

Project Design Phase-II

Data Flow Diagram & User Stories

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Team ID: LTVIP2026TMIDS91486

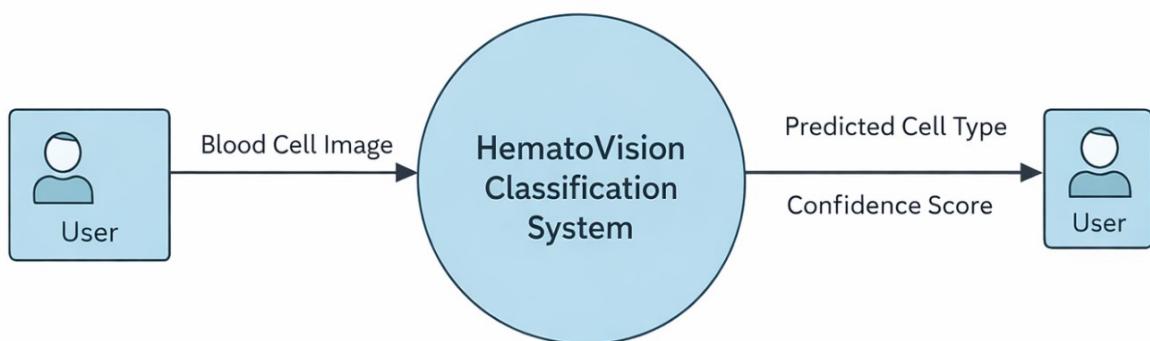
Project Name: HematoVision – Intelligent Blood Cell Classification System

Maximum Marks: 4 Marks

Data Flow Diagrams

A Data Flow Diagram (DFD) represents how data moves through the HematoVision system. It illustrates inputs, processing stages, outputs, and storage components.

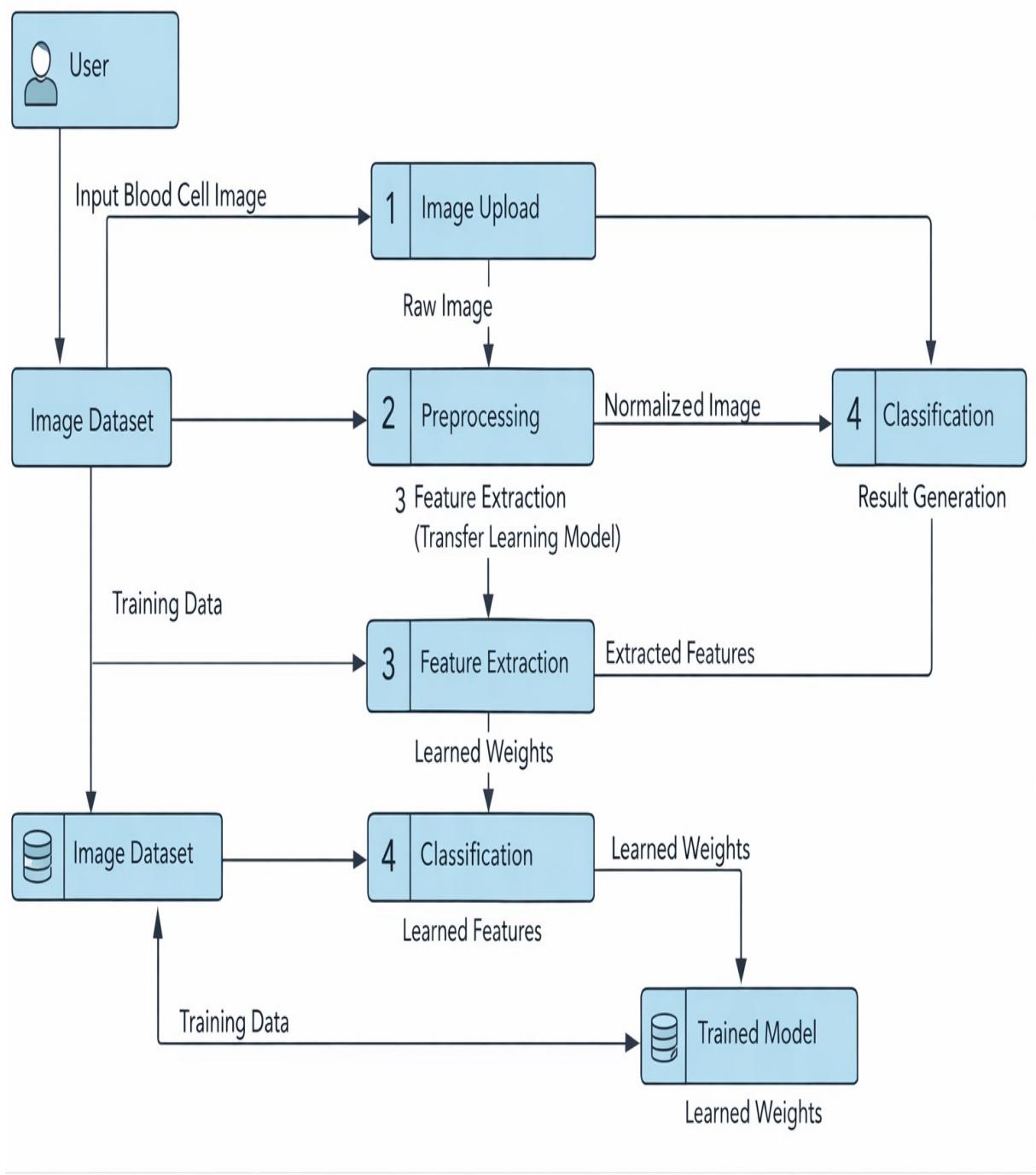
DFD Level 0 (Context Diagram)



HematoVision Classification System

(Level 0 Context Diagram)

DFD Level 1 (Simplified System Flow)



User Stories

User Type	Functional Requirement (Epic)	User Story Number	User Story / Task	Acceptance Criteria	Priority	Release
End User (Web App User)	Image Upload	USN-1	As a user, I can upload a blood cell image to the system for analysis.	✓ User can select image ✓ Supported formats accepted ✓ Image successfully displayed	High	Sprint-1
End User (Web App User)	Image Validation	USN-2	As a user, I receive an error message if an invalid image is uploaded.	✓ Invalid files rejected ✓ Error message displayed	High	Sprint-1
End User (Web App User)	Prediction	USN-3	As a user, I can run classification on the uploaded image.	✓ Prediction triggered ✓ Processing indicator shown ✓ Output generated	High	Sprint-1
End User (Web App User)	Results Display	USN-4	As a user, I can view the predicted blood cell type.	✓ Predicted label shown ✓ Clear UI presentation	High	Sprint-1
End User (Web App User)	Confidence Score	USN-5	As a user, I can see prediction confidence.	✓ Probability / confidence visible	Medium	Sprint-2
Researcher / Developer	Model Training	USN-6	As a developer, I can train the transfer learning model using dataset images.	✓ Dataset loaded ✓ Training executes ✓ Model saved	High	Sprint-1
Researcher / Developer	Model Evaluation	USN-7	As a developer, I can evaluate model accuracy.	✓ Accuracy metrics generated ✓ Loss values displayed	High	Sprint-1
Researcher / Developer	Model Improvement	USN-8	As a developer, I can fine-tune the pretrained CNN model.	✓ Layers configurable ✓ Updated model saved	Medium	Sprint-2
Administrator	System Monitoring	USN-9	As an administrator, I can monitor system performance.	✓ Logs available ✓ Prediction activity tracked	Low	Sprint-3

