

Project Design Phase-II

Solution Requirements (Functional & Non-functional)

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| Date | 6-Feb-2026 |
| Team ID | LTVIP2026TMIDS65604 |
| Project Name | Hematovision: Advanced Blood Cell Classification using Transfer Learning |
| Maximum Marks | 4 Marks |

Functional Requirements:

Following are the functional requirements of the proposed solution.

| FR No. | Functional Requirement (Epic) | Sub Requirement (Story / Sub-Task) |
|--------|-------------------------------|--|
| FR-1 | Image Preprocessing | The system shall allow users to preview uploaded images before processing. |
| FR-2 | Blood Cell Detection | The system shall output a label and a probability score for each identified cell in the image. |
| FR-3 | Performance and Reporting | The system shall allow export of classification results in standard formats |
| FR-4 | Data Handling | The system shall anonymize image metadata to ensure patient privacy. |

Non-functional Requirements:

Following are the non-functional requirements of the proposed solution.

| FR No. | Non-Functional Requirement | Description |
|--------|----------------------------|--|
| NFR-1 | Usability | The system shall provide visual feedback, tooltips, and error messages to guide the user. |
| NFR-2 | Security | The system shall comply with data protection regulations (e.g., HIPAA, GDPR if applicable). |
| NFR-3 | Reliability | The system shall be available 99.9% of the time during operational hours. |
| NFR-4 | Performance | The system shall support processing of at least 500 images per hour in batch mode. |
| NFR-5 | Availability | The system shall log all user actions, image uploads, classification results, and model usage. |