Project Planning Document (Backlog + Sprint Plan)

Project Design Phase-II

Data Flow Diagram & User Stories

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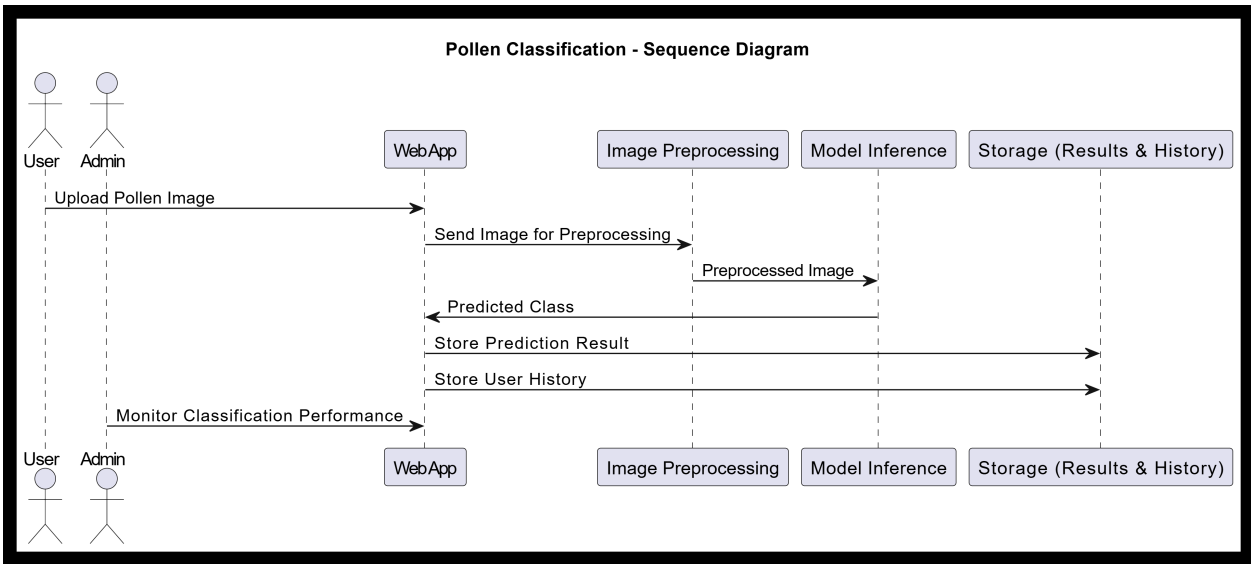
👥 **Team ID**: LTVIP2025TMID45577

📌 **Project Name**: Pollen's Profiling – Automated Classification of Pollen Grains

🔄 Data Flow Diagrams (DFD)

A Data Flow Diagram (DFD) visually illustrates how pollen images flow through the system from upload to classification. It maps:

- Input: Uploaded pollen image
- Processing: Image preprocessing → model inference
- Output: Predicted pollen class
- Storage: Classification results and user history
- Users: General users via web app (upload) and admins (monitor performance)



📋 User Stories Table

User Type	Functional Requirement (Epic)	User Story Number	User Story / Task	Acceptance Criteria	Priority	Release Sprint
General User	Image Upload	USN-1	As a user, I can upload an image of a pollen grain through the web interface	The system accepts the image and confirms upload	High	Sprint-1
General User	Prediction Result Display	USN-2	As a user, I can see the predicted pollen class with confidence score after uploading an image	Class name and accuracy displayed	High	Sprint-1
General User	About & Info	USN-3	As a user, I can read about the 23 pollen classes from the app	Class details visible in UI	Medium	Sprint-2
Admin	Model Accuracy Monitoring	USN-4	As an admin, I can view classification accuracy and logs	Model metrics and logs shown	Medium	Sprint-2
System (AI Model)	Image Classification	USN-5	As the system, I classify uploaded pollen images using a CNN model	Output class with >85% test accuracy	High	Sprint-1
System (Storage)	Save Results	USN-6	As the system, I store uploaded images and prediction results for record-keeping	Image and result stored correctly	High	Sprint-1
Admin	Model Management (Future)	USN-7	As an admin, I can retrain the model using new images or feedback	Model updates improve performance	Medium	Sprint-3
Customer/End-User	Export Report (Future)	USN-8	As a user, I can download a report of my uploads and prediction history	PDF/CSV file downloadable	Low	Sprint-4