Project Design Phase-II

Technical Architecture:

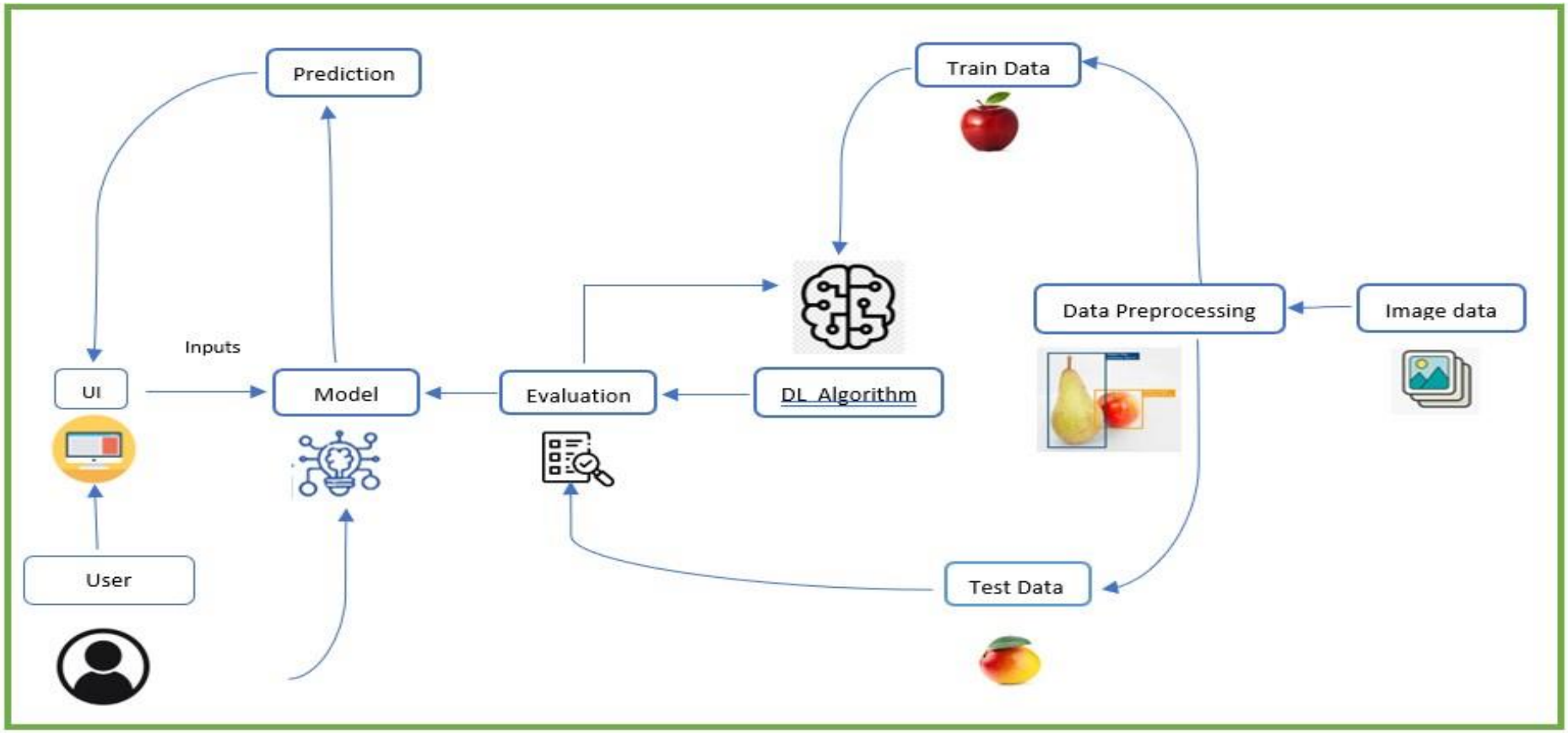

Table-1: Components & Technologies:

Si no	Component	Description	Technology
1.	User Interface	How user interacts with application Web UI, Mobile App etc.	HTML, CSS, JavaScript / Angular Java Script / React JavaScript
2.	Application Logic-1	Image processing is done using convolution layers	Python
3.	Application Logic-2	Implementing Backend tech stack and size analysis	Python, HTML
4.	Application Logic-3	Texture and colour analysis using the input	IBM Watson
5.	Database	Datasets, Configurations etc.	MySQL, NoSQL, etc.
6.	Cloud Database	Database Service on Cloud	IBM DB2, IBM Cloud ant etc.
7.	File Storage	Dataset storage on Cloud	IBM Block Storage or Other Storage Service or Local Filesystem
8.	External API-1	Training the model on IBM integrate it with flask application	CNN IBM Deployment
9.	External API-2	Input parameters are taken from HTML page to the Flask application	Python Flask, HTML
10.	Deep Learning Model	DL is used for achieving superior performance in predicting and supporting the feasibility of using artificial intelligence in nutrition analysis	Image Recognition Model, etc.
11.	Infrastructure (Server / Cloud)	Application Deployment on Local System / Cloud Local Server Configuration: Cloud Server Configuration	Local, Cloud Foundry, Kubernetes, etc.

Table-2: Application Characteristics:

Si No	Characteristics	Description	Technology
1.	Open-Source Frameworks	Python Anaconda Navigator, Flask ,HTML	Deep learning
2.	Security Implementations	Two factor authentication, Strong password	Encryptions
3.	Scalable Architecture	supports higher workloads without any fundamental changes to it Micro-services	Python
4.	Availability	Provided inputs Eg Datasets	Kaggle
5.	Performance	Layers of convolution network for more number of inputs	Artificial Neural Network