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

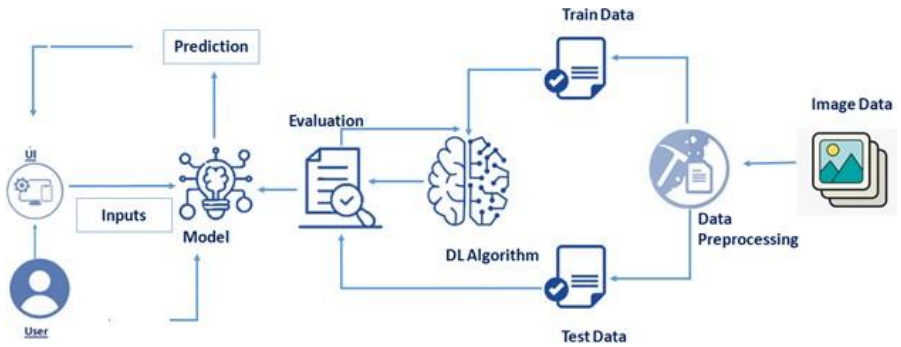
Date	13 October 2022
Team ID	PNT2022TMID08455
Project Name	Project - AI-Powered Nutrition Analyzer forFitness Enthusiasts
Maximum Marks	4 Marks

Technical Architecture:

The Deliverable shall include the architectural diagram as below and the information as per the table1 & table 2

Example: Order processing during pandemics for offline mode

Reference: https://developer.ibm.com/patterns/ai-powered-backend-system-for-order-processing-during-pandemics/



Guidelines:

1. Include all the processes (As an application logic / Technology Block)
2. Provide infrastructural demarcation (Local / Cloud)
3. Indicate external interfaces (third party API's etc.)
4. Indicate Data Storage components / services
5. Indicate interface to machine learning models (if applicable)

Table-1 : Components & Technologies:

S.No	Component	Description	Technology
1.	User Interface	The user may interact with Mobile App	HTML, CSS, JavaScript / Angular Js /React Js etc.
2.	Application Logic-1	A macronutrient analysis using Fitness tools	Python
3.	Application Logic-2	IBM Watson Health is a digital tool that effectivelyhelps healthcare services through AI	IBM Watson STT service
4.	Application Logic-3	A virtual assistant that can answer real-world problems about complex health plan benefitsquickly and easily	IBM Watson Assistant
5.	Database	String, Numeric and date/time datatypesConfigurations etc.	MySQL, NoSQL, etc.
6.	Cloud Database	A set of predefined values for the health monitors.	IBM DB2, IBM Cloudant etc.
7.	File Storage	Minimum 300 GB for a single node	IBM Block Storage or Other StorageService or Local Filesystem
8.	External API-1	Allows to access critical forecasts, alerts andobservations	IBM Weather API, etc.
9.	External API-2	One can authenticate Aadhar cards of any otherindividual without any issue	Aadhar API, etc.
10.	Machine Learning Model	To detect and classify multiple objects within animage with high accuracy	Object Recognition Model, etc.
11.	Infrastructure (Server / Cloud)	Application Deployment on Local System / CloudLocal Server Configuration:127.0.0.1 Cloud Server Configuration : 128.0.01	Local, Cloud Foundry, Kubernetes, etc.

Table-2: Application Characteristics:

S.No	Characteristics	Description	Technology
1.	Open-Source Frameworks	Flask framework in python	Artificial Intelligence
2.	Security Implementations	Data integrity, evidence of security-rich DNA	IAM Controls, OWASP etc.

S.No	Characteristics	Description	Technology
3.	Scalable Architecture	It supports higher workloads without anyfundamental changes to it	Artificial Intelligence
4.	Availability	The app evaluates all the functionalities of a model	Artificial Intelligence
5.	Performance	The application effectively use cache and CDNs	Artificial Intelligence

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