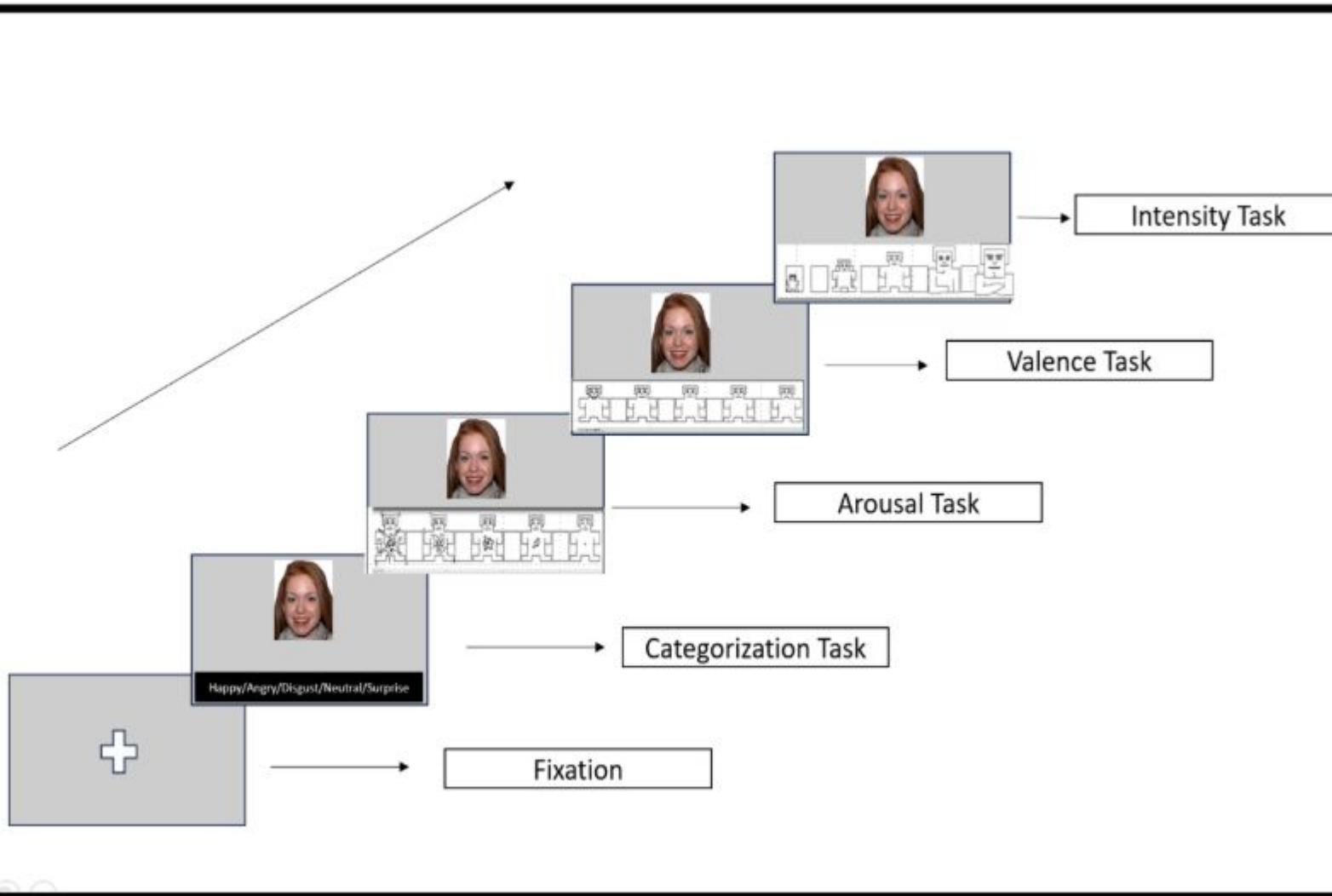
