

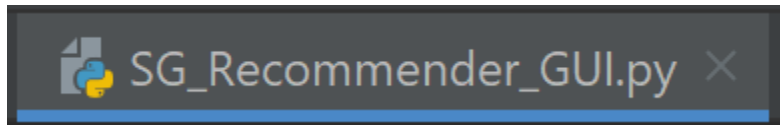
## SG Location Recommender App Documentation (How it works)

*\* Uses the similar GUI from the past batches codes (PyQt5)*

### Step 1- Launching the App

After the installation of all libraries, and setting up of the virtual environment, you can run the

“SG\_Recommender\_GUI.py” from the project: **AI Facial Recognition (SG Recommender)** and you should see the home screen page pop up.



*If it's not showing up or you see any red lines in the codes, do install the respective packages required – through pip installing them*

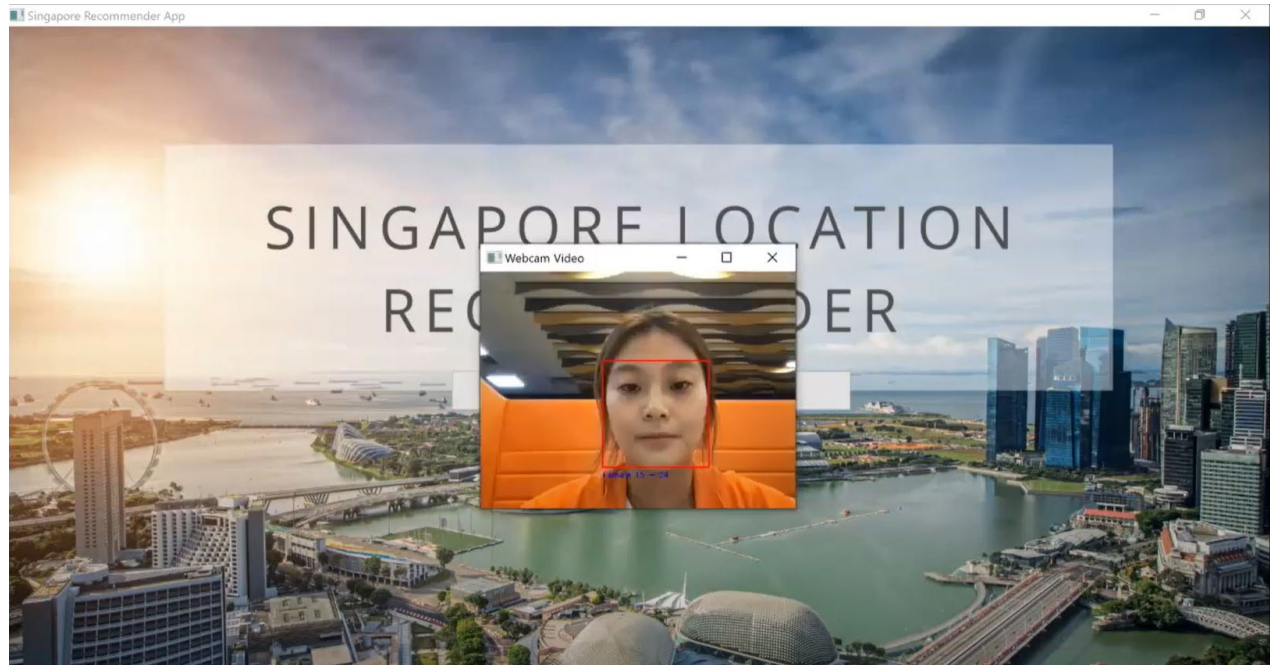
### Step 2- Click on the “Start” button on the Home Screen

Once the start button is clicked, there will be a loading screen that will pop-up. The loading screen is implemented as it takes some time for the facial recognition to load. The facial recognition might be slow for computer that is slow as well. I chose not to add the loading screen as its hardcoded and it will cause my app to crash. As u need to adjusting the timing for the loading screen to load manually. And every time the timing for facial recognition to load is different hence it will cause the app to crash more easily.



*remember to plug in your tobii pro eye detector device else you will face trouble in the next step.*

After pressing the start button, facial recognition window(face\_updated.py) will pop up to detect the users age and gender. There is a timer and a counter to turn off the facial recognition window after 5 seconds. So, you do not have to do anything other than adjusting your face so that the prediction will be more accurate.



