

Project planning phase

Fabric pattern classification is a crucial task in textile, fashion, and e-commerce industries. Accurate recognition of fabric patterns helps in cataloging products, enabling visual search, and supporting automated quality control. Deep learning, particularly Convolutional Neural Networks (CNNs), has revolutionized image classification by learning hierarchical features directly from raw data, making it highly suitable for classifying fabric patterns.

Objectives

- To build a deep learning model for automatic fabric pattern classification.
 - To use CNNs to extract texture and pattern features.
 - To evaluate the model on real-world fabric datasets.
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Fabric Pattern Categories Common fabric pattern categories include:

- Floral
- Striped
- Polka Dots
- Plaid
- Geometric
- Abstract

Date	19 may to 30 June
Sprint Duration	1 week (6 working days)
Project Name	Fabric pattern using deep learning
Duration	4 weeks

Project: timeline overview

Product Backlog & Sprint Planning

Sprint -1	Data set prepration	USN-1	As data enginner I want to collect and label fabric images from sources	3	High
Sprint-2	preprocessing	USN-2	As a team we want to split and preprocess the dataset	2	High
Sprint-3	Model Devoplement	USN-3	As a developer I want to train and validate model	5	Medium
Sprint-4	Model buliding	USN-4	As a tester I want to test model accuracy using unseen pattern	2	High
Sprint-5	Visualization	USN-5	As a UI designer I want to tune hyperparameters and performance	4	Medium
Sprint-6	Reporting	USN-6	As a team we want to document results and final project	3	Medium

Tools used:

Anaconda prompt

Visual studio code