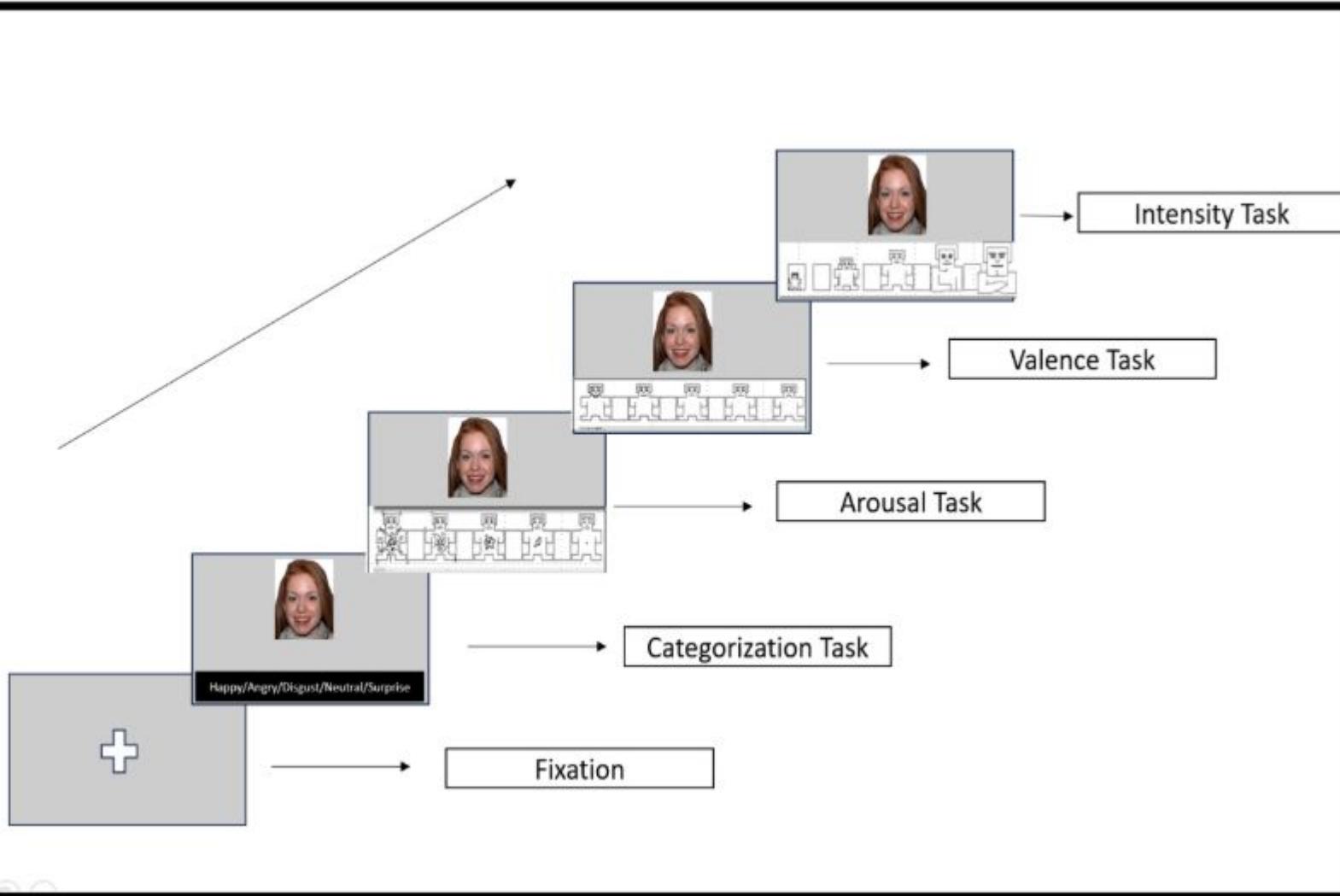


