

STYLESENSE

"Dress Smart. Dress Confident. Powered by AI."

- AI-Powered Smart Outfit Recommendation System
- Institution: GNITS - B.Tech CSE
- Event: Gen AI Hackathon 2026
- Tech Stack:
- React / Next.js • Flask / FastAPI • Python • Generative AI • JSON • Weather API

PROBLEM STATEMENT

- THE PROBLEM

- Choosing the right outfit every day is harder than it seems.
- People spend 10–20 minutes daily deciding what to wear
- Weather conditions affect clothing comfort
- Many struggle with color combinations
- No clarity on what suits their personal style
- Lack of confidence due to poor outfit choices

- EXISTING SOLUTIONS PROBLEMS:

- Show only trending outfits
- Not personalized
- No AI reasoning
- No weather intelligence
- No explanation behind recommendations



OUR SOLUTION

Introducing StyleSense

StyleSense is an AI-powered personal fashion assistant that recommends outfits based on:

- Weather conditions
- Occasion (College, Party, Formal, Casual, etc.)
- User style preference
- Color compatibility rules

What Makes It Unique?

- Hybrid AI Recommendation System
- Weather-Aware Outfit Matching
- Personalized Style Profiles
- Generative AI Explanations
- Unlike traditional apps, StyleSense doesn't just suggest outfits –
- It explains WHY the outfit suits you.
- This creates a personalized, intelligent, and confident dressing experience.



SYSTEM ARCHITECTURE

Frontend (React / Next.js)

- InputForm.js – Collects user inputs
- WeatherWidget.js – Fetches real-time weather
- OutfitCard.js – Displays recommended outfits
- Results Page – Shows AI output

Backend (Flask / FastAPI)

- app.py – API routing
- recommender.py – AI recommendation logic
- ai_explainer.py – LLM-based explanation generator

Data Layer

- outfits.json – Outfit dataset
- weather_rules.json – Climate-based logic
- style_profiles.json – User style preferences



AI & GENERATIVE AI COMPONENT



Recommendation Engine

- Rule-based filtering
- Weather-condition scoring
- Style matching algorithm
- Color compatibility logic
- Occasion-based filtering

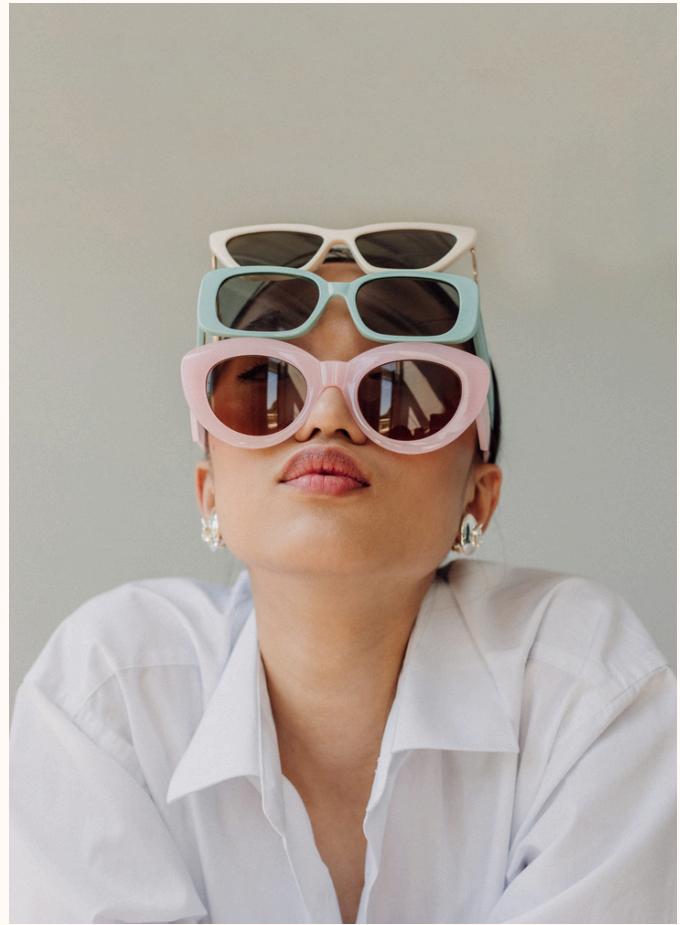
Generative AI (LLM Integration)

The system uses a Large Language Model to:

- Generate personalized explanations
- Provide styling suggestions
- Create confidence-boosting messages
- Make recommendations conversational



IMPACT



Impact

- Saves daily decision time
- Increases dressing confidence
- Encourages smart wardrobe use
- Reduces unnecessary shopping
- Promotes sustainable fashion

FUTURE SCOPE



Future Scope

- AR Virtual Try-On
- Body Type Detection using Computer Vision
- AI Image-Based Outfit Generation
- Closet Integration
- E-commerce API Integration
- Mobile App Deployment

CONCLUSION



StyleSense is an AI-powered personal stylist that combines intelligent recommendation logic with Generative AI explanations to deliver personalized, weather-aware, and confidence-driven outfit suggestions.

It transforms daily fashion decisions into a smart, explainable, and user-centric AI experience.

StyleSense is not just a fashion tool – it is intelligent lifestyle assistance powered by Gen AI.

THANK YOU

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