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5.0

Problem Statement Title:
Conversational Fashion Outfit Generator powered by GenAI.

Team Name: 686157-U27M5Y5X

Team members details

Team Name	686157-U27M5Y5X		
Institute Name/Names	Graphic Era (Deemed to be University)		
Team Members >	1 (Leader)	2	3
Name	Ashutosh Pandey	Adarsh Bharti Musa	
Batch	2021-25	2021-25	

Use-cases

P0 - High Impact:
 Personalized Outfit Recommendations: Generate tailored outfit recommendations based on user's past purchase history, browsing data, preferences, and social media trends.
 Conversational Interaction: Enable users to interact with the generator in a conversational manner, providing feedback and making adjustments to outfit suggestions.

P1 - Medium Impact:
 Preference Analysis: Analyse user's preferred style, colour choices, favourite brands, and frequently viewed/added items to create outfits that align with individual fashion taste.
Occasion-based Outfits: Provide outfit suggestions based on specific occasions (casual, formal, party) and consider factors like age, regional preferences, and body type.

P2 - Low Impact:
 Accessories and Coordination: Ensure well-coordinated outfit recommendations by including   clothing, accessories, and footwear that complement each other.
 User Feedback Loop: Allow users to provide feedback on the suggested outfits, indicating what they like and dislike, and allowing for adjustments.

Solution statement/ Proposed approach

Sub-Problem: Generating Personalized Outfit Recommendations

•**Description:** Use the fine-tuned LLM to generate tailored outfit recommendations based on user preferences, past purchase history, browsing data, and social media trends.

•**Solution:** Utilize the fine-tuned LLM's language generation capabilities to create personalized outfit suggestions by integrating user-specific data and fashion trends into the generated content.

Sub-Problem: Enabling Conversational Interaction

•**Description:** Implement a conversational interface that allows users to interact naturally with the fine-tuned LLM, providing feedback and making adjustments to outfit suggestions.

•**Solution:** Develop a chatbot interface that leverages the fine-tuned LLM's contextual understanding to engage users in a dynamic conversation, offering outfit recommendations and adapting based on user input.

Sub-Problem: Contextualizing Occasion-based Outfits

•**Description:** Enable the fine-tuned LLM to suggest outfits tailored to specific occasions, user characteristics, and preferences.

•**Solution:** Develop a context-aware module that considers user-provided information about occasions, body type, age, and location to enhance the fine-tuned LLM's recommendations.

Sub-Problem: Incorporating User Feedback

•**Description:** Allow users to provide feedback on suggested outfits and adjust recommendations accordingly.

•**Solution:** Develop a feedback loop that enables users to express preferences and refine outfit suggestions. Train the fine-tuned LLM to adapt its responses based on user feedback.

Flowchart
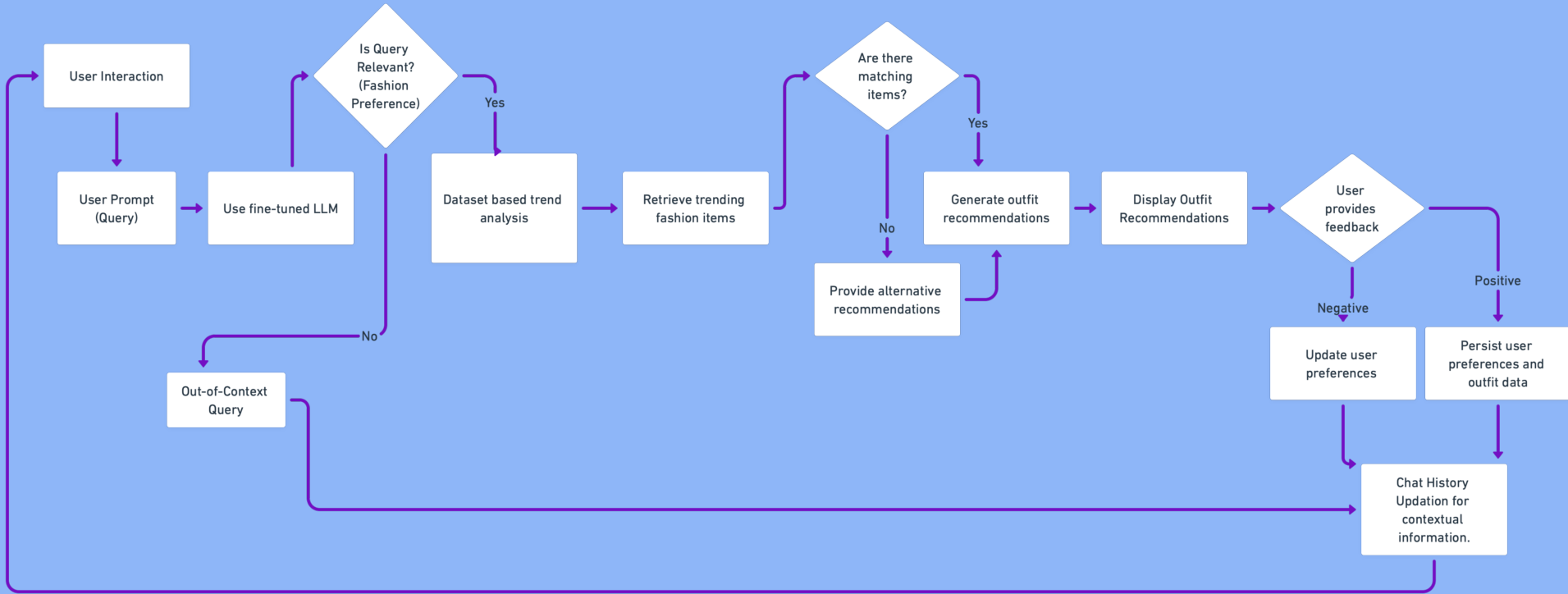
Limitations

Limited Data Diversity: The fine-tuned LLM was trained on a limited dataset, the generated content might lack diversity in fashion styles, preferences, and recommendations.

Dependency on Synthetic Data Quality: The effectiveness of the fine-tuned LLM relies on the quality and relevance of the synthetic training data. If the synthetic data doesn't capture the full spectrum of user interactions and preferences, the model's performance could suffer.

Dependency on User Input: The accuracy of outfit recommendations heavily relies on accurate user input. If users provide incomplete or inaccurate information, the generated suggestions may not align with their preferences.

Future Scope

1.Speech to Text Integration:
Incorporating a "speech to text" feature allows users to interact with the Conversational Fashion Outfit Generator using spoken language, further mimicking natural conversations.

2.API Integration:
Develop APIs that allow integration with other e-commerce platforms and fashion apps, expanding the reach and impact of the outfit generator.

3.Integration with AR/VR:
Incorporating Augmented Reality (AR) or Virtual Reality (VR) capabilities could allow users to visualize recommended outfits in a virtual fitting room, enhancing the shopping experience

4.AI-generated Fashion Designs:
Extend the project to generate entirely new fashion designs based on user preferences and trends, potentially collaborating with designers to bring these designs to life.

5.Real-time Fashion Trend Prediction:
Develop algorithms that predict future fashion trends based on historical data, enabling the system to offer anticipatory recommendations.

6.Collaborations with Fashion Brands:
Partner with fashion brands to offer exclusive collections or discounts based on the generated outfit recommendations, creating synergistic marketing opportunities.