

PATTERN SENSE: CLASSIFYING FABRIC PATTERNS USING DEEP LEARNING

Ideation Phase

Brainstorm & Idea Prioritization

Date	27 June 2025
Team ID	LTVIP2025TMID59820
Project Name	Pattern Sense: Classifying Fabric Patterns Using Deep Learning
Maximum Marks	4 Marks

Brainstorm & Idea Prioritization:

Brainstorming provides a free and open environment that encourages everyone within a team to participate in the creative thinking process that leads to problem solving. Prioritizing volume over value, out-of-the-box ideas are welcome and built upon, and all participants are encouraged to collaborate, helping each other develop a rich amount of creative solutions.

Step-1: Team Gathering, Collaboration and Select the Problem Statement



Brainstorm & idea prioritization

Pattern Sense is an innovative project focused on enhancing the precision and efficiency of classifying fabric patterns using deep learning. It aims to automate the identification of fabric patterns in large textile inventories, improving accuracy and speed.

Fabric retailers, manufacturers, and designers face challenges with the manual cataloging of diverse fabric patterns. This process is often time-consuming, error-prone, and inconsistent, which leads to confusion, mislabeling, and customer dissatisfaction. Our project uses deep learning-based image classification to identify and label fabric patterns accurately and automatically. This automation improves catalog quality, reduces manual work, and boosts customer trust.

Step-2: Brainstorm, Idea Listing and Grouping

Brainstorm

In large textile warehouses and factories, workers manually sort and classify thousands of fabric rolls with different patterns daily. This manual classification is slow, subjective, and prone to mistakes. By implementing Pattern Sense with deep learning for fabric pattern recognition, we can automate the cataloging process, minimize human error, and enhance inventory management.

Item	Color	Pattern	Material
Yellow	Yellow	Yellow	Yellow
Yellow	Yellow	Yellow	Yellow
Yellow	Yellow	Yellow	Yellow
Yellow	Yellow	Yellow	Yellow

Group ideas

Ideas include building an application to detect and classify the pattern of a given fabric image accurately, integrating the system with existing inventory management software, and developing a web interface where users can upload images and instantly get pattern classification results.

Step-3: Idea Prioritization

4

Prioritize

The building of project is completely based on the priorities of the application needed at most, for our project the first priority is to download dataset and train a model for the downloaded dataset.