3xx_Presentation

Task

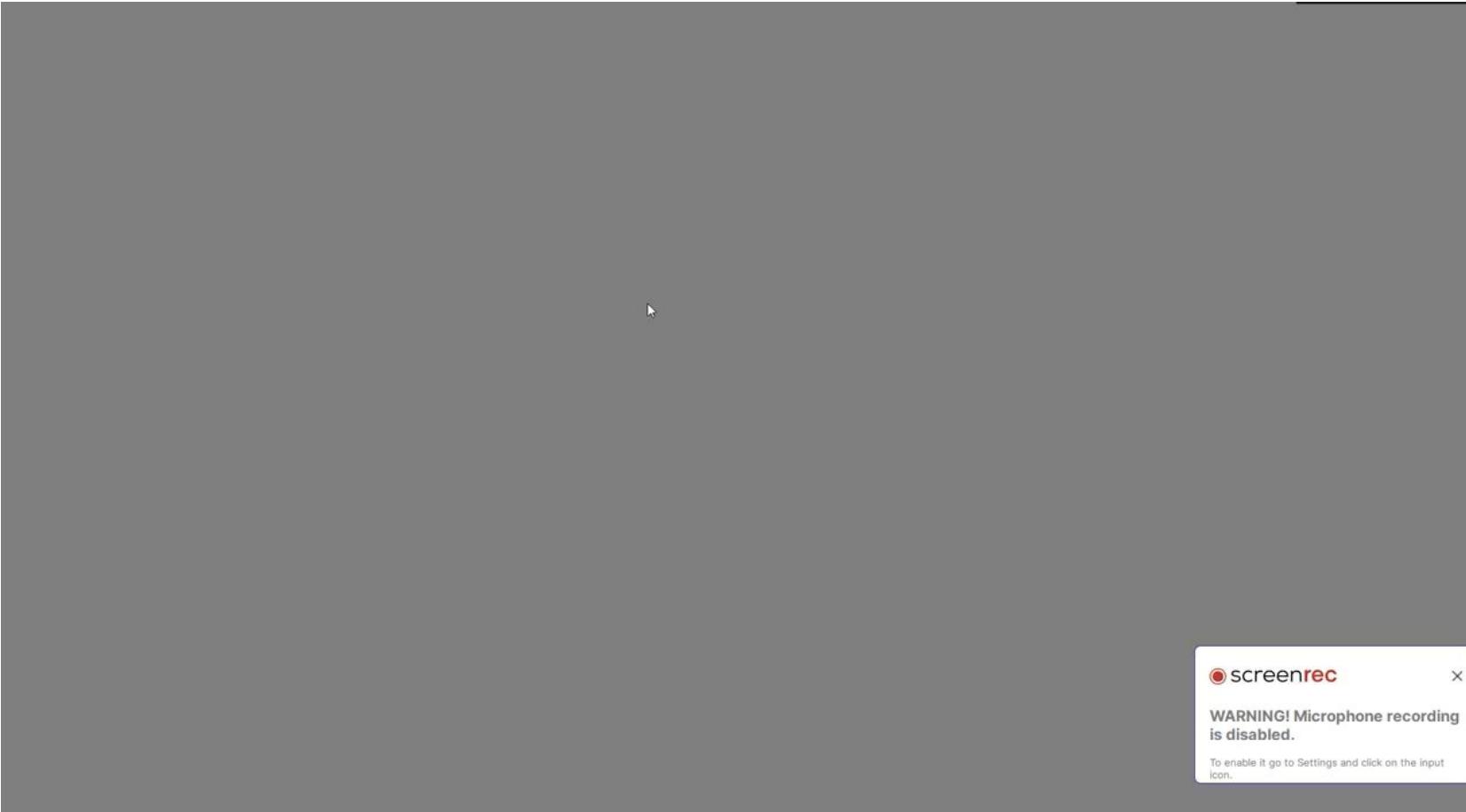


Task



Aim : To test eye movement differences across tasks.

Task



Data Recorded

- Ratings provided for each image.
- Continuous x and y gaze coordinates while the participants rated each task.

Data Recorded

- Ratings provided for each image.
- Continuous x and y gaze coordinates while the participants rated each task.

