

User Acceptance Testing (UAT)

Date	20 January 2026
Team ID	LTVIP2026TMIDS76912
Project Name	HematoVision: Advanced Blood Cell Classification Using Transfer Learning
Maximum Marks	

Project Overview

Project Name: HematoVision

ProjectDescription:

HematoVision is an AI-powered blood cell classification system that uses transfer learning with a pre-trained CNN model to classify blood smear images into categories such as eosinophils, lymphocytes, monocytes, and neutrophils. The system is integrated with a Flask web application for real-time image upload and prediction.

Project Version: 1.0

Testing Period: 15-02-2026 to 20-02-2026

Testing Scope

Features and Functionalities Tested:

- Image upload functionality
- Image preprocessing and resizing
- Model prediction accuracy
- Confidence score display
- Error handling for invalid inputs
- Model loading and response time
- UI display of results

User Stories / Requirements Tested:

- As a user, I can upload a blood cell image.
- As a user, I receive an accurate classification result.
- As a user, I can view prediction confidence scores.
- As a user, I receive error messages for invalid files.

Test Cases

Test Case ID	Test Scenario	Test Steps	Expected Result	Actual Result	Pass/Fail
TC-001	Upload valid blood cell image	1. Open app 2. Upload valid image 3. Click predict	Correct class label + confidence score displayed	Prediction displayed correctly	Pass
TC-002	Upload invalid file format	1. Upload .txt file 2. Click predict	Error message shown	Error handled properly	Pass
TC-003	Model prediction accuracy check	1. Upload known test image	Correct classification	Correct result returned	Pass
TC-004	System performance	1. Upload image 2. Measure response time	Prediction within acceptable time (<3 sec)	Response within limit	Pass
TC-005	Multiple uploads sequentially	1. Upload multiple images one by one	System remains stable	No crash observed	Pass

Bug Tracking

Bug ID	Bug Description	Steps to Reproduce	Severity	Status	Additional Feedback
BG-001	Model not loading on first request	1. Start server 2. Upload image immediately	Medium	Closed	Model preload added
BG-002	Incorrect message for unsupported format	1. Upload invalid file	Low	Closed	Error message improved

Sign-off

Tester Name: R.Balaji

Date: 20/02/2026

Signature: R.Balaji