

Project Design Phase-II

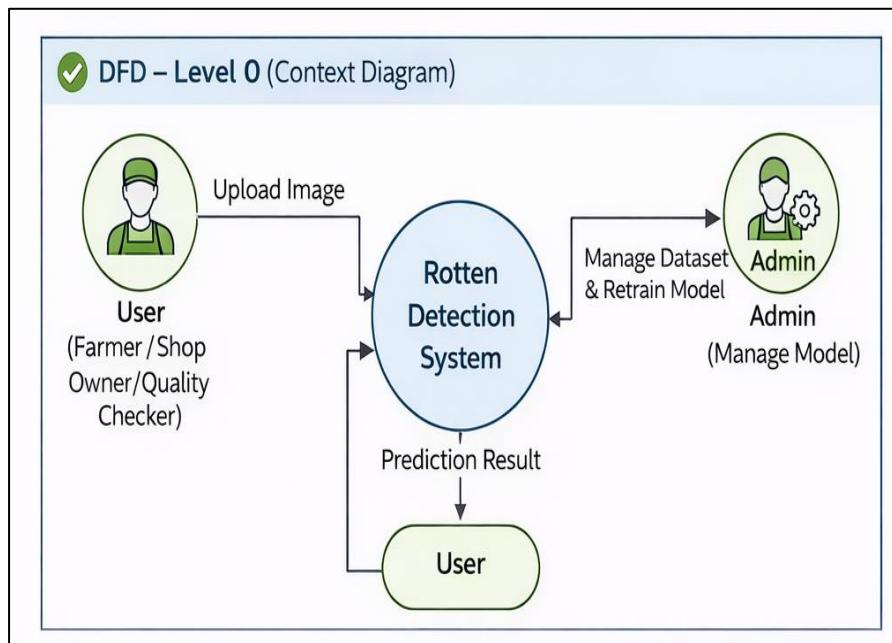
Data Flow Diagram & User Stories

Date	19 February 2026
Team ID	LTVIP2026TMIDS77295
Project Name	Smart Sorting: Transfer Learning for Identifying Rotten Fruits and Vegetables

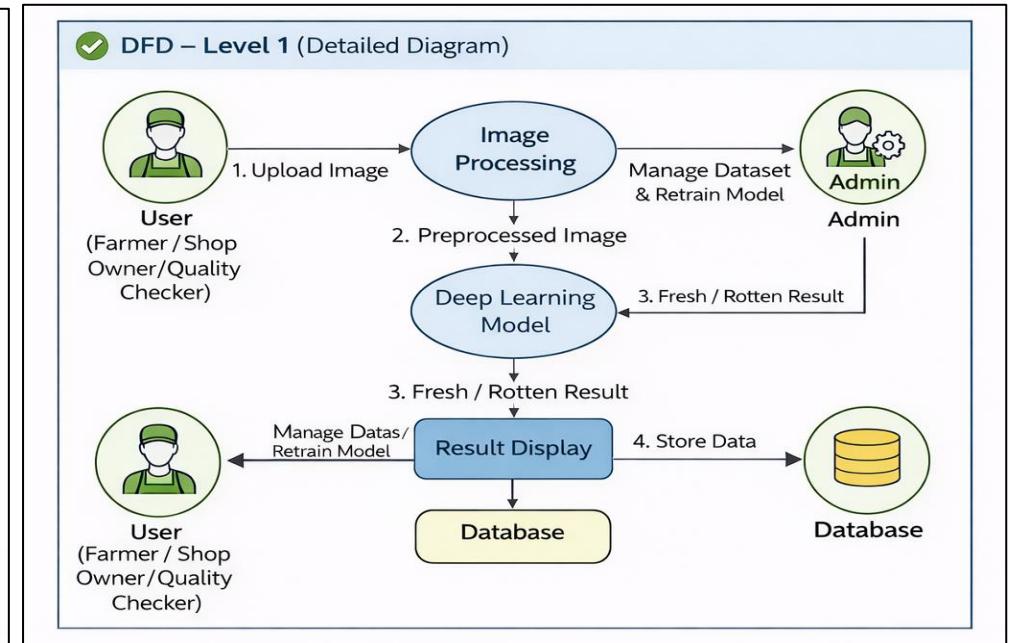
Data Flow Diagrams:

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.

Example: DFD Level 0 (Context Diagram)



Example: DFD Level 1 (Detailed Diagram)



User Stories

Use the below template to list all the user stories for the product.

User Type	Functional Requirement (Epic)	User Story Number	User Story / Task	Acceptance criteria	Priority	Release
Visitor	View home page	USN-1	As a visitor, I can open the home page to know what Smart Sorting does.	Home page shows title, tagline, and navigation links.	High	Sprint-1
Visitor	Navigate to other pages	USN-2	As a visitor, I can click navbar links (Home, About, Predict, Contact).	Correct page (about/predict/contact) opens without error.	High	Sprint-1
Visitor	View project overview	USN-3	As a visitor, I can read how Smart Sorting uses AI to detect rotten produce.	Text explains goal, approach, and benefits clearly.	High	Sprint-1
Visitor	View model statistics	USN-4	As a visitor, I can see model accuracy, number of classes, and dataset size.	Cards show 94.6% accuracy, 4 classes, 3200 images (or updated values).	High	Sprint-1
Visitor/Custom er	Open prediction page	USN-5	As a user, I can open the Predict page to upload an image.	Upload form with file chooser and submit button is visible.	High	Sprint-1
Visitor/Custom er	Upload image	USN-6	As a user, I can upload a fruit/vegetable image for analysis.	Image is saved to uploads/ without server error.	High	Sprint-1
Visitor/Custom er	See classification result	USN-7	As a user, I can view whether the item is Fresh or Rotten with a confidence score.	Result page shows label (Fresh/Rotten), confidence %, and image preview.	High	Sprint-1
Visitor/Custom er	Handle missing file	USN-8	As a user, I get a clear message if I submit without selecting an image.	Same page reloads with message "Please upload an image."	Medium	Sprint-1

User Type	Functional Requirement (Epic)	User Story Number	User Story / Task	Acceptance criteria	Priority	Release
System	Serve uploaded images	USN-9	As the system, I must serve uploaded images so they can be shown on the result page.	Image is returned correctly and displayed in tag.	High	Sprint-1
Visitor	View contact / team details	USN-10	As a visitor, I can open the Contact page to see how to reach the project team.	Page shows team ID, team members and contact info (email or form).	Medium	Sprint-2
Admin/Developer	Load trained model	USN-11	As a developer, I can load the trained healthy_vs_rotten.h5 model when the app starts.	Model loads without error; predictions use latest weights.	High	Sprint-1
Admin/Developer	Update model & metrics	USN-12	As a developer, I can retrain the model and update accuracy, classes, dataset size in About.	About page reflects new metrics; predictions match new model behaviour.	Medium	Sprint-2