Folder Structure

```
S1/ # Participant folder
    └── T1/ # Block 1: Categorisation
        └── gaze_data.csv for each image across all the participants
    └── T2/ # Block 2: Arousal
        └── gaze_data.csv for each image across all the participants
    └── T3/ # Block 3: Valence
        └── gaze_data.csv for each image across all the participants
```

- 12 csv files : 4 each representing Happy , Angry, Neutral Expression.
- Nomenclature : HA_X, (Happy),NE(Neutral), AN (Angry)
- Bounding Box csv.
- Representative Images .

Data set overview

- Image name
- Gaze x and Gaze y
- Pixel x and pixel y (For overlaying gaze points)
- Participant ID (3 Unique letters)

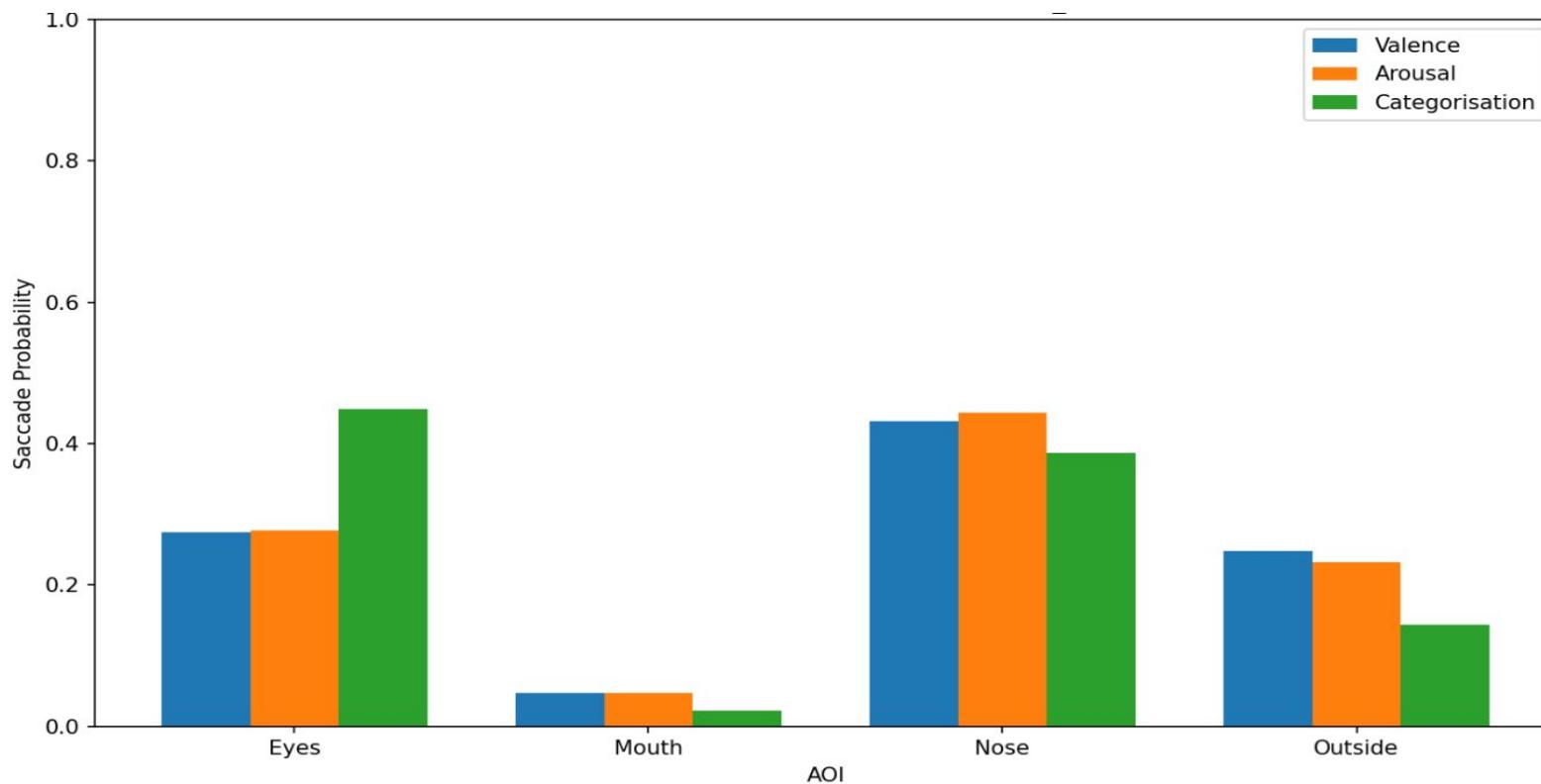
