AI Fashion Stylist Assistant – Project Summary

🧠 Objective

The project aims to build a personalized AI-powered fashion assistant that helps users get outfit suggestions based on either images or text queries.

It combines:

• Image similarity search (via ChromaDB + OpenCLIP)

• Text-based fashion advice (via Google Generative AI)

• Web interface (via Streamlit)

🔧 Core Technologies

• ChromaDB: Stores image embeddings and enables visual similarity search.

• Google Generative AI (Gemini/PaLM): Generates detailed fashion advice.

• OpenCLIP: Converts images into embeddings used by ChromaDB.

• Streamlit: Provides a clean and simple web interface for interaction.

🎯 Features

1. Image Input: Upload clothing images.

2. Text Input: Ask styling questions.

3. Combined Reasoning: Use both inputs for better results.

4. Recommendations: Get personalized advice with accessories, color pairings, and alternatives.

🧾 Data Model Highlights

Entities:

• Users

• Fashion Items

• Styling Recommendations

• Admins

Attributes:

• Image embeddings (vector format)

• Text queries

• Generated advice

• Linked item IDs and recommendations

🛠️ System Requirements

• Python 3.x, PIL, NumPy, Streamlit

• Google Cloud for LLM

• OpenCLIP for image embeddings

• ChromaDB for similarity search

• Internet connection is essential for API access

📌 Conclusion

The system provides a powerful and user-friendly platform for AI-based styling. It bridges the gap between fashion images and intelligent outfit suggestions. With further improvements (like trend updates, explainability, real-time customization), it could scale to professional stylist tools or ecommerce platforms.

🔮 Future Improvements

• Add explainability (e.g., highlight image regions)

• Support batch queries

• Integrate newer multimodal models like Kosmos or Flamingo

• Real-time fashion trend updates