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

Date	03 October 2022
Team ID	PNT2022TMID35586
Project Name	Project – Trip based modelling of fuel consumption in modern fleet vehicles using machine learning.
Maximum Marks	4 Marks

Technical Architecture:

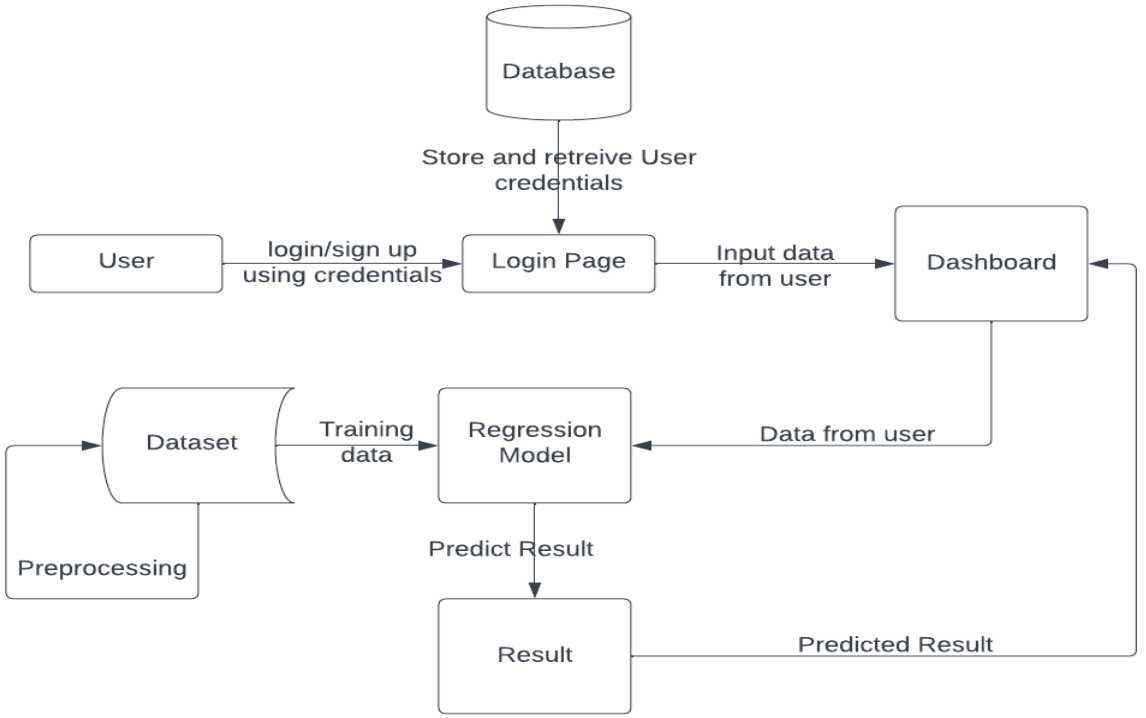

Table-1 : Components & Technologies:

S.No	Component	Description	Technology
1.	User Interface	Build a website to interact with user.	HTML, CSS, JavaScript
2.	Database	Store data for training data and user updates.	MySQL.
3.	Data Cleaning	Pre-process the data to reduce robustness.	Numpy, Pandas.
4.	API	Extract data from the dashboard.	Python Flask.
5.	Machine Learning Model	Regression model is used to predict output.	Linear Regression.
6.	Infrastructure	Application Deployment on Cloud.	IBM cloud.

Table-2: Application Characteristics:

S.No	Characteristics	Description	Technology
1.	Open-Source Frameworks	CSS styling framework, RDMS, Backend Framework.	IBM cloud Hosting, Python Flask, IBM cloud.
2.	Security Implementations	Authentication	Encryption Techniques
3.	Scalable Architecture	Can be scalable	IBM Cloud Service
4.	Availability	Increase by load balancer	IBM cloud hosting
5.	Performance	Handle large number of users at the same time	Load balancer, Distributed Server.