What you have to do

1. Detect 1st five saccades and calculate the probability of them landing on different Areas of Interest (Eyes,Nose,Mouth) for each task.

	A	B	C	D	E	F	G
1	participant_id	image_name	sac1	sac2	sac3	sac4	sac5
2	SHR*	36M_NE_C.BMP	Eyes	Nose	Nose	Mouth	Outside
3	KHA*	31M_NE_C.BMP	Nose	Eyes	Eyes	Eyes	NA
4							
5							
6							
7							
8							
9							
10							
11							

What you have to do

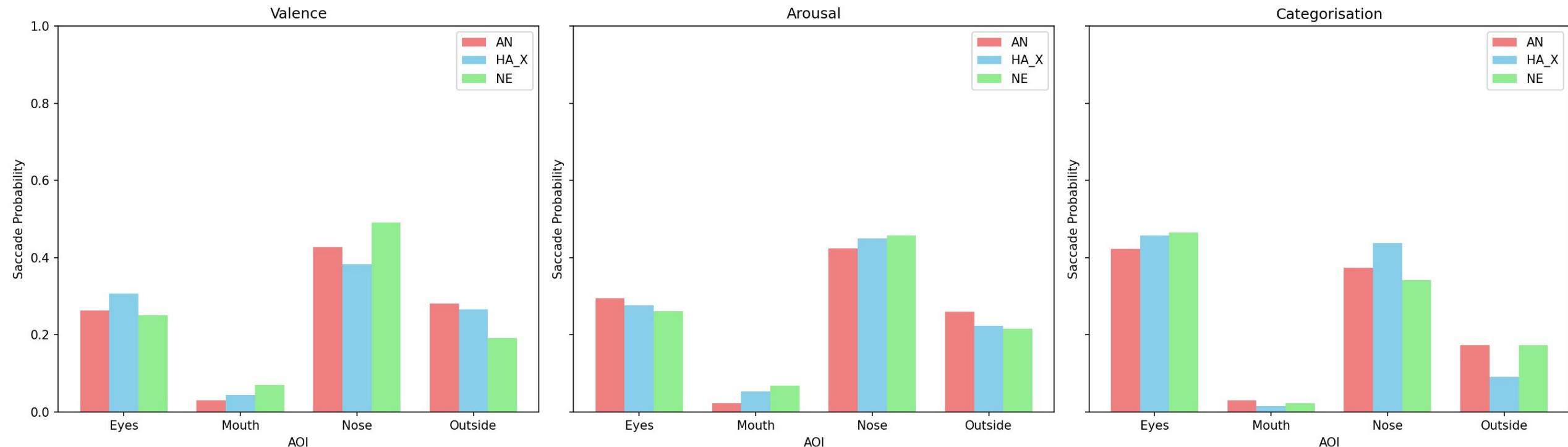
- Plot Bar graphs showing probability of 1st five saccades landing on different AOI across tasks.



What you have to do

- Plot Bar graphs showing probability of 1st five saccades landing on different AOI across emotions.

