

Project Design Phase-II
Solution Requirements (Functional & Non-functional)

Date	26/06/2025
Team ID	LTVIP2025TMID33042
Project Name	HematoVision-Blood Cell Classifier
Maximum Marks	4 Marks

Section Overview This section captures exactly what HematoVision must do (functional) and how well it must perform (non-functional) to meet our users' needs.

Functional Requirements

ID	Requirement
FR-1	The app shall load and preprocess a blood smear image entirely offline.
FR-2	The app shall display the top-3 predicted cell classes along with confidence scores.
FR-3	The app shall generate and export a medical-style PDF report in a single click.
FR-4	The app shall provide an on-screen explanation for each prediction (e.g., heatmap or text rationale).

Non-Functional Requirements

ID	Requirement
NFR-1	The app must return classification results within 5 seconds for a 512×512 image.
NFR-2	The user interface shall be responsive and correctly render on desktop resolutions $\geq 1366 \times 768$.
NFR-3	All processing—including model inference—shall run entirely offline without any external calls.
NFR-4	The exported PDF must conform to A4 portrait layout standards (margins, fonts, branding).
NFR-5	The system shall handle at least 100 image classifications per session without restart or degradation.
NFR-6	Updates to the model or preprocessing pipeline shall be deliverable via an offline package upgrade.

