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

DATE	27 October 2023
TEAM ID	Team-592327
Project Name	Deep Learning Model For Detecting Diseases In Tea Leaves
Team Members	Saatvik Sumanta Kotamareddi Abigna Abhigyan Ghoshal Denesh L

Technical Architecture

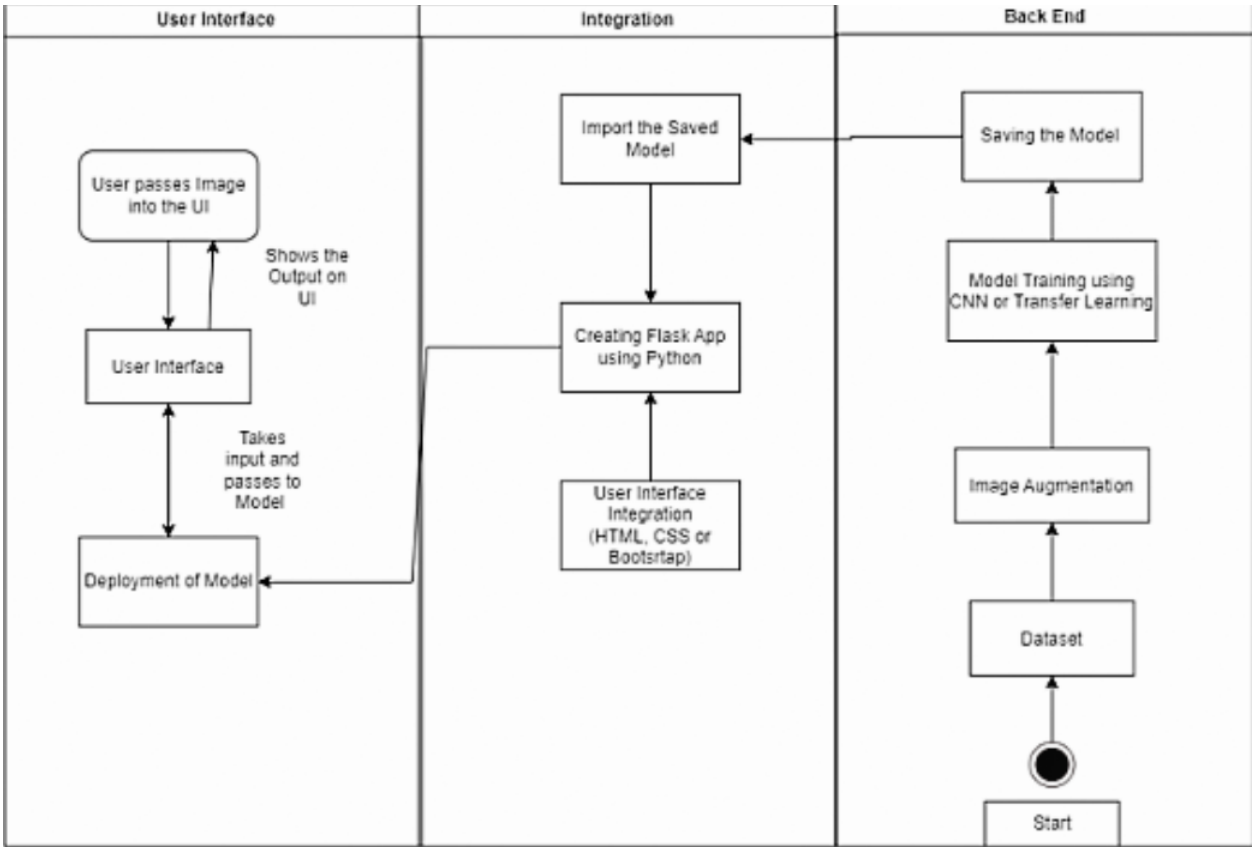

Table-1: Component & Technologies

S.No	Component	Description	Technolgy
1	User Interface	How user interacts with Application interface	HTML, CSS
2	Application Logic	User takes photograph and uploads to website -> ML Model in backend analyses the image to detect diseases	Python Flask
3	Database	Collected from Kagglle	Kaggle API, File manager, Pandas
4	Data	Stored on Local server	Local System
5	Frame Work	Frontend UI integrated with ML Model in backend	Python Flask
6	Deep learning Model	CNN Model for image based disease detection, Opencv and YOLO for Live disease detection	CNN, Transfer Learning, OpenCV, YOLO
7	Infrastructure	Local Server Deployment	Local

Table-2: Application Characteristics

S.No.	Charecteristics	Description	Technology
1	Open-Source Frameworks	Kaggle API for data collection, Google Colab for model training and testing	Pandas, Tensorflow, Keras, OpenCV, YOLO, Flask
2	Security Implementations	No special security applied as no information is being taken from user, HTTPS used for web deployment	HTTPS
3	Scalable Architecture	A three tier architecture has been used 1. User Interface 2. ML Computation on local server 3. Backend control for model updation	HTML, CSS, Deep Learning
4	Availability	Hosted on free Github hence availability based on github server availability	Github
5	Performance	Hit counter, reviews	HTML