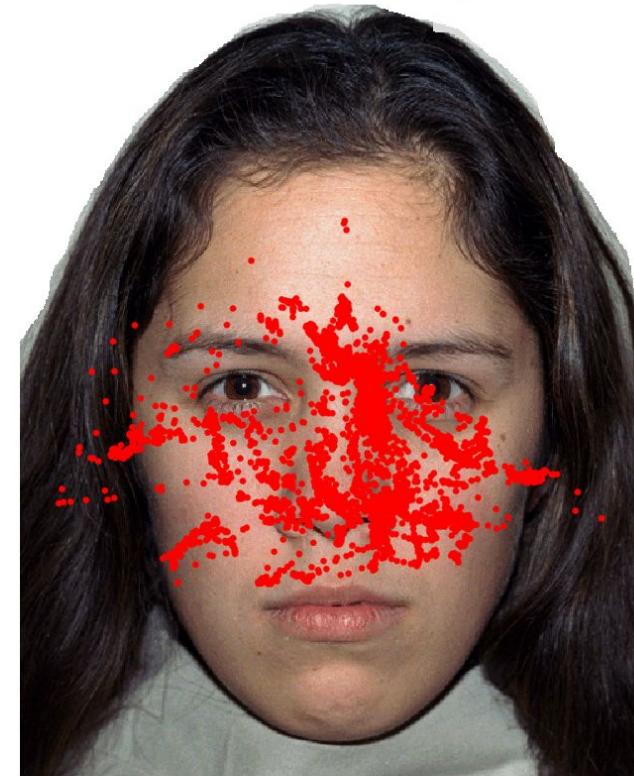
Saccade Probabilities per AOI - set_1



Gaze Distribution Analysis

Overlay as Red dots .

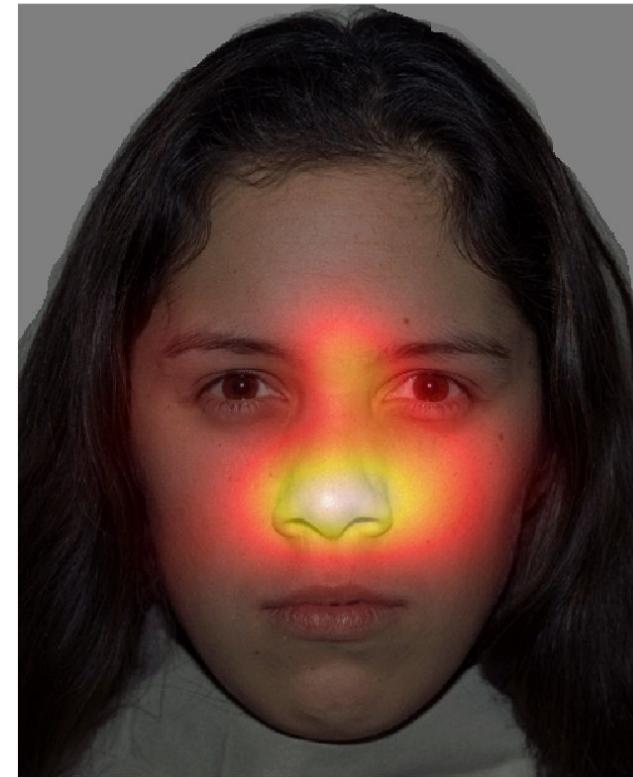
All Participants - 03F_AN_C



Gaze Distribution Analysis

Generate Heatmaps

Group Heatmap: 03F_AN_{Cl}ong



Inferring Results + Report

- From the Assignment

Submission Guidelines

- Name your code file after the assigned data folder (e.g., S1.py or S1.ipynb).
- Submit three CSV files in the classroom-provided format; fill in all labelled fields.
- Submit your results CSV as folder_rollnumber.
- **Important:** Use the exact formats; otherwise, data will be forfeited.

Rubric

Component	Description	Deliverables	Marks
1. Saccade Detection	Detect first five saccades per trial. Compare across tasks and emotions.	Table/plot of first five saccades per task and emotion	5
2. Gaze Heatmaps	Generate heatmaps for each task (categorisation, arousal, valence).	Heatmaps with overlayed gaze points	5
3. Supporting Plots	Bar plots showing saccade probability per AOI across tasks and emotions.	AOI probability bar plots	5
4. Inference & Comparison	Compare AOI probabilities and interpret heatmaps. Draw evidence-based conclusions.	Written analysis with observations and insights	5
Total			20