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Closet-AI

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Abstract: ClosetAI is a smart outfit recommendation system that integrates large language models (LLMs) with web scraping and computer vision to provide context-aware fashion suggestions. Utilizing the Gemini API, the system interprets natural language queries from users—such as event types, moods, or occasions—and dynamically scrapes relevant fashion data from the web to enrich its recommendations. The pipeline combines clothing detection and classification with a Gemini-powered backend that understands user intent and preferences, including age, gender, skin tone, and weather conditions.

ClosetAI processes this multimodal input to generate accurate and personalized outfit recommendations in real time. The backend is served via a lightweight Flask API, ensuring smooth interaction and integration across platforms. By merging LLM-driven comprehension, live data extraction, and visionbased clothing analysis, ClosetAI transforms traditional outfit selection into an intelligent, adaptive experience tailored to individual users.

Keywords: Gemini API, LLM, Web Scraping, Outfit Recommendation, Personalized Fashion AI

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349