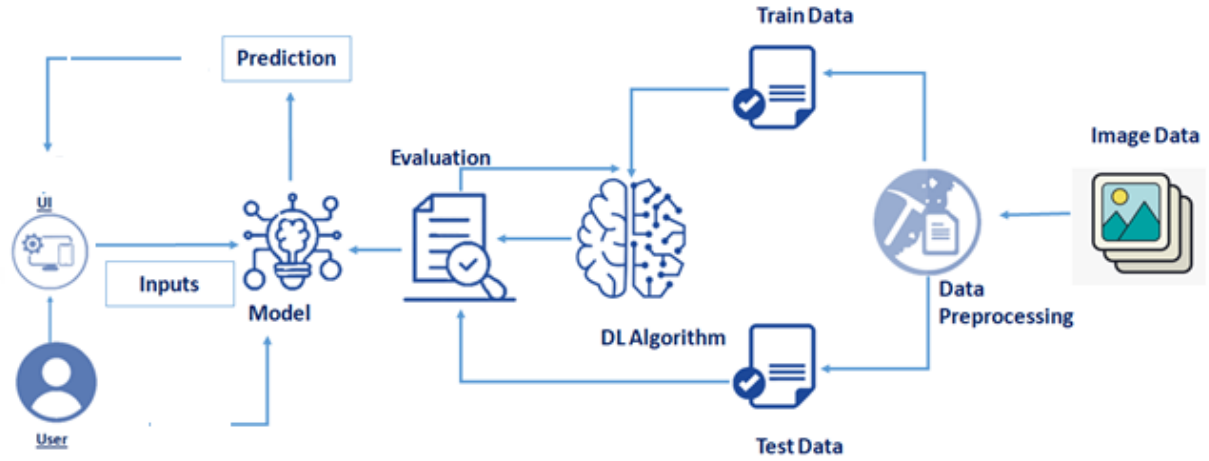
Project Design Phase-II
Technology Stack (Architecture & Stack)

Date	23-10-2022
Team ID	PNT2022TMID44123
Project Name	**AI-Powered Nutritional Analyzer for Fitness Enthusiasts**
Maximum Marks	4 Marks

Technical Architecture:



Front End **Back End-IBM cloud** **Database**

Table-1: Components & Technologies:

S.No	Component	Description	Technology
1.	User Interface	How user interacts with application e.g. Web UI, Mobile App.	HTML, CSS, JavaScript / Angular Js / React Js etc.
2.	Application Logic-1	The application contains the sign in/signs up where the user will login into the main dashboard.	Java / Python
3.	Application Logic-2	Dashboard contains the fields like, Capture image, Upload image and retake image.	IBM Watson STT service
4.	Application Logic-3	The user can view the nutrient content present in the fruit.	IBM Watson Assistant
5.	Database	The image data are stored in the MySQL database	MySQL, NoSQL, etc.
6.	Cloud Database	With use of Database Service on Cloud, the User data are stored in a well secured Manner	IBM DB2, IBM Cloudant etc.
7.	File Storage	IBM Block Storage used to store the image data of the user	IBM Block Storage or Other Storage Service or Local Filesystem
8.	Deep Learning Model	The Deep learning model recognize the image of the fruit and delivers the name of the fruit	Convolutional neural network

Table-2: Application Characteristics:

S.No	Characteristics	Description	Technology
1.	Open-Source Frameworks	Flask Framework in Python is used to implement this Application	Python-Flask
2.	Security Implementations	This Application Provides high security to the user login data. It can be done by using the Container Registry in IBM cloud	Container Registry, Kubernetes Cluster
3.	Scalable Architecture	Nutritional Analyzer is a scalable architecture. We can scale the application whenever there is a need.	Container Registry, Kubernetes Cluster

S.No	Characteristics	Description	Technology
4.	Availability	This application will be available to the user at any time	Container Registry, Kubernetes Cluster
5.	Performance	The performance will be high because there will be no network traffics in the application	Kubernetes Cluster