### Step 3- Gaze at the Singapore Location that you are interested in:

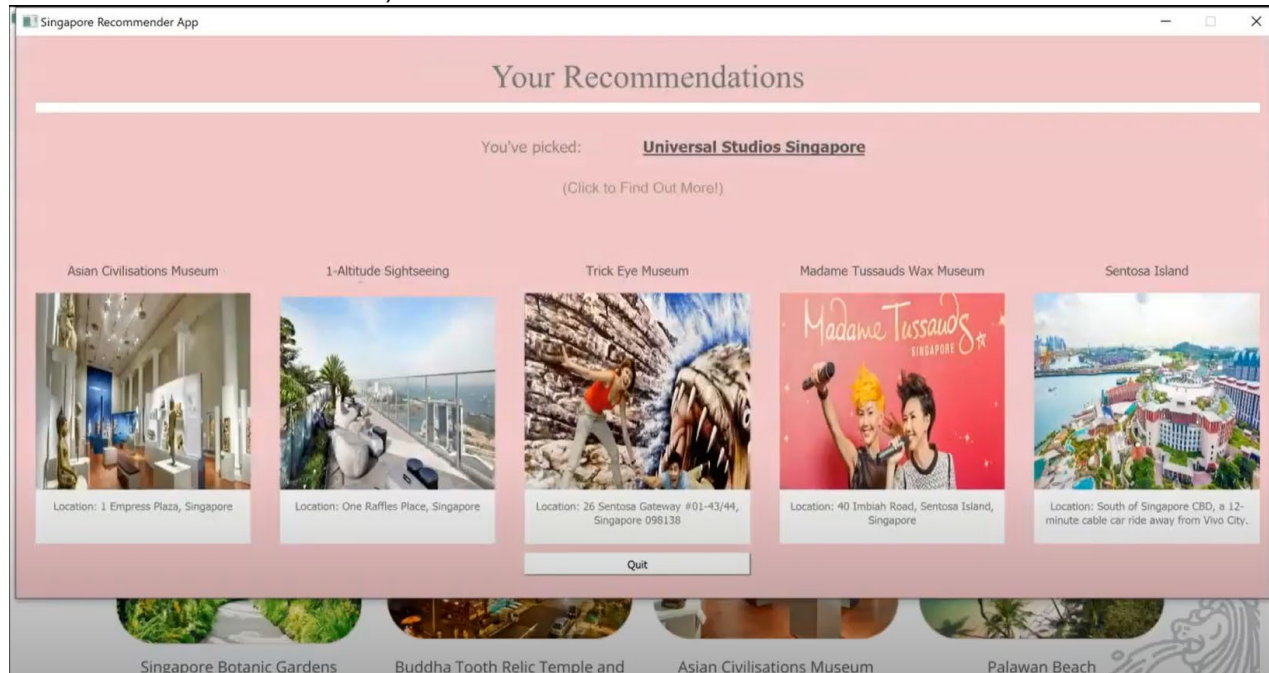
Once the Facial Recognition feature has detected users age and gender, a randomized catalogue screen will then be shown. The tobii eye tracker device will capture your eye gaze and it will tally which Singapore Location that's on screen has the highest eye gaze from your eyes and that particular Singapore Location will be assigned to "most\_looked".






## Step 4- Recommended Singapore Location

With the Users demographics and the chosen Singapore Location from the previous step. The catalogue pages will include images of Singapore Location. The model will then recommend top 5 Singapore Location based on a group of similar users that are similar to you. (eg: they are the same age group and gender, and also pick the same Singapore Location, then the top 5 Singapore Location that are within the same gender that keeps appearing within this group will be recommended to the user)







## Step 5- Click on the images or the “You’ve chosen:”

If you click on the image on the recommendation pane or the underlined chosen Singapore Location, it will redirect users to the respective information page of Singapore Location. The information pages have more information on the Singapore Location where you can choose to view more info of the Singapore Location and book a ticket of the location is needed.



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SGD Login



Universal Studios Singapore Tickets

4.9 / 5 (1154 Reviews) Singapore

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Universal Studios Singapore Tickets Overview

Universal Studios Location: 8 Sentosa Gateway, Singapore

Universal Studios Singapore Timing:

- Wednesday - Sunday: 12:00 PM - 07:00 PM

Activity Duration: 9 - 10 hours (Approx.)

About Universal Studios Singapore:

Universal studios is well-known and the name itself reminds us of the wonderful and amazing movies produced by this production house. Imagine a theme park that brings all of its characters and stories to life. The theme park houses different areas like Hollywood, New York, Sci-fi City, Ancient Egypt, The Lost World, Far Far Away, and Madagascar, each having a certain significance in the real world, as well as in the movies. There are amazing and wonderful rides such as 'Transformers: The Ride', Accelerator, 'Revenge of the Mummy: The Ride', Canopy Flyer, Dino Soarin', Enchanted Airways, Magic Potion Spin, 'Madagascar: A Crate Adventure, and many more..

