

## 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

**Project Description:**

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

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## Sign-off

Tester Name: R.Balaji

Date: 20/02/2026

Signature: R.Balaji