Project Design Phase-II

3.3 Data Flow Diagram & User Stories

Date	30 june 2025
Team ID	LTVIP2025TMID34162
Project Name	GrainPalette – A Deep Learning Odyssey in Rice Type Classification Through Transfer Learning
Maximum Marks	4 Marks

Data Flow Diagrams:

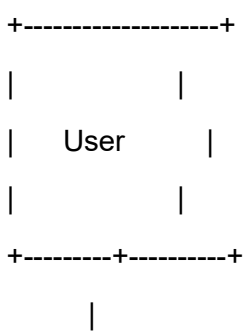
A Data Flow Diagram (DFD) is a traditional visual representation of the information flows within a system. A neat and clear DFD can depict the right amount of the system requirement graphically. It shows how data enters and leaves the system, what changes the information, and where data is stored.

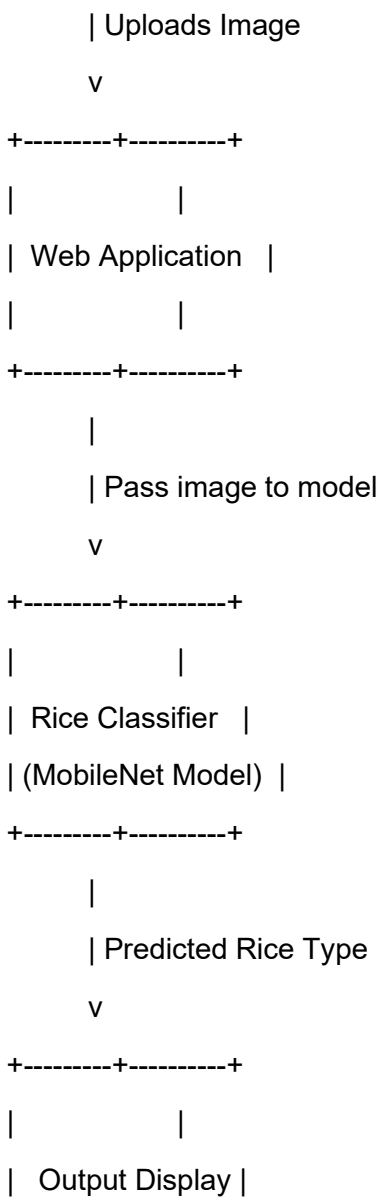
PART 1: Data Flow Diagram (DFD) for Rice Grain Classifier

🎯 **Purpose:**

Shows how data flows through your rice grain classification system from user input (image) to model output (prediction).

✍️ **Example - Level 0 DFD (Context Diagram):**



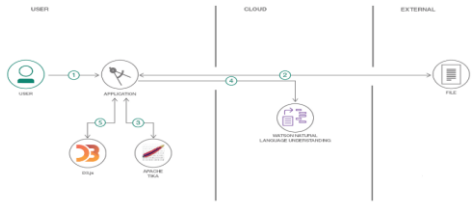

| Uploads Image
v
+---------+----------+
| |
| Web Application |
| |
+---------+----------+
|
| Pass image to model
v
+---------+----------+
| |
| Rice Classifier |
| (MobileNet Model) |
+---------+----------+
|
| Predicted Rice Type
v
+---------+----------+
| |
| Output Display |

PART 2: User Stories Table (Customized for Your Project)

User Type	Functional Requirement (Epic)	User Story Number	User Story / Task	Acceptance Criteria	Priority	Release
Web User (Farmer)	Upload Image	USN-1	As a user, I can upload a rice grain image through the website	The system accepts my image and confirms upload	High	Sprint-1
Web User (Farmer)	Predict Rice Type	USN-2	As a user, I get the rice type prediction after submitting the image	I see the predicted type and image preview	High	Sprint-1
Admin	View Prediction Logs	USN-3	As an admin, I can access logs of all predictions made	I can see user data, timestamps, and predictions	Medium	Sprint-2
Developer (Internal)	Model Training	USN-4	As a developer, I can retrain and update the rice classification model	Model accuracy improves and reflects in predictions	High	Sprint-2
Web User (Farmer)	Mobile Responsive Website	USN-5	As a user, I can access the app from mobile devices	Website adjusts to mobile view without layout issues	Medium	Sprint-2

Example: [(Simplified)]

Flow



1. User configures credentials for the Watson Natural Language Understanding service and starts the app.
2. User selects data file to process and load.
3. Apache Tika extracts text from the data file.
4. Extracted text is passed to Watson NLU for enrichment.
5. Enriched data is visualized in the UI using the D3.js library.

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
Customer (Mobile user)	Registration	USN-1	As a user, I can register for the application by entering my email, password, and confirming my password.	I can access my account / dashboard	High	Sprint-1
		USN-2	As a user, I will receive confirmation email once I have registered for the application	I can receive confirmation email & click confirm	High	Sprint-1
		USN-3	As a user, I can register for the application through Facebook	I can register & access the dashboard with Facebook Login	Low	Sprint-2
		USN-4	As a user, I can register for the application through Gmail		Medium	Sprint-1
	Login	USN-5	As a user, I can log into the application by entering email & password		High	Sprint-1
	Dashboard					
Customer (Web user)						
Customer Care Executive						
Administrator						