

Project Design Phase

Proposed Solution

Date	25 june 2025
Team ID	LTVIP2025TMID32913
Project Name	Pattern Sense: Classifying Fabric Patterns Using Deep Learning
Maximum Marks	3

Proposed Solution Template

Project: Pattern Sense: Classifying Fabric Patterns Using Deep Learning

Project team shall fill the following information in the proposed solution template.

S.No.	Parameter	Description
1	Problem Statement (Problem to be solved)	Manual classification of fabric patterns in the textile industry is time-consuming, error-prone, and lacks consistency, especially in high-volume production.
2	Idea / Solution description	Pattern Sense is an AI-powered solution using deep learning (CNN) to automatically classify and label fabric patterns from images with high accuracy.
3	Novelty / Uniqueness	Uses custom-trained deep learning models on fabric-specific datasets, offering real-time, scalable, and domain-tailored pattern classification.
4	Social Impact / Customer Satisfaction	Reduces human workload, improves accuracy in fabric quality checks, enhances productivity, and supports textile workers through automation.

5	Business Model (Revenue Model)	Freemium model with core features free; advanced features (bulk uploads, custom training, API access) available via subscription or enterprise licensing.
6	Scalability of the Solution	Highly scalable for small businesses to large textile industries; adaptable to new fabric types by retraining the model on new data.