User Acceptance Testing (UAT) Template

Date	26 June 2025
Team ID	LTVIP2025TMID45471
Project Name	HematoVision-Advanced Blood Cell Classification Using Transfer Learning
Maximum Marks	2 Marks

Project Overview:

Project Name: HematoVision – Blood Cell Classification Using Transfer Learning

Project Description:

This project involves developing a deep learning-based image classification system to identify blood cell types including neutrophils, lymphocytes, monocytes, and eosinophils. It uses pre-trained models like MobileNetV2 for transfer learning to improve classification accuracy. The trained model is integrated with a Flask web application allowing real-time prediction and interaction.

Project Version: v1.0

Testing Period: 17 June 2025 to 26 June 2025

Testing Scope:

List of Features and Functionalities to be Tested :

1. Image upload functionality
2. Cell type prediction using .h5 model
3. Real-time result display on Flask web app
4. Handling of invalid inputs (non-image files, corrupted images)
5. Display of predicted class
6. Mobile responsiveness of web interface

List of User Stories or Requirements to be Tested :

1. As a medical user, I want to upload a blood smear image and get the cell type prediction.
2. As a lab technician, I want accurate prediction for efficient diagnostics.
3. As a user, I want clear error messages if I upload an invalid file.

Testing Environment:

URL/Location: http://127.0.0.1:5000/

Credentials (if required): Not Required

Test Cases:

Test Case ID	Test Scenario	Test Steps	Expected Result	Actual Result	Pass/Fail
TC-001	Upload valid image	Open app → Upload image → Submit	Prediction shown	As Expected	Pass
TC-002	Upload non-image file	Upload .txt or .pdf	Error message shown	Error handled	Pass
TC-003	Upload corrupted image	Upload invalid .jpg	Show error	Message displayed	Pass
TC-004	Submit empty form	Click Submit without file	Prompt for upload	Prompt shown	Pass
TC-005	Upload large resolution image	Upload HD image	Successfully classified	Done	Pass
TC-006	Accuracy verification	Upload known image	>90% Accuracy	Validated	Pass
TC-007	Mobile responsive UI	Open app in phone browser	Layout adapts	Works well	Pass

Bug Tracking:

Bug ID	Bug Description	Steps to reproduce	Severity	Status	Additional feedback
BG-001	Incorrect cell label	Upload blurred image	Medium	Open	May need more samples
BG-002	Model loads slowly	First time server run	Low	In Progress	Optimize model loading
BG-003	UI scaling issue	Open on small screen	Low	Closed	Fixed via responsive CSS

Sign-off:

Tester Name: Vidavaluru Glory Manvitha

Date: 26 June 2025

Signature: V. Glory Manvitha

Notes:

- Ensure that all test cases cover both positive and negative scenarios.
- Encourage testers to provide detailed feedback, including any suggestions for improvement.
- Bug tracking should include details such as severity, status, and steps to reproduce.
- Obtain sign-off from both the project manager and product owner before proceeding with deployment.