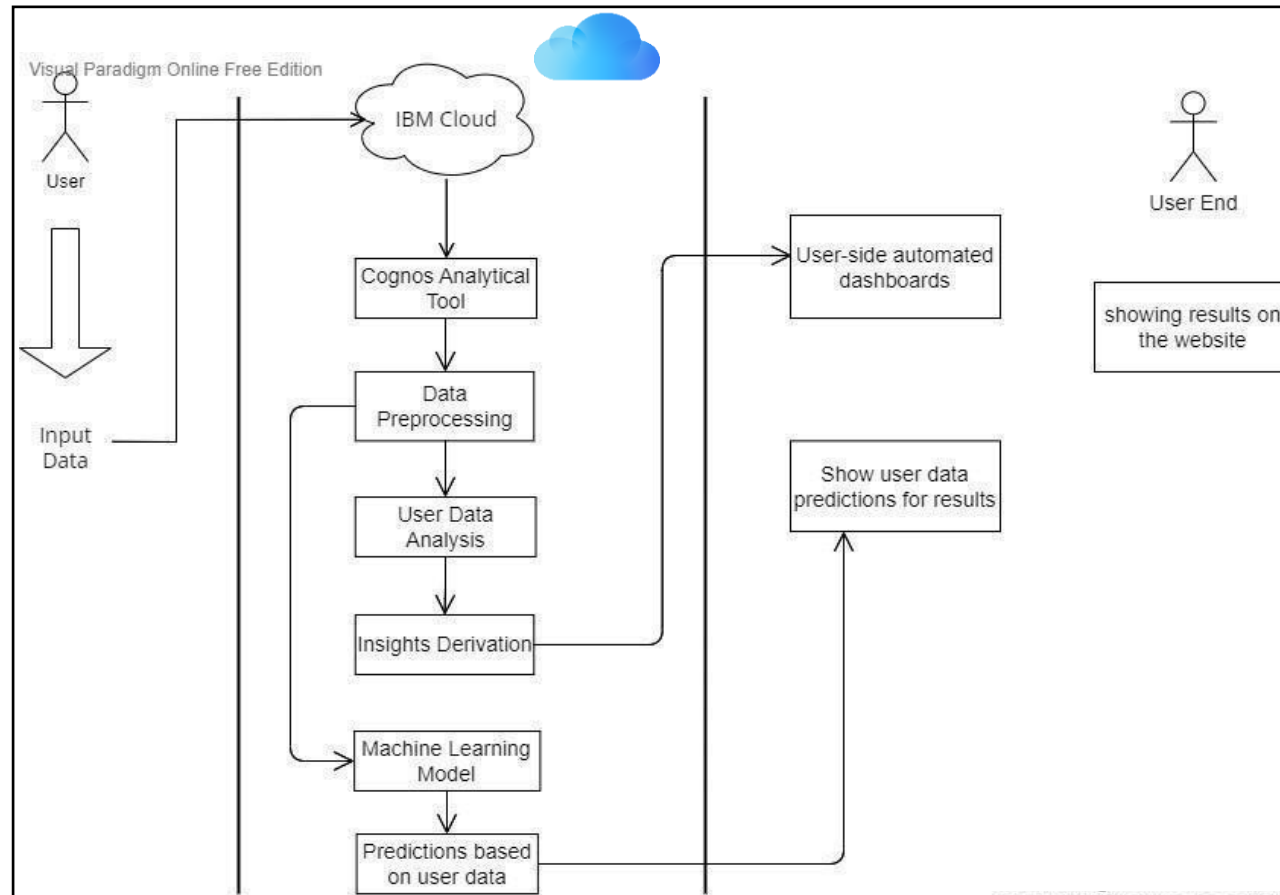


**Project Design Phase-II**  
**Technology Stack (Architecture & Stack)**

|               |   |
|---------------|---|
| Date          | 03 October 2022                                       |
| Team ID       | PNT2022TMID25687                                      |
| Project Name  | Project - Data Analytics for DHL Logistics Facilities |
| Maximum Marks | 4 Marks   |

**Technical Architecture:**



| S.No | Component      | Description   | Technology            |
|------|----------------|---|-----------------------|
| 1.   | User Interface | User uploads the csv or excel format files into the web pages | HTML, CSS, JavaScript |

|    |                     |  |           |
|----|---------------------|--|-----------|
| 2. | Application Logic-1 | The user data will pass into the IBM cloud for storing and acts as a data source | IBM cloud |
|----|---------------------|--|-----------|

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

|     |                                 |  |  |
|-----|---------------------------------|--|--|
| 3.  | Application Logic-2             | In cloud, data will be fetched by the Cognos analytical tool for data analysis   | IBM Cognos analytical tool                                     |
| 4.  | Application Logic-3             | The pre-trained Dashboards will be present to perform analysis on the incoming data  | IBM Cognos analytical tool                                     |
| 5.  | Database                        | Data will be retrieved from cloud  | MySQL  |
| 6.  | Cloud Database                  | Database Service on cloud  | IBM DB2, IBM Cloud   |
| 7.  | File Storage                    | Customer sales data is uploaded in cloud through interface   | IBM Block Storage or Other Storage Service or Local Filesystem |
| 8.  | External API-1                  | To perform data analysis on the user data  | IBM Cognos Tool  |
| 9.  | External API-2                  | To build the machine learning model for classification   | Jupyter Notebook   |
| 10. | Machine Learning Model          | To do the predictive analysis on the input data  | Predictive analysis model, etc.                                |
| 11. | Infrastructure (Server / Cloud) | Application Deployment on Local System / Cloud<br>Local Server Configuration: Using the flask<br>Cloud Server Configuration: IBM cloud | Local, Cloud Foundry   |

**Table-2: Application Characteristics:**

| S.No | Characteristics | Description | Technology |
|------|-----------------|-------------|------------|
|------|-----------------|-------------|------------|

|    |                          |   |  |
|----|--------------------------|---|--|
| 1. | Open-Source Frameworks   | List the open-source frameworks used  | Technology of Opensource framework                   |
| 2. | Security Implementations | List all the security / access controls implemented, use of firewalls etc.  | e.g., SHA-256, Encryptions, IAM Controls, OWASP etc. |
| 3. | Scalable Architecture    | Justify the scalability of architecture (3 – tier, Micro-services)  | Technology used                                      |
| 4. | Availability             | Justify the availability of application (e.g., use of load balancers, distributed servers etc.)                           | Technology used                                      |
| 5. | Performance              | Design consideration for the performance of the application (number of requests per sec, use of Cache, use of CDN's) etc. | Technology used                                      |