

# **Report 2**

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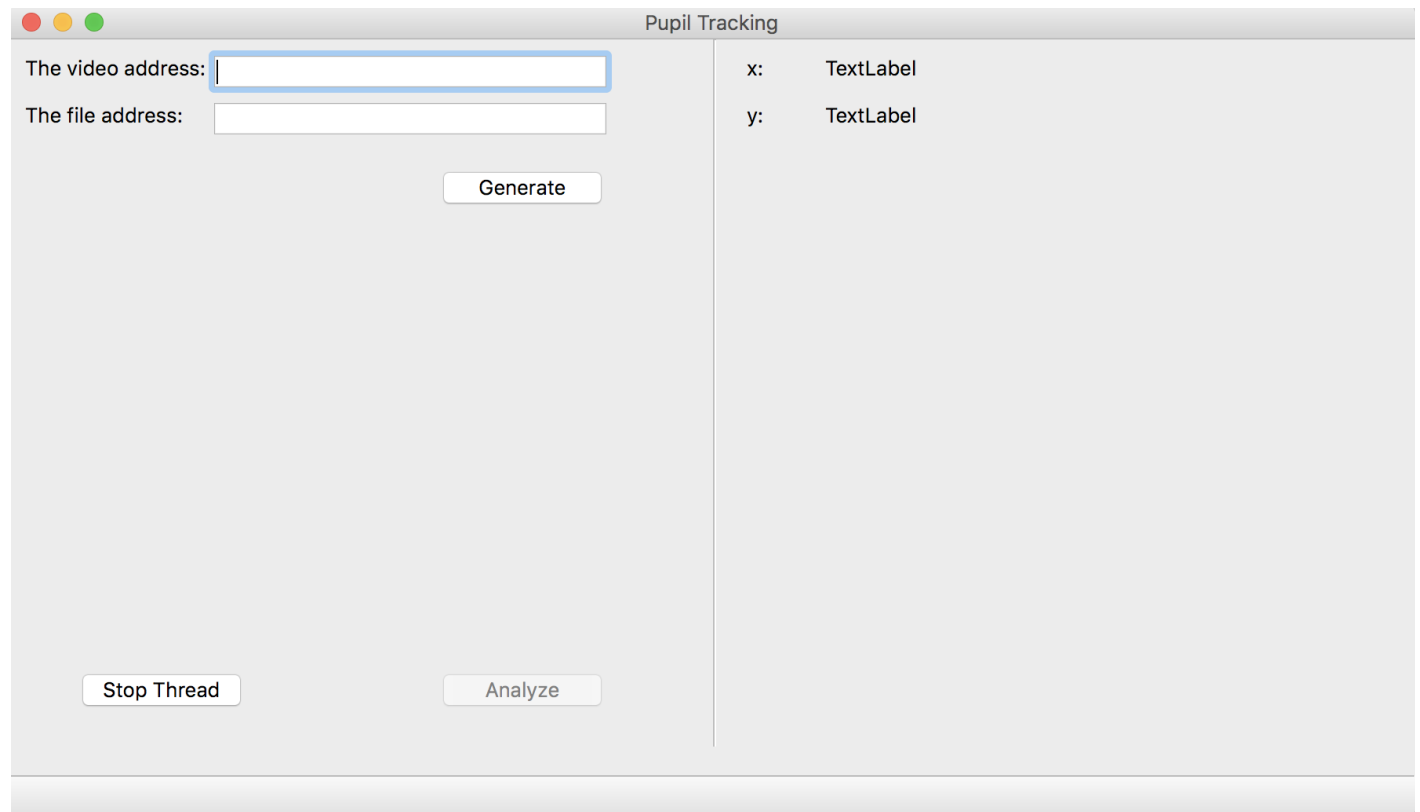
## Objectives achieved this week

- Setting up the user interface.
- Enabling user-selected image-space to increase run time efficiency by scanning less space.
- implementing multi-threading to increase run time efficiency.

## Objectives for next week

- Read the data input from the data file.
- Contextualize the data from the data file.
- Correlates the video and the data.

## Results Demo



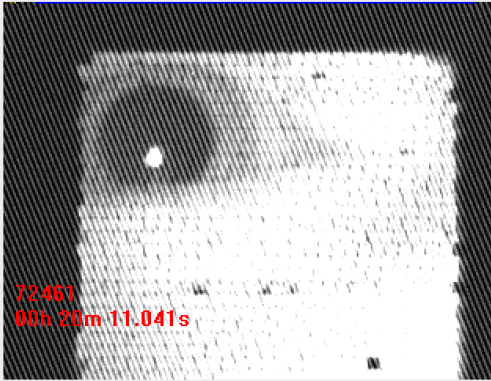
The screenshot shows a macOS-style window titled "Pupil Tracking". The window is divided into two main sections. The left section contains two input fields: "The video address:" followed by a text box with a blue border, and "The file address:" followed by a text box. Below these fields is a "Generate" button. At the bottom left of the left section are two buttons: "Stop Thread" and "Analyze". The right section of the window is currently empty, but it contains labels "x: TextLabel" and "y: TextLabel" at the top, indicating where results will be displayed.

Pupil Tracking

The video address:

The file address:

Generate



Stop Thread

Analyze

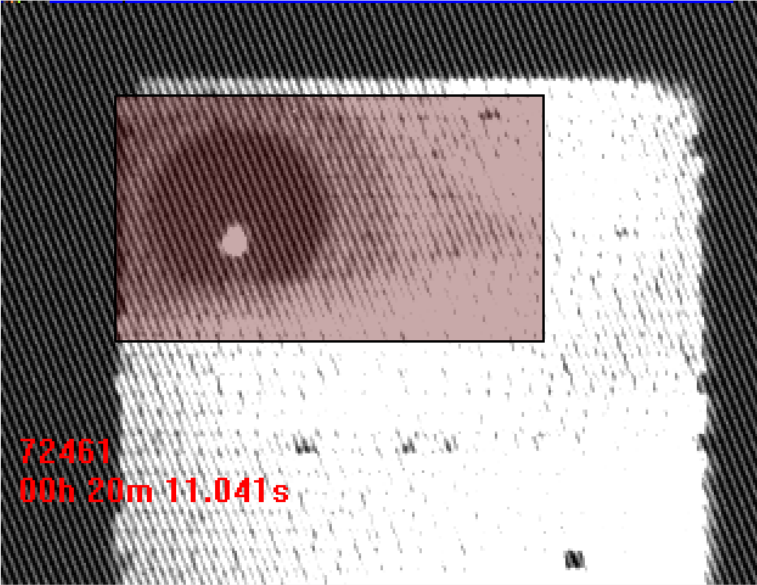
x: TextLabel

y: TextLabel

The video address:

The file address:

Generate



Stop Thread

Analyze

x: TextLabel

y: TextLabel

# Explanation

## "Video Address" and "File Address"

-user inputs, which also have self-check functions to see if the files exist.

## "Generate button"

-generates an open-eye picture for users to select as well as creating another thread in the background to output all the video generated pictures to the output file.

## "Analyze button"

-Crop the image by the user-selected portion(Marked by the red rectangle), and run the image processing algorithms on it.

## "Stop thread button"

-Stop multi-threading(in case the results are wrong)

## "Space on the left"

-Wait after completing the image-processing part.

# Conclusion

User Interface is half-completed. However, challenges remain on how to update displayed pictures in real-time so that users could watch the whole process of image processing and terminate it when necessary during the analysis process.