Project Design Phase
Proposed Solution Template

Date	20 June 2025
Team ID	LTVIP2025TMID60795
Project Name	**Pattern Sense**: Classifying Fabric Patterns Using Deep Learning
Maximum Marks	2 Marks

Proposed Solution Template:

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 is inefficient, time-consuming, and prone to error. This creates inconsistencies in design, manufacturing, and retail workflows.
2.	Idea / Solution description	Develop a deep learning-based system that uses a Convolutional Neural Network (CNN) to automatically classify fabric patterns from images into predefined categories.
3.	Novelty / Uniqueness	Unlike traditional methods or manual tagging, this solution uses fine-tuned AI models trained specifically on diverse fabric patterns, ensuring high accuracy and adaptability.
4.	Social Impact / Customer Satisfaction	Improves productivity and reduces labor costs in the textile industry. Enhances user experience for e-commerce buyers and helps designers focus on creativity rather than routine classification.
5.	Business Model (Revenue Model)	This solution can be monetized as a SaaS product for textile manufacturers, integrated into e-commerce platforms, or licensed to fashion tech companies and AI firms.
6.	Scalability of the Solution	The model can be trained with larger datasets for broader fabric coverage, integrated into mobile apps, or scaled to global markets where textile classification is in demand.