

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

Date	15 February 2026
Team ID	LTVIP2026TMIDS49741
Project Name	HematoVision: Advanced Blood Cell Classification Using Transfer Learning
Maximum Marks	

Functional Requirements:

Following are the functional requirements of the proposed solution.

FR No.	Functional Requirement (Epic)	Sub Requirement (Story / Sub-Task)
FR-1	Dataset Management	Upload blood cell image dataset
FR-2	Data Preprocessing	Validate image format (JPG, PNG)
FR-3	Model Building	Split dataset into training and testing data
FR-4	Model Training	Resize images to required dimensions (224x224)
	Model Evaluation	Normalize pixel values
	Prediction System	Perform data augmentation (flip, rotation, zoom)

Non-functional Requirements:

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

FR No.	Non-Functional Requirement	Description
NFR-1	Usability	The system provides a simple and easy-to-use interface for image upload and prediction.
NFR-2	Security	The system prevents unauthorized access and does not store uploaded images permanently.
NFR-3	Reliability	The system provides consistent and accurate results for valid
NFR-4	Performance	The prediction result is generated within a few seconds after image upload.
NFR-5	Availability	The system is accessible via web interface whenever required.
NFR-6	Scalability	The system can handle larger datasets and additional blood cell categories in future.