**Project Design Phase-II**

**Data Flow Diagram & User Stories**

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| Date | 25 June 2025 |
| Team ID | LTVIP2025TMID35341 |
| Project Name | Smart Sorting: Transfer Learning for Identifying Rotten Fruits and Vegetables |
| 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.

**Level 0 DFD – Context Level**

Upload Image

**ML Model**

**(VGG)**

**Smart sorting flask web app**

**User**

<----->

Return Prediction

**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** |
| --- | --- | --- | --- | --- | --- | --- |
| User(Mobile/Web) | Registration | USN-1 | As a user, I can register by entering my name, email, and password. | I can log in to access the image classification dashboard. | High | Sprint-1 |
| User (Mobile/Web) | Registration | USN-2 | As a user, I receive a confirmation email upon successful registration. | I can click the confirmation link to activate my account. | High | Sprint-1 |
| User(Mobile/Web) | Login | USN-3 | As a patient, I can log in using email and password. | I can access the dashboard. | High | Sprint-1 |
| User (Mobile/Web) | Image Upload | USN-4 | As a user, I can upload a fruit/vegetable image for classification. | I get a confirmation that the image is uploaded successfully. | High | Sprint-1 |
| User (Mobile/Web) | Classification Result | USN-5 | As a user, I can view whether the item is fresh or rotten along with confidence. | I can see the result label and score clearly. | High | Sprint-1 |
| User (Mobile/Web) | History | USN-6 | As a user, I can view previously uploaded images and results. | I can see a timeline/list of past classifications.. | Medium | Sprint-3 |
| Admin (Web Only) | Model Management | USN-7 | As an admin, I can upload or update the ML model used for prediction. | System uses the latest uploaded model. | High | Sprint-1 |
| Admin (Web Only) | Monitoring | USN-8 | As an admin, I can monitor user activity and upload history. | I can view logs and analytics of usage. | Medium | Sprint-3 |
| System | Email Service | USN-9 | As a system, I automatically send email confirmations upon registration. | Emails are sent instantly to registered addresses. | High | Sprint-1 |
| ML Service | Image Classification | USN-10 | As a model, I preprocess the image and classify it as fresh or rotten. | Classification is accurate and returned within 2–3 seconds. | High | Sprint-2 |
| Customer Support | User Query Handling | USN-11 | As a support executive, I can respond to user issues regarding uploads or results. | I can view and reply to user messages via admin/support panel. | Medium | Sprint-3 |