Progress Report

Student Name: Mario Pauldon
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Proposed Team Name: StyleGenius

1. Overview:

For my final project, I will be creating a "StyleGenius," which is a small web page around fashion and styling. The web page would recommend outfits or find pieces based on the user's style, personality, and or their self-identified traits. It would use a sentence transformer and drop-down selections to match the prompts and inputs with the different items. The descriptions and item details would likely come from fashion websites or magazines.

I came up with this project idea because of my experience with fashion. I have started a fashion club on campus that helps people find their sense of style, all while fostering a community through culture and the love for fashion. I hope that this web page serves as a resource for the club and new members who would like to get support on their clothing choices for everyday looks.

2. Research Questions:

1. *How does StyleGenius compare to existing fashion platforms in personalization and satisfaction based on cosine calculations?*
2. *What is the best way to format search prompts for optimal results?*
3. *How can user feedback be incorporated into the recommendation loop to improve personalization over time?*
4. *What biases emerge based on dataset composition?*
5. *How could StyleGenius support fashion education?*

3. Value to User Community:

The Prospective users for my projects are either new to fashion and trying to find their sense of style, or students who need help deciding on an outfit. The website will show them suggestions and or recommendations based on their inputs or what filters they add. I am wondering if I should make a user profile and allow them to add their style and filter the front page based on their preferences.

4. Demo:

1-Minute Elevator Pitch:

Hi, my name is Mario Pauldon, and I'm a senior at Columbia College studying computer Science. I am excited to share my project called "StyleGenius", a fashion outfit recommendation

web app that merges fashion and NLP. The idea came from my experience running a campus fashion club where people often asked for advice to find outfits that matched their mood, style, or personality.

StyleGenius lets users type in descriptions like ‘chill streetwear for spring brunch’ and get outfit matches based on real clothing data and sentence similarity using language models. It will be like having a personal stylist on hand for everyday use. My goal is to help users discover or enhance their style.

Demo outline:

1. Preview the home page
2. Search function
3. Filters page
4. Comparison
5. Item detail page
6. Wrap-Up and Reflection

5. Delivery:

I will be uploading my code to a GitHub repository that will be public. I will also write a short report on the project and upload that separately to Coursework.

6. Existing components:

- Sentence similarity modeling using the sentence-transformers Python library to convert user prompts into embeddings and match them with item descriptions using cosine similarity.
- Fashion item data will be curated manually and supplemented with descriptions and product images scraped or sourced from publicly available fashion retailers.
- The UI is built using Flask with HTML/CSS templating and Bootstrap for responsiveness.
- While my project is a new project for this class, I will be using similar structures and techniques for web development from previous projects I completed in UI design. These projects include html formatting, python server, AI generated databases and css styling. **I will not be continuing my midterm paper.**