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

Date	15 October 2022
Team ID	PNT2022TMID27576
Project Name	DemandEst - AI powered Food Demand Forecaster
Maximum Marks	4 Marks

Technical Architecture:

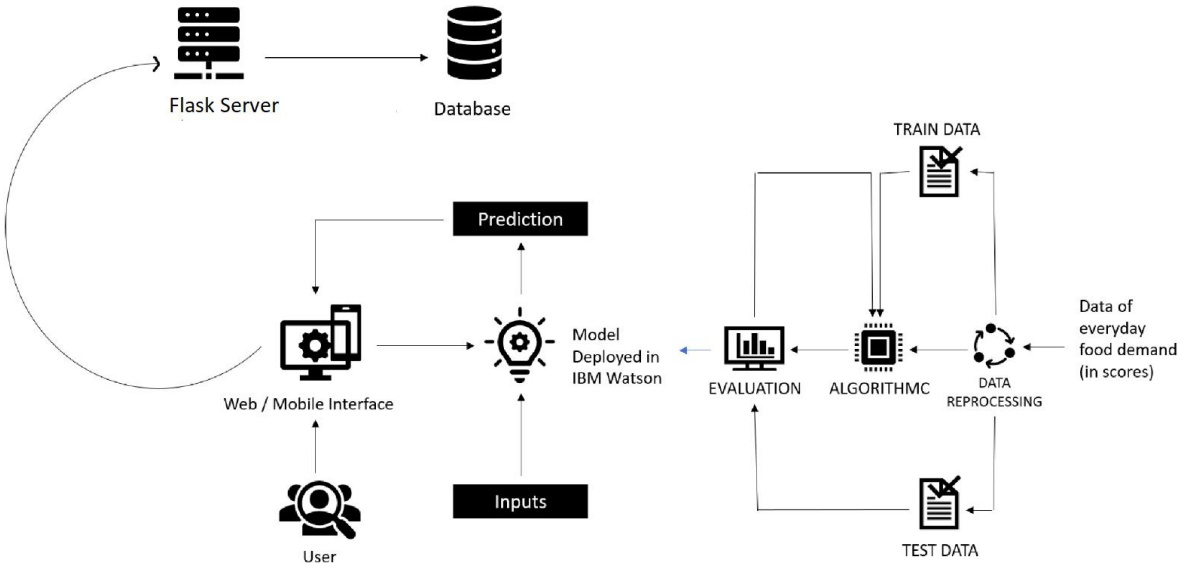

Table-1 : Components & Technologies:

S.No	Component	Description	Technology
1.	User Interface	User Interface is used to interact with the user and collect necessary details for user login and registration.	React Js, TailwindCSS
2.	Time Range	The user selects a time range to forecast the food demand.	React Component Libraries
3.	Database	A database to store user information	MySQL.
4.	Cloud Database	A database that should be served via cloud	IBM DB2
5.	Machine Learning Model	The Machine Learning model is trained using Multivariate linear regression algorithm along with Model Boosters to produce accurate predictions	Python, Numpy, Pandas, Sklearn Library
6.	Dataset	The Dataset is collected and stored as CSV file	MS Excel
7.	APIs	The APIs are used to serve the required content from the server. For prediction results, the corresponding API is triggered.	Python, Flask
8.	Infrastructure	The Frontend and Backend is deployed on Cloud	Docker

Table-2: Application Characteristics:

S.No	Characteristics	Description	Technology
1.	Open-Source Frameworks	The open-source frameworks used are listed	ReactJs, TailwindCSS
2.	Scalable Architecture	The Architecture is customized according to user's needs	
3.	Availability	The System is well tested so it is Highly available	
4.	Performance	Appropriate number of features are extracted from the data which makes Feature engineering efficient.	