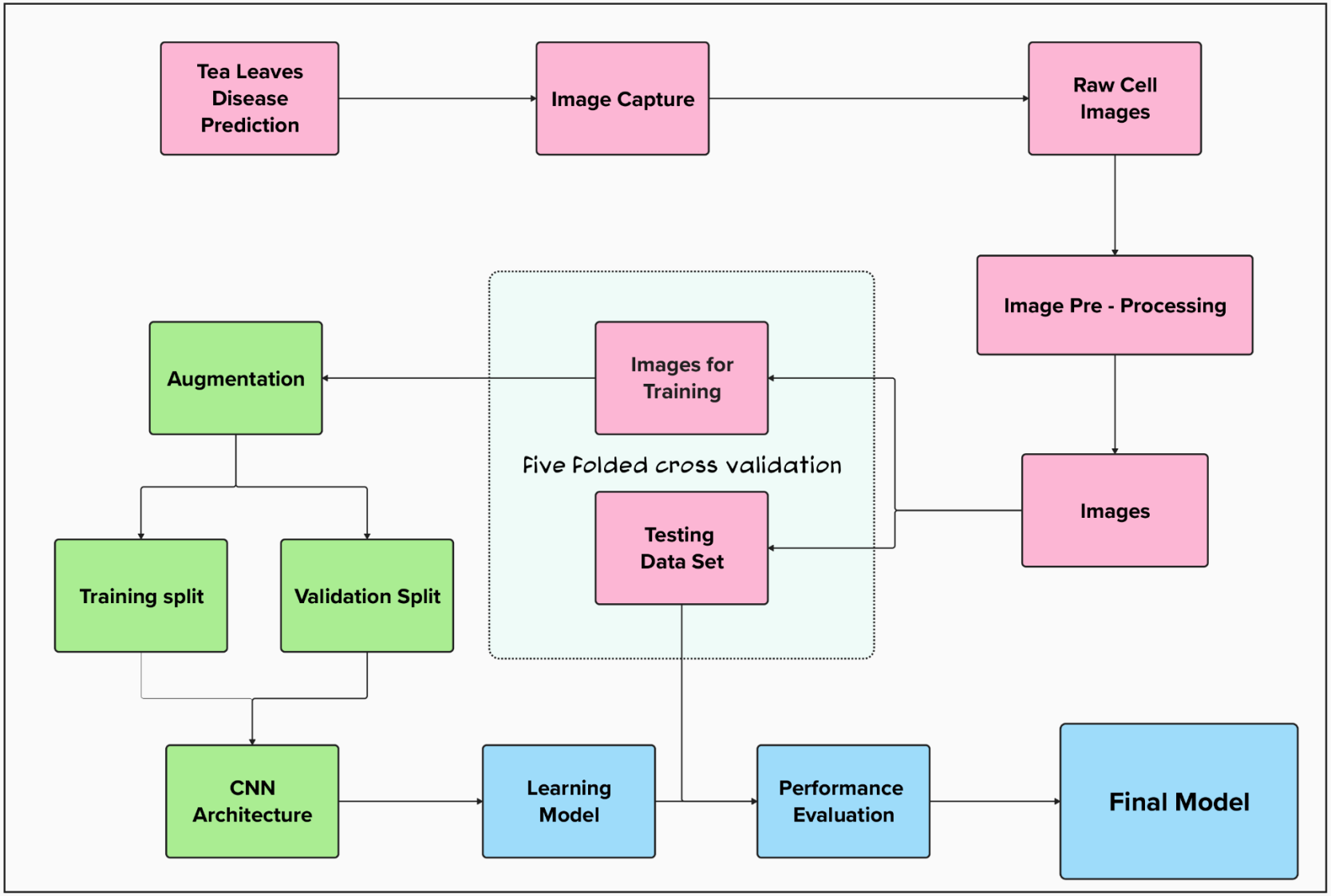
Project Design Phase-II
Data Flow Diagram & User Stories

Date	02-11-23
Team ID	Team-592384
Project Name	Deep Learning Model For Detecting Diseases In Tea Leaves
Maximum Marks	4 Marks

Data Flow Diagrams:

A Data Flow Diagram (DFD) is a traditional visual representation of the information flows within a system. A neat and clear DFD can depict the right amount of the system requirement graphically. It shows how data enters and leaves the system, what changes the information, and where data is stored.

Data Flow Diagram (Project – Disease Detection on Tea Leaves)



User Stories

User Type	Functional Requirement (Epic)	User Story Number	User Story / Task	Acceptance criteria	Priority	Release
Tea Farms and Plantations	Project Setup & Infrastructure	USN-1	Set up the development environment with the required tools and frameworks to start the disease prediction project.	Successfully configured with all necessary tools and frameworks	High	Sprint 1
Research Institutions and Universities	Development Environment	USN-2	Gather a diverse dataset of tea leaf images containing examples of healthy and diseased leaves for training the deep learning model.	Gathered a diverse dataset of tea leaf images depicting healthy and diseased leaves	High	Sprint 1
Tea Plantation Workers and Farmers	Data Collection	USN-3	Preprocess the collected tea leaf dataset by standardizing image sizes, enhancing image quality, and splitting it into training and validation sets.	Pre-processed the dataset and organized it into training and validation sets	High	Sprint 2
Agriculture Scientists and Researchers	Data Preprocessing	USN-4	Explore and evaluate various deep learning architectures (e.g., CNNs, RNNs) to select the most suitable model for disease prediction in tea leaves.	Explored and evaluated different deep learning models for disease prediction	High	Sprint 2
Tea Industry Professionals and Consultants	Model Development	USN-5	Train the selected deep learning model using the pre-processed dataset and monitor its performance on the validation set.	Trained the model and validated its performance	High	Sprint 3

Machine Learning Engineers and Data Scientists	Training	USN-6	Implement data augmentation techniques (e.g., rotation, flipping) to enhance the model's ability to recognize disease patterns in tea leaves.	Applied data augmentation techniques and tested the model's robustness	Medium	Sprint 3
Tea Processing and Manufacturing Companies	Model Deployment & Integration	USN-7	Deploy the trained deep learning model as an API or web service to make it accessible for disease prediction in tea leaves. Integrate the model's API into a user-friendly web interface for users to submit tea leaf images for analysis.	Checked the scalability and usability of the deployed model	Medium	Sprint 4
Quality Control and Inspection Agencies	Testing & Quality Assurance	USN-8	Conduct thorough testing of the model and web interface to identify and report any issues or inaccuracies. Fine-tune the model's hyperparameters and optimize its disease prediction performance based on user feedback and testing results.	Conducted testing and optimization of the model and web application	Medium	Sprint 5