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

Date	03October 2022
Team ID	PNT2022TMID13691
Project Name	Project – AI-Powered Nutrition Analyser for Fitness Enthusiast
Maximum Marks	4 Marks

Technical Architecture:

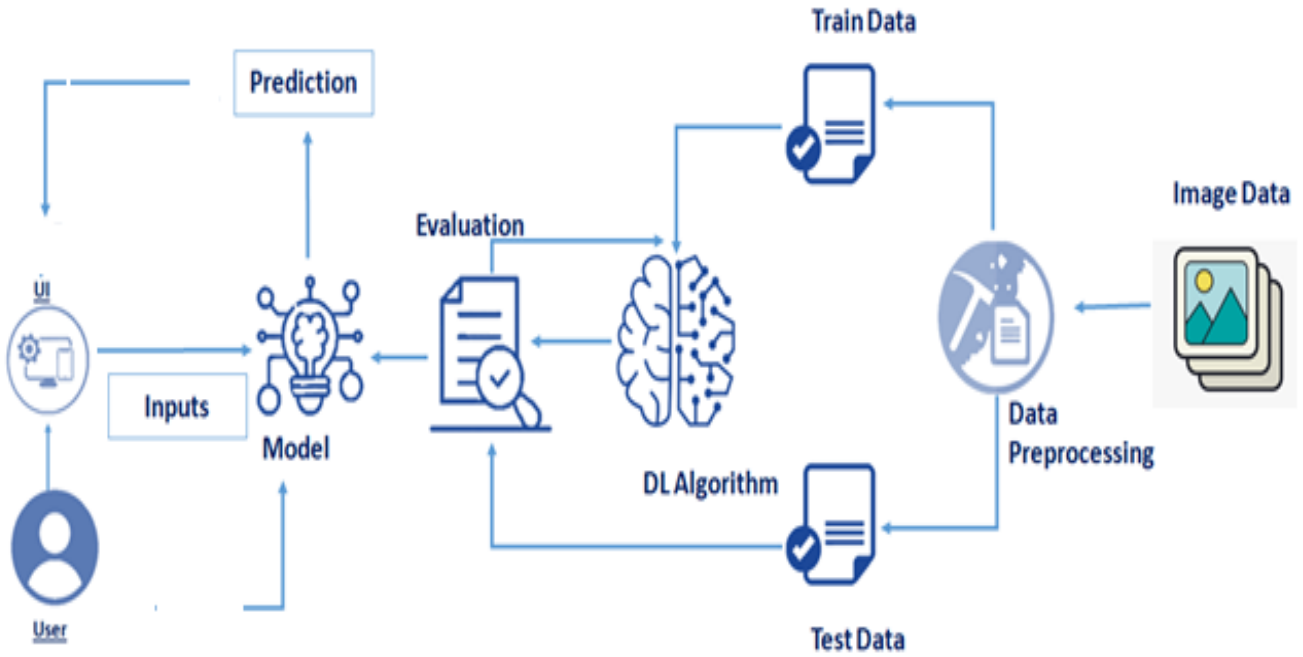

Table-1 : Components & Technologies:

S.No	Component	Description	Technology
1.	User Interface	User interacts by logging in to the website.	HTML, CSS, JavaScript .
2.	Application Logic-1	For building a model used for classifying food and providing related nutritional value.	Python.
3.	Application Logic-2	We can provide an API to add speech transcription capabilities to applications.	IBM Watson STT service
4.	Application Logic-3	Through Watson service we can train, deploy and manage our AI model.	IBM Watson Assistant
5.	Database	Data type will be text and image, which consists of image of the food and corresponding nutritional values.	MySQL.
6.	Cloud Database	We can also use cloud based service for higher security and management of data.	IBM DB2, IBM Cloudant etc.
7.	File Storage	The Data should available on all time and it should be reliable.	Local Filesystem
8.	Machine Learning Model	It allows the user to feed a computer algorithm an immense amount of data and have the computer analyze and make data-driven recommendations and decisions based on only the input data.	Object Recognition Model.
9.	Infrastructure (Server / Cloud)	Application developed on local system.	Local.

Table-2: Application Characteristics:

S.No	Characteristics	Description	Technology
1.	Open-Source Frameworks	A software for which the original source code is made freely available and may be redistributed and modified according to the requirement of the user.	Chrome,jupiter.
2.	Security Implementations	All network connections are protected by a firewall, a hardware or software component that prevents unauthorized access to or from a network.	e.g. SHA-256, Encryptions, IAM Controls, OWASP etc.
3.	Scalable Architecture	A scalable architecture supports higher workloads without any fundamental changes to it.	Jupiter.
4.	Availability	It makes use of AI to provide a real-time update about nutrition intake.	Web application to access the system.
5.	Performance	Data analysis of their physical health status, an evaluation report, and real-time return to the server through the cloud platform can help to increase the performance.	Convolutional neural networks.