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

Date	16 October 2022
Team ID	PNT2022TMID17487
Project Name	Project – AI-Powered Nutrition Analyzer for Fitness Enthusiasts
Maximum Marks	4 Marks

Technical Architecture

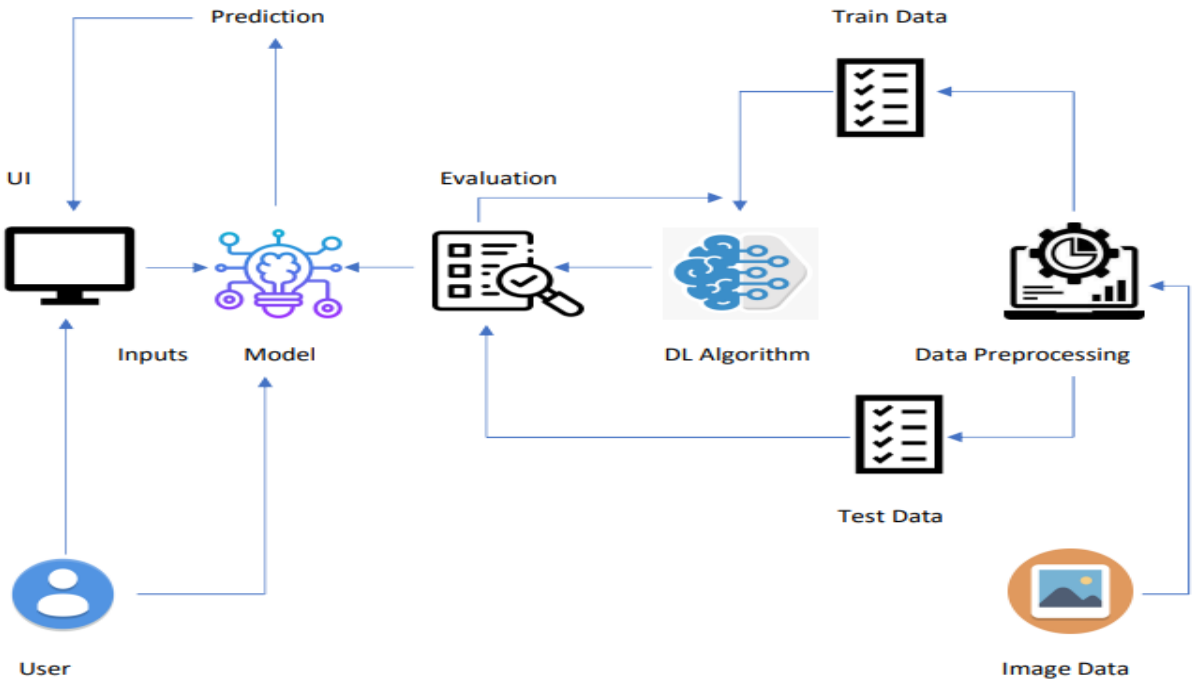

Table-1 : Components & Technologies:

S.No	Component	Description	Technology
1.	Application	User interacts with application for the prediction of Nutrition	Python, Java, HTML,SQL,Android studio,JavaScript,ReactJS,tailwindCSS
2.	Database	Data Type, Configurations and data will be stored	MySQL, JavaScript
3.	Cloud Database	Database Service on Cloud	IBM DB2, IBM Cloudland, etc
4.	File Storage	File storage requirements	The storage will be based on Cloud
5.	Machine Learning	Purpose of Machine Learning Model	ANN, CNN, RNN
6.	Notification	Notification will be sent from the server	SendGrid
7.	File Storage	File storage requirements	IBM Block Storage or Other Storage Service or Local Filesystem
8.	External API	Purpose of External API used in the application	Aadhar API, Stripe
9.	Machine Learning Model	Purpose of Machine Learning Model	OpenCV, MATLAB
10.	Infrastructure (Server / Cloud)	Application Deployment on Local System / Cloud Local Server Configuration: Cloud Server Configuration :	Local, Cloud Foundry, Kubernetes, etc.

Table-2: Application Characteristics:

S.No	Characteristics	Description	Technology
1.	Open-Source Frameworks	open-source frameworks used	SendGrid, Python, jQuery
2.	Security Implementations	Request authentication using encryption	Encryptions, SSL certs
3.	Scalable Architecture	The scalability of architecture consists of 3 tiers	Web Server – HTML, CSS, JavaScript Application Server – Python Flask Database Server – IBM Cloud
4.	Availability	Availability is increased by loads balancers in cloud VPS	IBM Cloud hosting
5.	Performance	The application is expected to handle up to 4000 predictions per second	IBM Load Balance