Project Design Phase-II Technology Stack

(Architecture & Stack)

Date	03 October 2022
Team ID	PNT2022TMID13814
Project Name	Project - Data Analytics for DHL Logistics Facilities

Technical Architecture:

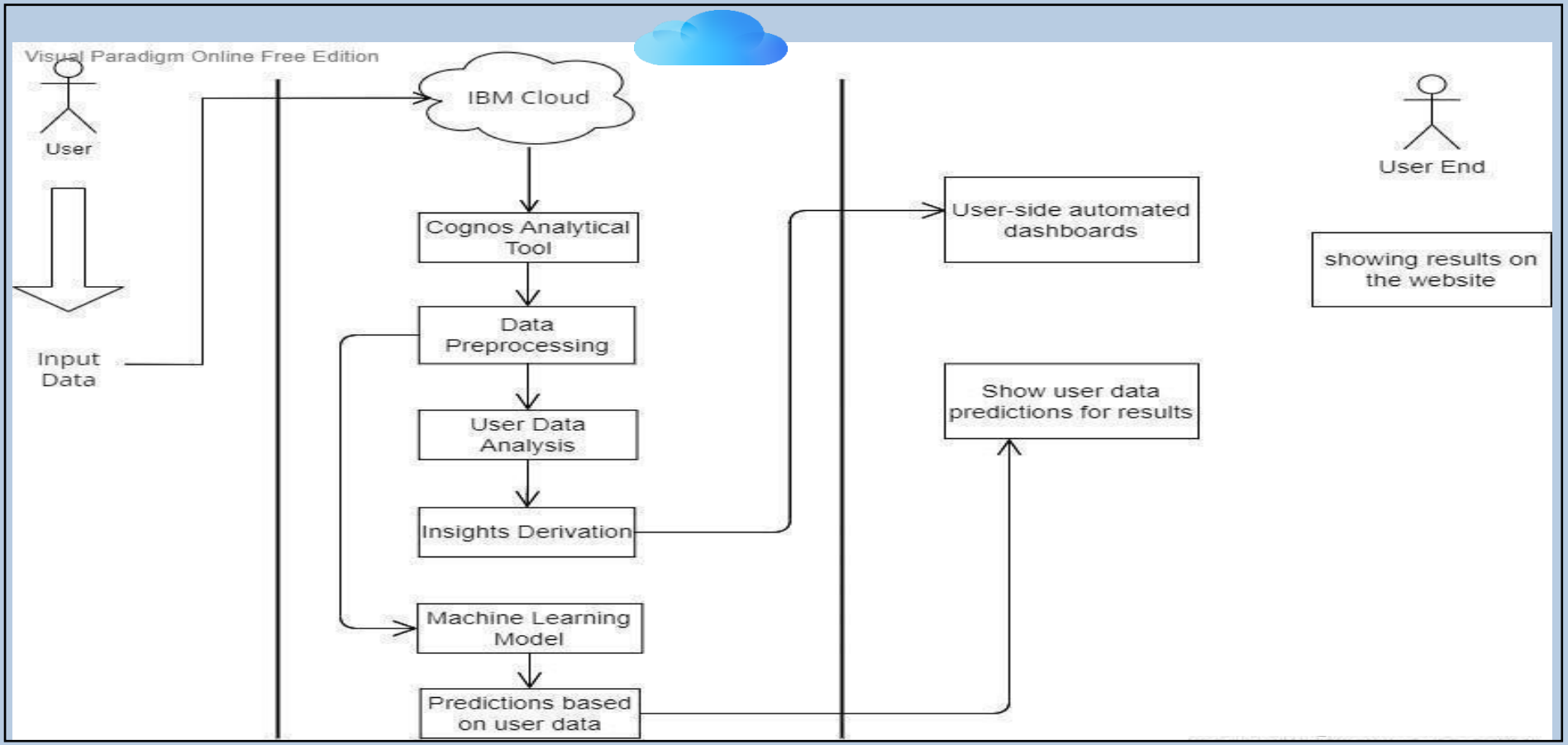

Table-1: Components & Technologies:

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
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	Jupiter 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 Local Server Configuration: Using the flask 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 loadbalancers, 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