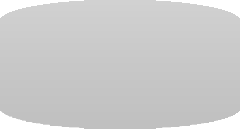
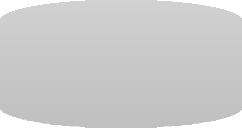
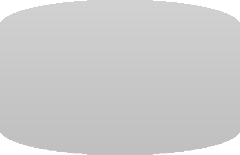
# Technical Architecture:



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

|  |  |
| --- | --- |
| Date | 15 October 2022 |
| Team ID | PNT2022TMID10060 |
| Project Name | Flight Delay Prediction Using Machine Learning |
| Maximum Marks | 4 Marks |

Data Pre- processing

EDA Feature

Engineering

IBM CLOUD WATSON

HTML Pages

Dashboard, Login page etc

JUPYTER NOTEBOOK(SciPy)

Flightdata.csv

Splitting Dataset

Integrating ML

Model

Training Data

MySQL

FLASK

Testing Data

Develop

and train ML models

Evaluating

the ML models

Choose

Best ML Model

**USER**

User Data

Deploy

Best ML Model

# Table-1 : Components & Technologies:

|  |  |  |  |
| --- | --- | --- | --- |
| **S.No** | **Component** | **Description** | **Technology** |
| 1. | User Interface | How user interacts with application Web UI. | HTML, CSS |
| 2. | Application Logic-1 | Develop , Train and find best ML Model | Python |
| 3. | Application Logic-2 | Deploy Best ML Model | IBM Watson |
| 4. | Application Logic-3 | Integrating ML model with Flask web app | IBM Watson, Flask, python |
| 5. | Database | Structured data | MySQL |
| 6. | Cloud Database | Database Service on Cloud | IBM DB2 |
| 7. | File Storage | File storage requirements | IBM Block Storage or Other Storage Service or Local Filesystem |
| 8. | Infrastructure (Server / Cloud) | Application Deployment on Cloud | Cloud Foundry, Kubernetes |

**Table-2: Application Characteristics:**

|  |  |  |  |
| --- | --- | --- | --- |
| **S.No** | **Characteristics** | **Description** | **Technology** |
| 1. | Open-Source Frameworks | Flask, Scipy, Jupiter Notebook | microframework |
| 2. | Scalable Architecture | 3 – tier, Micro-services | Relational database, cloud, GUI |
| 3. | Availability | distributed servers | IBM Cloud |
| 4. | Performance | 100 per sec | IBM Watson App Service |