Technology Stack - Architecture & Stack

Date	01 November 2022
Team ID	PNT2022TMID43802
Project Name	AI-powered Nutrition Analyzer for Fitness Enthusiasts
Maximum Marks	4 Marks

Technical Architecture:
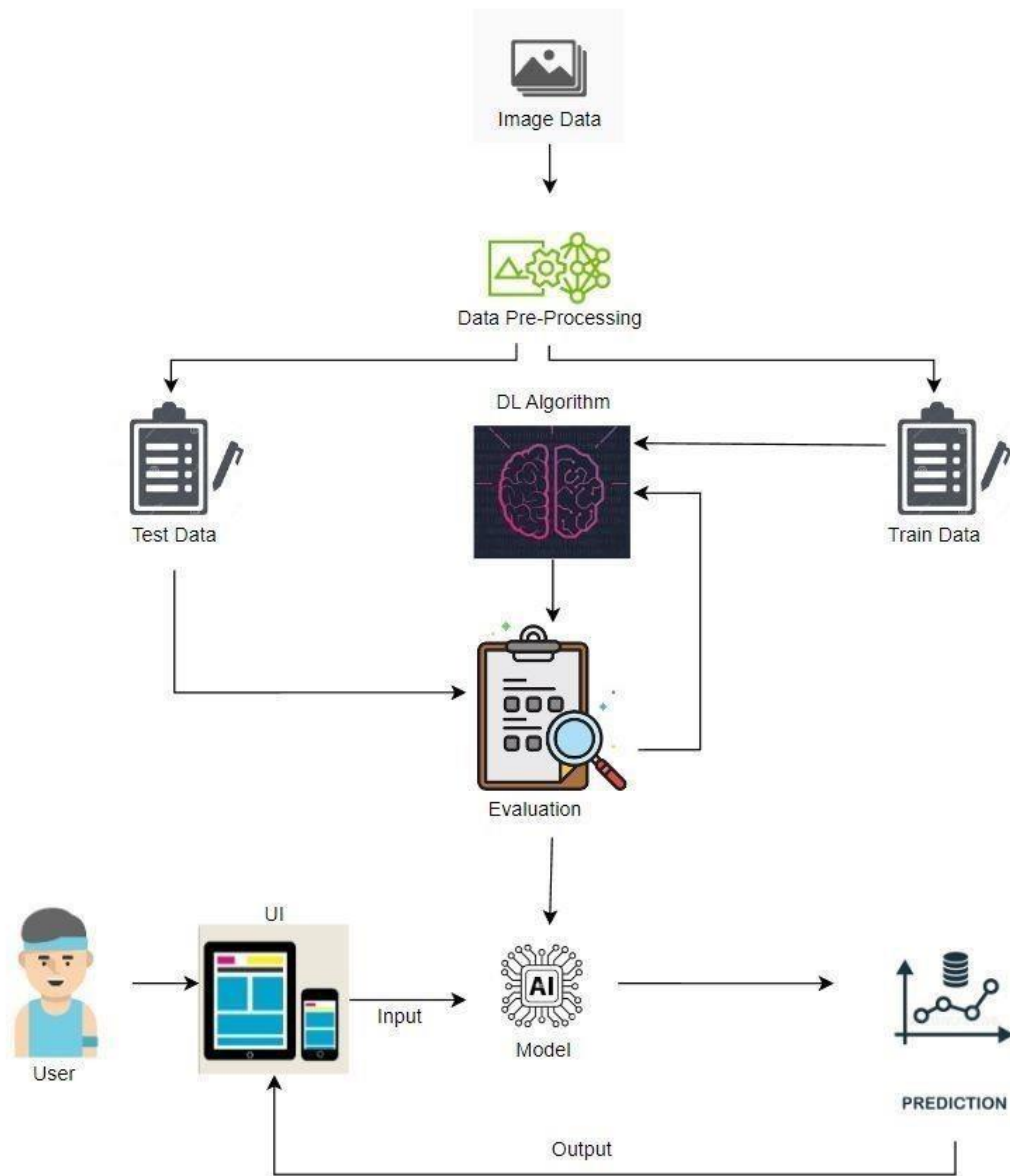
1.	User Interface	How the user interacts with software. E.G. Internet UI	HTML and CSS
2.	Application Logic-1	Handle all of the user requests completed through the web UI / display the results after method	Python Flask Server
3.	Application Logic-2	Method the photograph furnished by using the consumer through web UI	Python
4.	Application Logic-3	Train the model and provide the class result for the photograph given as enter	IBM Watson Studio
5.	Cloud Database	Database Service on Cloud	IBM DB2, IBM Cloudant etc.
6.	File Storage	File storage requirements	Local File system
7.	Machine Learning Model	Purpose of Machine Learning Model	VGG16 Pre-Trained Model
8.	Infrastructure (Server / Cloud)	Application Deployment on Local System	Local

Table-2: Application Characteristics:

S. No	Characteristics	Description	Technology
1.	Open-Source Frameworks	Listing the open-supply frameworks used	Flask, TensorFlow, Keras , NumPy, OpenCV
2.	Security Implementations	List all of the protection / get right of entry to controls applied, use of firewalls and so on.	IAM Controls
3.	Scalable Architecture	Justify the scalability of structure (three – tier, Micro-offerings)	3-tier type (Web server, App server and DB server).
4.	Availability	Justify the supply of software (e.G. Use of load balancers, distributed servers and many others.)	Neighborhood: to be had based on pc's specifications. Cloud: internet server, DB server to be had while requested. App server calls for high requirements as compared with different 2 servers, thereby availability is bit much less but can be compensated through cloud

5.	Performance	Design consideration for the overall performance of the application (wide variety of requests in step with sec, use of Cache, use of CDN's) and so forth.	Accuracy of version: >85% (anticipated) quantity of requests in line with 2nd: 250 – 1000 (primarily based on network Visitors, 250 is default as targeted consumer institution is mild)