PROJECT DESIGN PHASE - II

TECHNOLOGY STACK (ARCHITECTURE & STACK)

Date	15 October 2022
Team ID	PNT2022TMID44653
Project Name	AI-powered Nutrition Analyzer for Fitness Enthusiasts
Maximum Marks	4 Marks

TECHNICAL ARCHITECTURE

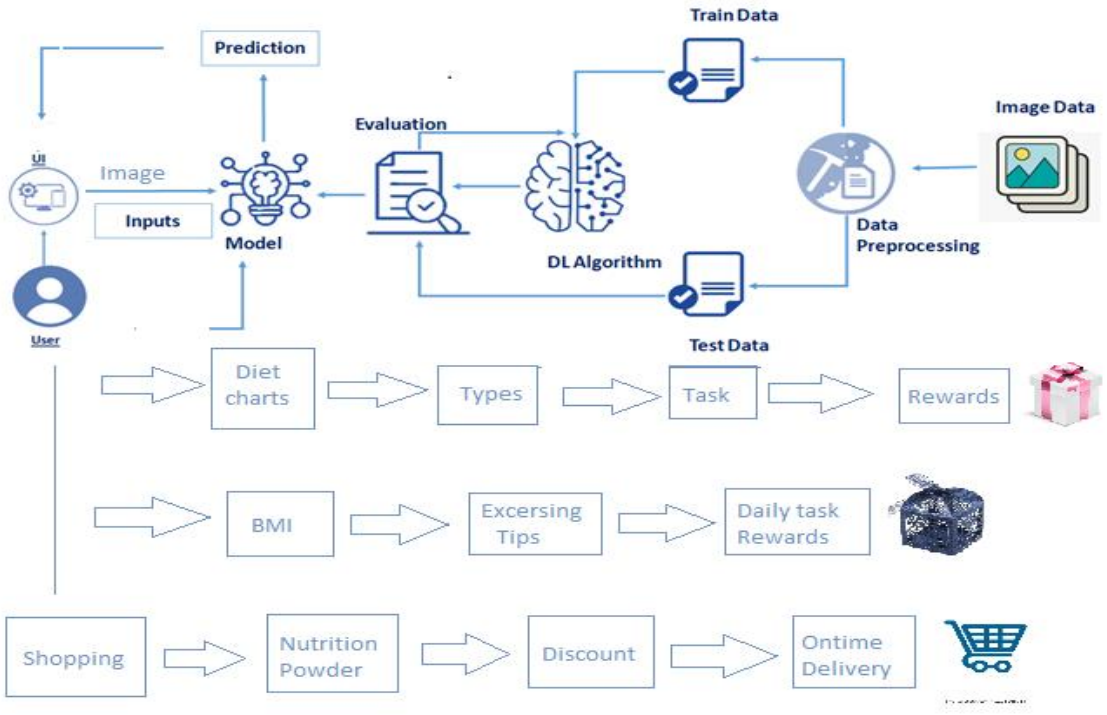

Table-1 : Components & Technologies:

S.No	Component	Description	Technology
1.	User Interface	Mobile Application	HTML, CSS, JavaScript, Python.
2.	Application Logic-1	Data preprocessing	Keras, Tensorflow, Numpy- (Importing Essential Libraries)
3.	Application Logic-2	CNN Model Creating	Keras, Tensorflow, Numpy- (Importing Essential Libraries)
4.	Application Logic-3	Web Application (UI)	Flask
5.	Database	Data Type, Configurations etc.	MySQL, NoSQL, etc.
6.	Cloud Database	Image (Jpeg, PNG, jpg, etc..)	IBM DB2, IBM Cloudant etc.
7.	File Storage	File storage requirements	IBM Block Storage or Other Storage Service.
8.	External API-1	Keras	Image preprocessing API, etc.
9.	External API-2	Verification	Aadhar API.
10.	Deep Learning Model	Food Image Classification	Image Recognition Model.
11.	Infrastructure (Server / Cloud)	Application Deployment on Web server	Flask- a python WSGI HTTP server.

Table-2: Application Characteristics:

S.No	Characteristics	Description	Technology
1.	Open-Source Frameworks	Flask	Werkzeug, jinja2, Sinatra Ruby framework, Android.
2.	Security Implementations	Data protection, Secure flag,cookies etc.	Authorized APIs Only, Data Encryption, OWASP etc.
3.	Scalable Architecture	Micro-services	Micro web application by Flask.
4.	Availability	Distributed servers, Google playstore.	Werkzeug, jinja2, Sinatra Ruby framework, Android.
5.	Performance	High Flexibility Quick accessibility High speed	SQLAlchemy, extensions, Werkzeug, jinja2, Sinatra Ruby framework.