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

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|---|---|
| Date | 16 October 2022 |
| Team ID | PNT2022TMID15779 |
| Project Name | Developing a Fight delay prediction model using Machine Learning |
| Maximum Marks | 4 Marks |

**Technical Architecture:**

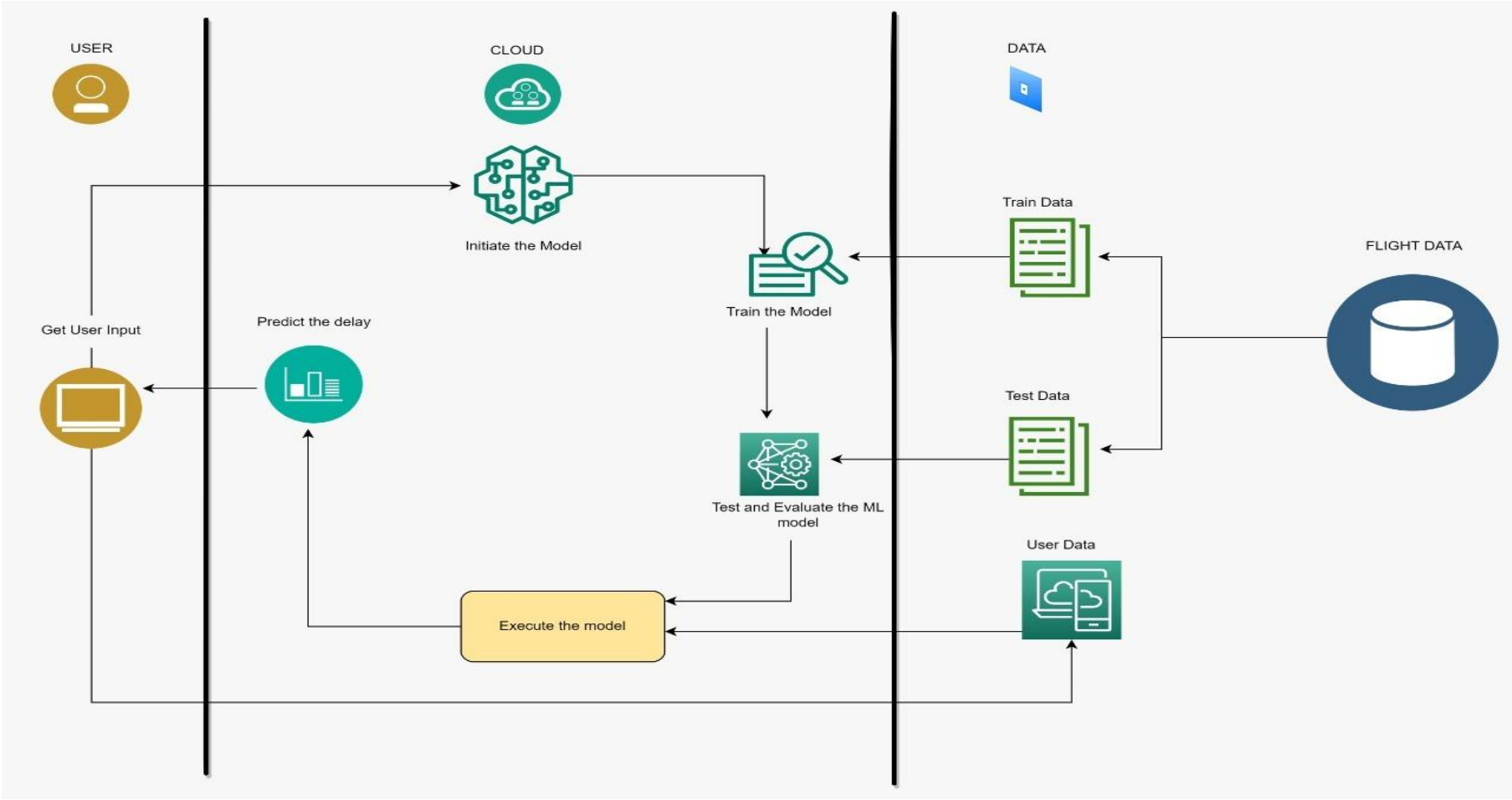

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**Table-1 : Components & Technologies:**

| S.No | Component | Description | Technology |
|---|---|---|---|
| 1. | User Interface | user interacts with application | HTML, CSS, JavaScript / Angular Js / React Js etc. |
| 2. | Application Logic-1 | Develop a ML model | Python |
| 3. | Application Logic-2 | Analysis the best model | IBM Watson MLservice |
| 4. | Application Logic-3 | Select the model | 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 | Communication between user and cloud | IBM Watson, etc. |
| 9. | External API-2 | Communication between cloud and data | Aadhar API, etc. |
| 10. | Machine Learning Model | Purpose of Machine Learning Model | Evaluation and Prediction Model |
| 11. | Infrastructure (Server / Cloud) | Application Deployment on Local System / Cloud<br>Local Server Configuration:<br>Cloud Server Configuration : | Flask,IBM Watson, etc. |

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**Table-2: Application Characteristics:**

| S.No | Characteristics | Description | Technology |
|---|---|---|---|
| 1. | Open-Source Frameworks | Flask,Node js, Jupyter Notebook,Google colab | Flask,Python |
| 2. | Security Implementations | Firewalls,Digital Signature,DNS,Symmentric key Encryption | SHA-256, Encryptions, IAM Controls, OWASP etc. |
| 3. | Scalable Architecture | 3 – tier, Micro-services | IBM Watson |
| 4. | Availability | use of load balancers, distributed servers etc. | IBM Cloud |
| 5. | Performance | 100 requests per sec, use of Cache, use of CDN’s | IBM Watson |