This is an overview of the system design for the recommender. With facial recognition detects the users age and gender. Eye tracker detects the eye gaze of user preferences. And integrate the trained machine learning model with the dataset. It will recommend contents based on similar users.

I will now explain the concept of machine learning which is the AI implemented in the system. Machine learning (ML) is a type of artificial intelligence (AI) that allows software applications to become more accurate at predicting outcomes without being distinctly explicitly programmed to do so. Machine learning algorithms use historical data as input to predict new output values.

The main model used is collaborative filtering. With research of the previous batch did. collaborative filtering has the most accuracy level compared to the other models. Collaborative filtering is a technique that can filter out items that a user might like based on the reactions by similar users. It works by searching a large group of people and finding a smaller set of users with tastes like similar to a particular user.

The statement of work consists of two parts, what is needed and what are our objectives. Firstly, we need a batch of data for machine learning and secondly find out the suitable model and algorithm to predict with best accuracy. We had two objectives for this project, firstly, train a model with data and algorithm and integrate the trained model into the system. Secondly, implement suitable model to recommend items based on the user case.

Now, I will past my time to roshini for the travel recommender system

My first recommender system is the Fashion Recommender

This is a short demo on the fashion recommender system

My first user is a female age 15 to 24

I will run the system by clicking on the executable file created

Click on the start button for the facial recognition to load, it will take 5 seconds for the facial recognition to automatically detect users age and gender

After age and gender is detected, a randomized style catalogue page will be shown based on the gender detected as female and male has different catalogue page

For my case I’m looking at biker style

Click on it and it will redirect me to the shopping link of the clothe

I can also click on any images of the recommended style to bring me to the redirect shopping link

The heatmap of my eye gaze will be shown here

My second user is a male age 15 to 24

He can run the system by clicking on the executable file created

Click on the start button for the facial recognition to load, it will take 5 seconds for the facial recognition to automatically detect users age and gender

After age and gender is detected, a randomized style catalogue page will be shown based on the gender detected as female and male has different catalogue page

For his case, hes looking at formal office style

Click on it and it will redirect him to the shopping link of the clothe

He can also click on any images of the recommended style to bring him to the redirect shopping link

And this is the heatmap of his eye gaze

My second recommender system is the NYP CCA Recommender

This is a short demo on the NYP CCA recommender system

The user is a female age 15 to 24

I can run the system by clicking on the executable file created

Click on the start button for the facial recognition to load and a loading screen will be shown while waiting for the facial recognition to load, it will take 5 seconds for the facial recognition to automatically detect users age and gender

After age and gender is detected, a randomized nyp cca catalogue page will be shown

For my case I’m looking at live audio

Click on it and it will redirect me to the sign up link of the cca

I can also click on any images of the recommended cca to bring me to the redirect sign up link to look for more information

This is the heatmap of my eyegaze

My last recommender system is the Singapore location Recommender

This is a short demo on the Singapore location recommender system

The user is a female age 15 to 24

I can run the system by clicking on the executable file created

Click on the start button for the facial recognition to load and a loading screen will be shown while waiting for the facial recognition to load, it will take 5 seconds for the facial recognition to automatically detect users age and gender

After age and gender is detected, a randomized Singapore location catalogue page will be shown

For my case I’m looking at Sentosa island

Click on it and it will redirect me to more information of the location

I can also click on any images of the recommended location to redirect to more information

At the bottom of each recommended location image, it will show where each location is located at

This is the heatmap of my eyegaze

In conclusion, the overall facial recognition feature has improved accuracy in predictions of user demographics, loading screen has improved the ux design of the app and provides reliable recommendations list for the various use cases.

The enhancements we had done are added in 5 new use cases in total. Improve facial recognition and graphical user interface by improve the accuracy of facial recognition and adding loading screen while waiting for facial recognition to load and converting all the 7 recommender systems into executable files that can be deployed easily.