About the Universal Studios Singapore:

- Bring your little ones here to this magnificent Universal Studios of Singapore for a fun day out with them.
- The park consists of six zones - Sci-Fi City, Ancient Egypt, New York, Far Far Away,

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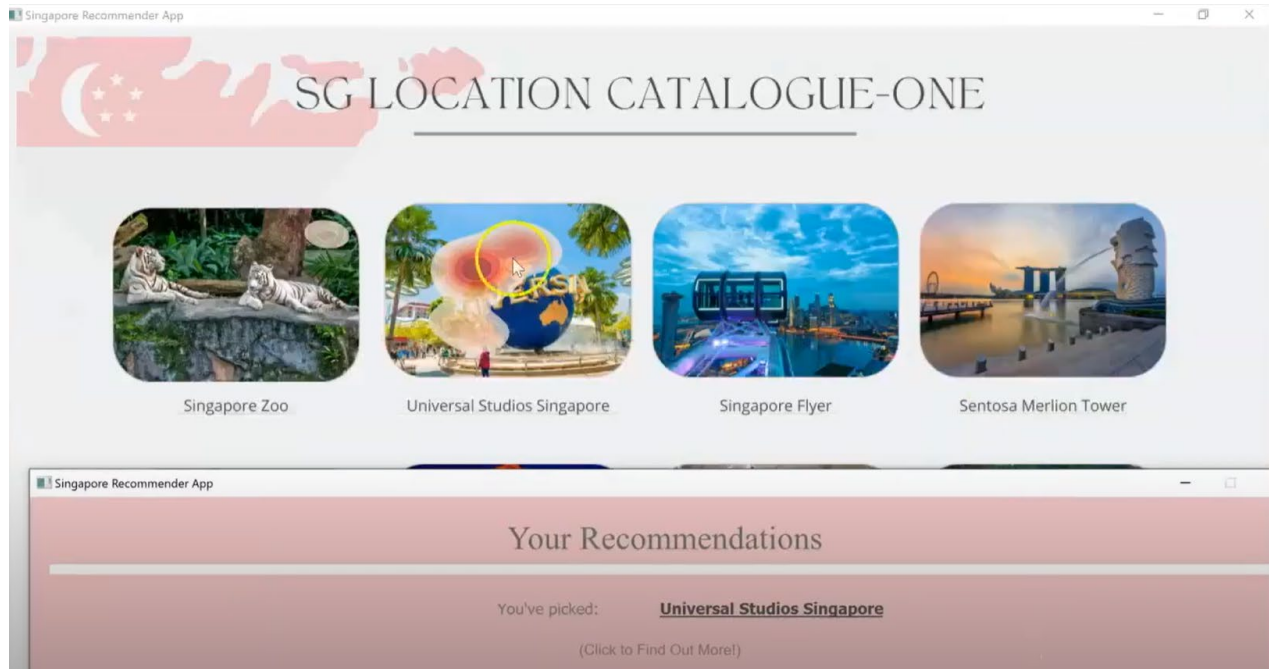
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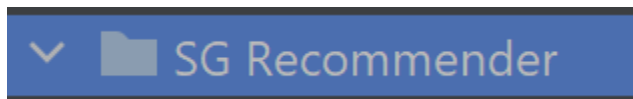
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## Step 6- Heat Map

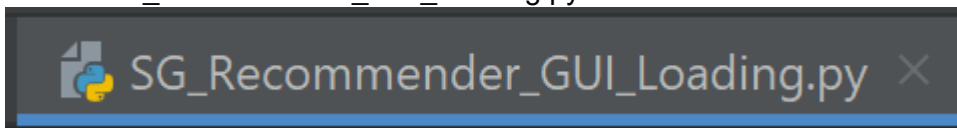
If you shift the recommendations page aside, you can see that there's a heat map beneath it. This heatmap is generated from the gaze data that was collected earlier, so you can cross check if you're looking at the "right Singapore Location".



Other Things to note:



- In the SG Recommender folder u can see SG\_Recommender\_GUI.py and SG\_Recommender\_GUI>Loading.py.



- I had implemented the loading screen for SG\_Recommender\_GUI>Loading.py. However, after various testing, I decided to not use the loading screen. As after testing, I found certain errors with the loading screen.
  1. Loading screen is hard coded, hence after pressing start button, u had to manually adjust the timing of the loading screen in SG\_Recommender\_GUI>Loading.py to make sure it fits the duration for the facial recognition to load.
  2. I encountered many times when the loading screen loads slower than the facial recognition and problems such as loading screen and facial recognition will pop up together at the same time and sometimes catalogue page will pop up as well causing the flow of the app to mess up and crash.
- Hence, I had two version of the app, one with loading screen and one without and after testing, I think the one without is better as it keeps the flow of the app.

