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

Date	9 November 2022
Team ID	PNT2022TMID12370
Project Name	AI-powered Nutrition Analyzer for Fitness Enthusiasts
Maximum Marks	4 Marks

Technical Architecture:

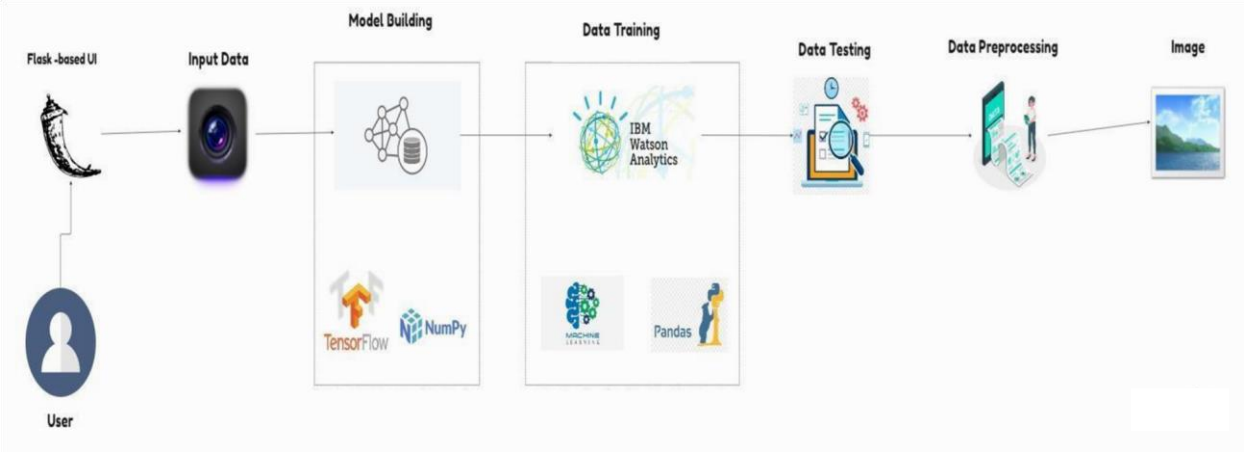

Table-1 : Components & Technologies:

S.No	Component	Description	Technology
1	User Interface	How the user interacts with application. e.g. Web UI	HTML and CSS
2	Application Logic-1	Handle all the user requests done through the Web UI / Display the results after process	Python Flask Server
3	Application Logic-2	Process the image provided by the user via Web UI	Python
4	Application Logic-3	Train the model and provide the classification result for the image given as input	IBM Watson Studio
5	Cloud Database	Database Service on Cloud	IBM DB2, IBM Cloudant etc.
6	File Storage	File storage requirements	Local Filesystem
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	List the open-source frameworks used	Technology of Opensource framework
2.	Security Implementations	List all the security / access controls implemented, use of firewalls etc.	e.g. SHA-256, Encryptions, IAM Controls, OWASP etc.
3.	Scalable Architecture	Justify the scalability of architecture (3 – tier, Micro-services)	Technology used
4.	Availability	Justify the availability of application (e.g. use of load balancers, distributed servers etc.)	Technology used
5.	Performance	Design consideration for the performance of the application (number of requests per sec, use of Cache, use of CDN's) etc.	Technology used

References:

https://c4model.com/

https://developer.ibm.com/patterns/online-order-processing-system-during-pandemic/

https://www.ibm.com/cloud/architecture

https://aws.amazon.com/architecture

https://medium.com/the-internal-startup/how-to-draw-useful-technical-architecture-diagrams-2d20c9fda90d