Project Design Phase
Proposed Solution Template

Date	15 February 2025
Team ID	LTVIP2025TMID34512
Project Name	Pattern Sense: Classifying Fabric Patterns using Deep Learning
Maximum Marks	2 Marks

Proposed Solution Template:

S.No.	Parameter	Description
1.	Problem Statement (Problem to be solved)	The manual classification of fabric patterns in the textile and fashion industry is time-consuming, error-prone, inconsistent, and not scalable, affecting product cataloging, inventory management, and customer satisfaction.
2.	Idea / Solution description	Pattern Sense is a Deep Learning-powered system that automatically identifies and classifies fabric patterns from images with high accuracy, improving operational efficiency, product consistency, and reducing human error.
3.	Novelty / Uniqueness	Unlike traditional manual or rule-based classification methods, Pattern Sense uses advanced computer vision and deep learning techniques to accurately categorize complex fabric patterns, even under varying conditions or image quality.
4.	Social Impact / Customer Satisfaction	The solution enhances efficiency for manufacturers, retailers, and designers, reducing labor-intensive tasks, improving product accuracy, and ensuring consistent quality for end customers, thereby boosting customer satisfaction and reducing returns.
5.	Business Model (Revenue Model)	Revenue generated through SaaS subscriptions for Pattern Sense software, integration services, and enterprise licensing for large-scale textile manufacturers and e-commerce platforms. Freemium or pay-per-analysis options can target smaller businesses.
6.	Scalability of the Solution	Highly scalable for global textile, fashion, and e-commerce industries. The AI model can be trained with diverse pattern datasets to handle new patterns, fabrics, and regional requirements, ensuring adaptability across markets.