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

Date	15 October 2022
Team ID	PNT2022TMID04836
Project Name	AI-Powered Nutrition Analyzer for Fitness Enthusiasts
Maximum Marks	4 marks

Technical Architecture:

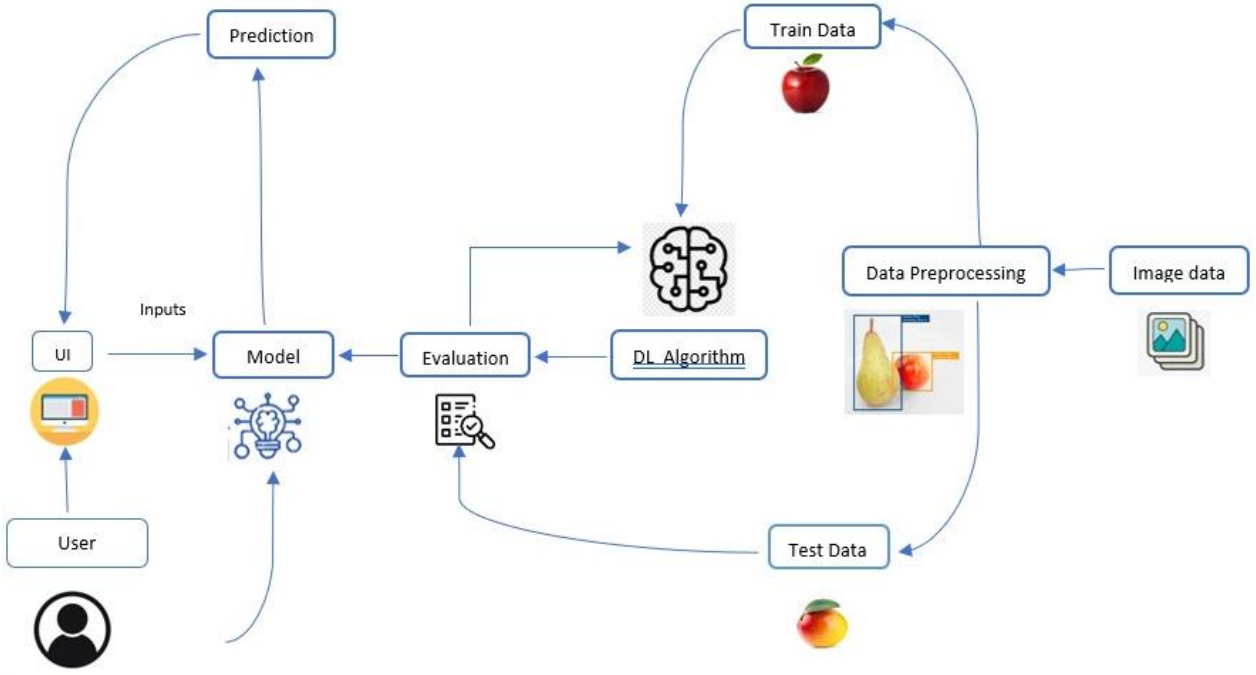

Table-1 : Components & Technologies:

S.No	Component	Description	Technology
1.	User Interface	How user interacts with application like Web UI, Mobile App, etc.,	HTML, CSS, JavaScript / AngularJs / ReactJs
2.	Application Logic-1	Image processing is done using convolution layers	Python
3.	Application Logic-2	Implementing backend tech stack and size analysis	Python, HTML
4.	Application Logic-3	Texture and colour analysis using the input data	IBM Watson
5.	Database	Datasets and Configurations	MySQL, NoSQL, etc.,
6.	Cloud Database	Database Service on Cloud	IBM DB2, IBM Cloudant etc.
7.	File Storage	Dataset storage on Cloud	IBM Block Storage or Other Storage Service or Local Filesystem
8.	External API-1	Training the model on IBM ,integrate it with flask application	CNN IBM Deployment
9.	External API-2	Input parameters are taken from HTML page to the Flask application	Python Flask, HTML
10.	Deep Learning Model	DL is used for achieving superior performance in predicting and supporting the feasibility of using artificial intelligence in nutrition analysis	Image Recognition Model, etc.
11.	Infrastructure (Server / Cloud)	Application Deployment on Local System / Cloud	Local, Cloud Foundry, Kubernetes, etc.

Table-2: Application Characteristics:

S.No	Characteristics	Description	Technology
1.	Open-Source Frameworks	Pycharm, Python, Anaconda Navigator, Flask, HTML	Deep learning
2.	Security Implementations	Two factor authentication and Strong password	Encryption
3.	Scalable Architecture	supports higher workloads without any fundamental changes to it Micro-services	Python
4.	Availability	Provided inputs Eg: Datasets	Kaggle
5.	Performance	Layers of convolution network for more number of inputs	Artificial Neural Network