

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

Date	23 October 2022
Team ID	PNT2022TMID29438
Project Name	AI-Powered Nutrition Analyzer For Fitness Enthusiasts
Maximum Marks	4 Marks

Technical Architecture:

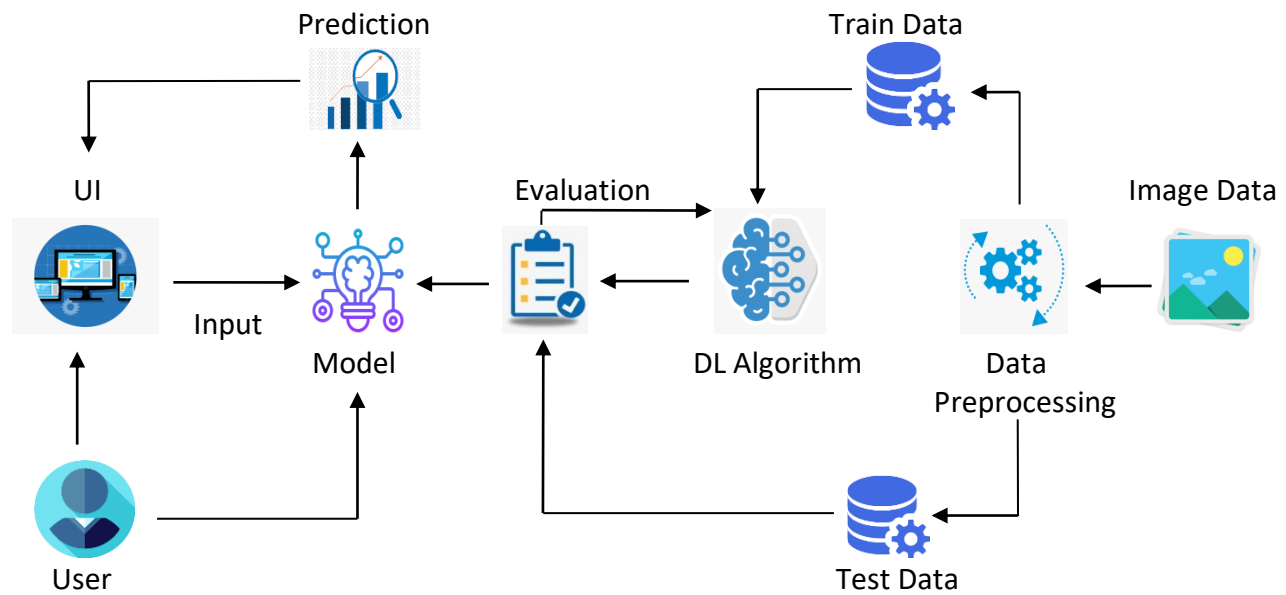


Table-1: Components & Technologies:

S.No	Component	Description	Technology
1.	User Interface	How the user interacts with the application .To depict the human-computer interaction and communication	HTML, CSS, JavaScript ,React Js
2.	Application Logic-1	A page to upload images as input	Python
3.	Application Logic-2	To use the Deep Learning model and predicting the result	Python
4.	Deep Learning Model	Deep learning model used to classifying the images using neural networks	CNN
5.	Database	Structured data-images	MySQL
6.	Cloud Database	Database that typically runs on a cloud computing platform and access to the database is provided as-a service	IBM Cloud Databases for MySQL
7.	File Storage	File storage requirements	Local Filesystem
8.	API	Used to Collecting heart beat rate data	Google fit API

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 predications per second	IBM Load Balance