

Project Report

Pattern-Sense: Classifying Fabric Patterns Using Deep Learning

Submitted by: Thappeta Sri Yasaswini

Email: shriyasaswini@gmail.com

Date: July 10, 2025

1. Project Overview

Pattern-Sense is an intelligent web-based system designed to classify and provide insightful information about fabric patterns using deep learning models. By simply uploading a fabric image, users can retrieve detailed insights about the pattern. Additionally, the platform can answer user queries about the fabric, making it an AI-powered assistant for textile analysis.

2. Features

- Upload fabric images to identify and classify patterns
- Retrieve relevant fabric information using AI
- Ask questions about fabrics and get intelligent responses
- User-friendly interface for easy interaction

3. Technologies Used

- Lovable AI Builder (No-code platform)
- Natural Language Processing (for Q&A)
- Deep Learning (for pattern recognition)
- Image Classification Models (possibly using pre-trained models)
- Supabase/Firebase (if backend/database connected)

Project Report

- HTML, CSS, and JavaScript (automatically handled by Lovable)

4. Hosted Link

Live Project URL: <https://fabric-whisperer-ai-query.lovable.app>

5. How It Works

The user uploads a fabric image through the platform. The AI model processes the image to detect the fabric's pattern, texture, and other attributes. Based on this analysis, it provides fabric-related details. Additionally, a chatbot-like feature allows users to ask specific questions about the fabric, which the system answers using NLP and contextual understanding.

6. Conclusion

Pattern-Sense is a smart and accessible solution that leverages the power of AI to make fabric identification and understanding easier and faster. It is especially useful for fashion designers, textile engineers, and anyone interested in fabric analytics.