PAVANE

FINAL YEAR PROJECT (2023)

FACULTY OF COMPUTERS AND INFORMATION **DAMANHOUR UNIVERSITY**

Supervisor: Dr. Mohamed Mostafa

Team Members

Ahmed Sameh — **Moataz Bahaa** — **Omar Lotfy**
Kamal Osama — **Marina Magdy** — **Sherif Ahmed**
Ibrahim Saad — **Ahmed Samir** — **Abdelhady Mohamed**

Perspective

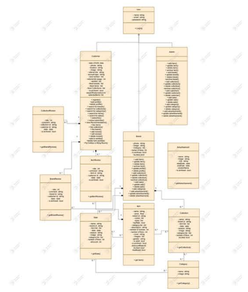
PAVANE is an online platform that offers clothing Brands an opportunity to showcase their products. Also, Customers benefit from the wide range of items available on the platform. There are two main features that both Brands and Customers benefit from, which are, the presence of a Recommendation System that suggests items to customers based on their preferences, and the availability of a 3D space environment that offers a unique experience in viewing the items. The main strategy of PAVANE is increasing the consumption rate of the customers.

Objectives

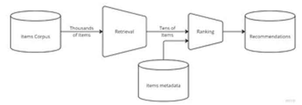
1. Helping the customer find all he needs on one platform.
2. Providing recommendations for clothes to save his time in searching.
3. Make him imagine and coordinate clothes on a 3D model.
4. Help customer to move all the pieces that he loves to a designated place so that he can return to them at any time without searching again for it

Methods

Back-End Class Diagram

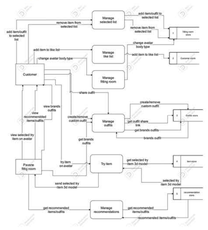


Recommender System Architecture



Back-End Sequence Diagram

Fitting Room DFD LEVEL 1



Tools

- Flutter
- React.js
- Node.js with Express
- Python, TensorFlow Extended
- Mongo DB
- Blender
- Marvelous designer
- Substance painter
- Substance designer

Expected Results

When the user creates an account and then logs in, the Recommendation System Model displays products that suit the data he entered, and with the continuous use of the platform, the Recommendation System Model displays other products based on the user's interests and activities on the platform, as shown here:

After the user checks the results of the Recommendation System Model or even the remaining products and adds some of them to the Fitting Room to see them on the 3D model, as shown here:

Conclusion And Future Work

In this project, we have designed a platform to display clothes where the user can enter and search for what he needs, and with the help of Machine Learning, we have designed and integrated the Recommendation System Model where it filters products for the user based on his own taste, and then the user can try these products in a 3D space environment that contains a model that simulates the human shape and the pieces of clothing that the user added to be able to see them on this model.
Currently, we have designed a version for the mobile phone only, but another version can be created that works on the browser.
You can also work on the Machine Learning part, where we improve the Recommendation System Model in order to give better results and improve its speed as well.

Refrences

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