

PROJECT PROGRESS REPORT (Week 4)

“Caffeine Overflow’s - Ai driven virtual try-on system in E-commerce”

Junior Design

CSE299

Semester: Summer 2024

Section: 15



North South University

Department of Electrical & Computer Engineering

Submitted By

Aporbo Ghosh 1931458042

Tasfia Anjum Zuairia 2221233642

Under the guidance of

Ms. Tanzilah Noor Shabnam

Lecture

Project Overview:

Our project focuses on developing an AI-driven virtual try-on system that leverages e-commerce technologies, augmented reality (AR), and 3D modeling to enhance online shopping experiences. This system will allow users to try on clothing virtually, making it easier to make purchasing decisions while reducing product returns.

Progress Made in Week 3:

□ 3D Cloth and Model Generation with Visualization:

- **3D Model Generation:** A 3D model generation feature was developed to produce 3D representations of clothing.
- **3D Visualization:** A visualization system was added, allowing users to view the generated 3D model. The validation process involves uploading a 2D picture, which is then converted into a 3D model for visualization.
- **Functional but Imperfect:** While the feature is working and displays the 3D model based on the uploaded 2D picture, the visualization is not yet perfect and requires further refinement.

Progress:

The 3D model generation and visualization process is functional but still requires optimization for better accuracy and performance.

□ Backend Development and Integration:

- **Backend Development:** developed the backend infrastructure, connecting the system's admin panel to the backend.
- **Admin and Backend Connection:** The admin panel is now connected to the backend, enabling full functionality for managing products.
- **MongoDB Integration:** The backend has been successfully integrated with MongoDB, allowing for efficient data storage and retrieval, particularly for product management.

Progress:

The backend is now fully operational, connected to the admin panel, and integrated with MongoDB for managing and storing data efficiently.

Challenges & Areas Yet to Be Completed:

- ❑ **3D Visualization Refinement:** The 3D visualization from 2D picture uploads is functional, but it requires improvements to enhance the quality and accuracy of the generated models.
- ❑ **Full E-commerce Integration:** The 3D model generation and backend systems need to be fully integrated with the e-commerce platform for a seamless user experience.

Plan for Week 5:

- Continue refining the 3D model visualization and improve the system's ability to handle more complex inputs.
- Focus on fully integrating the backend with the e-commerce platform, including user authentication and product purchase functionalities.

Contribution:

Aporbo	Tasfia
Developed the 3D cloth and model generation system with visualization.	Developed the backend for the system, ensuring smooth communication with the admin panel.
Implemented a 2D to 3D conversion process for visualizing models, though it requires refinement.	Integrated the backend with MongoDB for data management.
Created a functional but imperfect 3D visualization system based on 2D picture uploads.	Connected the backend to the admin panel for product management.

Conclusion:

Week 4 brought significant progress, with the development of 3D model generation and visualization as well as backend integration. While the 3D model system is working, it still requires refinement. The backend is fully operational, connected to both the admin panel and MongoDB, laying the groundwork for further integrations in Week 5.