Capstone Progress Report nkungad24@asmsa.org Switch account Draft saved \* Indicates required question Email \* Record nkungad24@asmsa.org as the email to be included with my response **Objectives for the Week** (What did you plan to achieve this week?) Run MediaPipe and use it and some pre-existing code to track some part about the face. Then to find or make code that would track lips. **Accomplishments** (List the tasks you've completed and the milestones you've reached this week.) Determined what MediaPipe was, found a tutorial for it, determined the scope of my **Challenges and Obstacles** (Describe any challenges or obstacles you faced this week and how you addressed them.)

There weren't many obstacles in the past week. The biggest one was a mental barrier of how small the MVP should be. My goal was too ambitious and, though I still hope to get full lip reading by science fair, I need to just focus on getting AI to determine simple sounds from lips as a minimum before I go further.

#### **Resources Used**

(List any significant resources, such as articles, tools, libraries, or consultations.)

Engadget summarized how the AI Lip Reading scene is currently looking from the market place and established some of the methods they were using to train their AI and what their AI were looking for:www.engadget.com/ai-is-already-better-at-lip-reading-that-we-are-183016968.html

This article by Learn OpenCV summarized what I needed to know about MediaPipe and what solutions I can use that already have face tracking (and potentially lip tracking with a bit of work) built into it. The remaining step from there is to mess around with it: learnopencv.com/introduction-to-mediapipe/

The video by Pysource, which I have not yet watched, should help cover the basics of MediaPipe and its facial tracking capabilities. This is why the goal for this week goes further to specialize the facial tracking to track lips because they have their code linked in the description: https://youtu.be/LF7Lgz4\_lus?si=1P8Y78HrCubT9Y8h

## **Next Week's Objectives**

(List the goals you have set for the upcoming week.)

Next week will probably be gathering data. I might buy a bag of candy and bribe poeple to stop by and record basic sounds to get a sample size to train my AI to. (Ex: have people say the "th" sound as well as miscellaneous other sounds so the first training test can be to have the AI learn the lip movements when someone says the "th" sound)

# **Feedback Required**

(Is there anything specific you'd like feedback on?)

Not unless you have anything you want to say. I think I'm doing well as of now but advice is always appreciated.

### **Additional Notes/Comments**

(Any other information you think is important to share about your progress, insights, or adjustments to your project plan.)

Your answer

A copy of your responses will be emailed to nkungad24@asmsa.org.

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