**Requirement Analysis**

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| Date | 30 june2025 |
| Team ID | LTVIP2025TMID59822 |
| Project Name | Hematovision: Advanced Blood Cell Classification Using Transfer Learning |
| Maximum Marks | 4 Marks |

The Requirement Analysis phase identifies and documents all functional, non-functional, system, and user-specific requirements. This ensures that the Hematovision system aligns with user needs and technical feasibility before development begins.

**5.1 Functional Requirements**

These are core features the system must perform:

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| **ID** | **Functional Requirement** |
| FR1 | User should be able to upload blood cell images through the web interface. |
| FR2 | System should preprocess the uploaded image (resize, normalize, etc.). |
| FR3 | The model should predict and classify the blood cell type (e.g., neutrophil, monocyte). |
| FR4 | Display the predicted class along with confidence level. |
| FR5 | Allow users to clear/reset or upload a new image. |
| FR6 | Admin/user (optional) can log the classification results. |

**Non-Functional Requirements**

These define how the system should behave:

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| **ID** | **Non-Functional Requirement** |
| NFR1 | The model should return results within 3 seconds. |
| NFR2 | The system should handle invalid or unsupported file formats gracefully. |
| NFR3 | The web interface should be responsive and work on desktops and tablets. |
| NFR4 | The system should be lightweight and not require high-end hardware. |
| NFR5 | User data and image inputs should be processed securely. |