Computer Vision Project 4 Progress Report 1

Members of your group and group name
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Progress Report 1 11/13

For any results or objectives that you planned to achieve by the Progress Report 1 due date, demonstrate that you have achieved them by providing images, video, or starter code. If you missed your planned completion date, explain what challenges you faced that prevented you from achieving them.

Include an updated schedule in your progress report that reflects what you believe you can achieve and when for the duration of the final project schedule.

We used an existing facial recognition program called pyfaces and build on it to recognize faces from a webcam. The opens source program can be found here: https://code.google.com/p/pyfaces/

We have included starter code that demonstrates that we can successfully identify a person from a webcam video. The only problem is that it currently only recognizes Guillermo Terrazas, and Lauren Hunter. The reason is that training the program involves a lengthy manual process which we plan to automate in order to make it generic and easy to demonstrate to the class during demo day. That automation should take less than a day. The command to run the program is as follows:

(from the recognize_faces directory)

python pyfacedemo pathToFacesDatabase 4 3

The last two numbers are required by the pyfaces program and are tunable. Development is almost complete. We need to test this in order to ensure our original goal of correctly recognizing a face 75% of the time holds.

We have also decided to start working on eye tracking next, and gesture recognition later. We have started working on eye tracking, and as of right now, we can identify the eyes on any face. There is work being done on tuning that feature in order to reduce noise and more accurately detect the eyes. That code has been pushed, and is under the folder named eye_tracking. The next step to this, is to be able to track the movement of the eyes accurately. As for facial gesture tracking, we have explored tutorials on the topic and it looks like the effort for this part of the project is going to be more involved than originally thought.

Our planned schedule for meeting objectives is now as follows:

Recognize a person from a webcam video
• Estimate the effort required: Medium effort
• Expected completion date: November 13
CODING COMPLETE - TESTING NEEDED

Eye tracking
• Estimate the effort required: High effort
• Expected completion date: November 20
CURRENTLY IN DEVELOPMENT

Track facial gestures
• Estimate the effort required: **Very high effort**
• Expected completion date: December 2
EXPLORE FACIAL GESTURE TUTORIALS AND ALGORITHMS

Combined experiment with eye tracking and facial gestures:
• Estimated effort: Very high effort
• Expected completion date: December 2