Project Design Phase-II

Solution Requirements (Functional & Non-functional)

Date: 15 June 2025

Team ID: LTVIP2025TMID34516

Project Name: Pattern Scene - Classifying Fabric Patterns Using Deep Learning

Maximum Marks: 4 Marks

Functional Requirements:

FR No.	Functional Requirement (Epic)	Sub Requirement (Story / Sub-Task)
FR-1	Image Upload	Upload fabric image via web/mobile interface
		Upload multiple images in batch
FR-2	Pattern Classification	Classify uploaded image using trained DL model
		Return top predicted pattern label with confidence score
FR-3	Model Feedback	Allow users to report incorrect classifications
		Submit additional image for retraining
FR-4	User Management	Admin dashboard to monitor uploads and classifications
		View usage statistics and model performance metrics

Non-functional Requirements:

FR No.	Non-Functional Requirement	Description
NFR-1	Usability	Simple and intuitive user interface for uploading and results
NFR-2	Security	Secure image upload and access control for admins
NFR-3	Reliability	System handles faulty inputs gracefully
NFR-4	Performance	Real-time or near real-time classification (< 2s avg.)
NFR-5	Availability	99.9% uptime for user-facing services
NFR-6	Scalability	System can scale to classify thousands of images/day