Acceptance Testing
UAT Execution & Report Submission

Date	21 February 2026
Team ID	LTVIP2026TMIDS76616
Project Name	HematoVision – Advanced Blood Cell Classification Using Transfer Learning
Maximum Marks	4 Marks

1. Purpose of Document

The purpose of this document is to explain the test coverage, validation results, and system performance of the HematoVision project during User Acceptance Testing (UAT). The system classifies microscopic blood cell images using MobileNetV2 transfer learning and Flask deployment.

2. Defect Analysis

This report shows the number of resolved or closed bugs at each severity level, and how they were resolved

Resolution	Severity 1	Severity 2	Severity 3	Severity 4	Subtotal
By Design	0	0	0	0	0
Duplicate	0	0	0	0	0
External	0	0	0	0	0
Fixed	0	0	0	0	0
Not Reproduced	0	0	0	0	0
Skipped	0	0	0	0	0
Won't Fix	0	0	0	0	0
Totals	0	0	0	0	0

No open defects
No critical bugs
System working stable

3. Test Case Analysis

This report shows the number of test cases that have passed, failed, and untested

Section	Total Cases	Not Tested	Fail	Pass
Image Upload Module	5	0	0	5
Blood Cell Prediction	5	0	0	5
Non-Blood Image Validation	3	0	0	3
Confusion Matrix Generation	2	0	0	2
Classification Report	2	0	0	2
Flask Web Integration	3	0	0	3
Total	20	0	0	20

4. Model Performance Summary

- Training Accuracy: ~91%
- Validation Accuracy: **88.94%**
- Confusion Matrix: Generated successfully
- Classification Report: Precision, Recall, F1-score calculated for all classes
- Dataset Size: 5156 validation images
- Classes: Basophil, Eosinophil, Lymphocyte, Monocyte, Neutrophil, Others

The model demonstrated good generalization and reliable classification performance.

5. UAT Conclusion

The HematoVision system has been successfully tested and validated.

✓ Blood cell images are classified correctly
✓ Non-blood images are handled appropriately
✓ Model accuracy achieved ~88.94%
✓ Web application runs successfully using Flask
✓ No critical defects identified

6. Sign-Off

Tester Name: Baitapalli Kishor
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