Data Gardens Final Project Proposal

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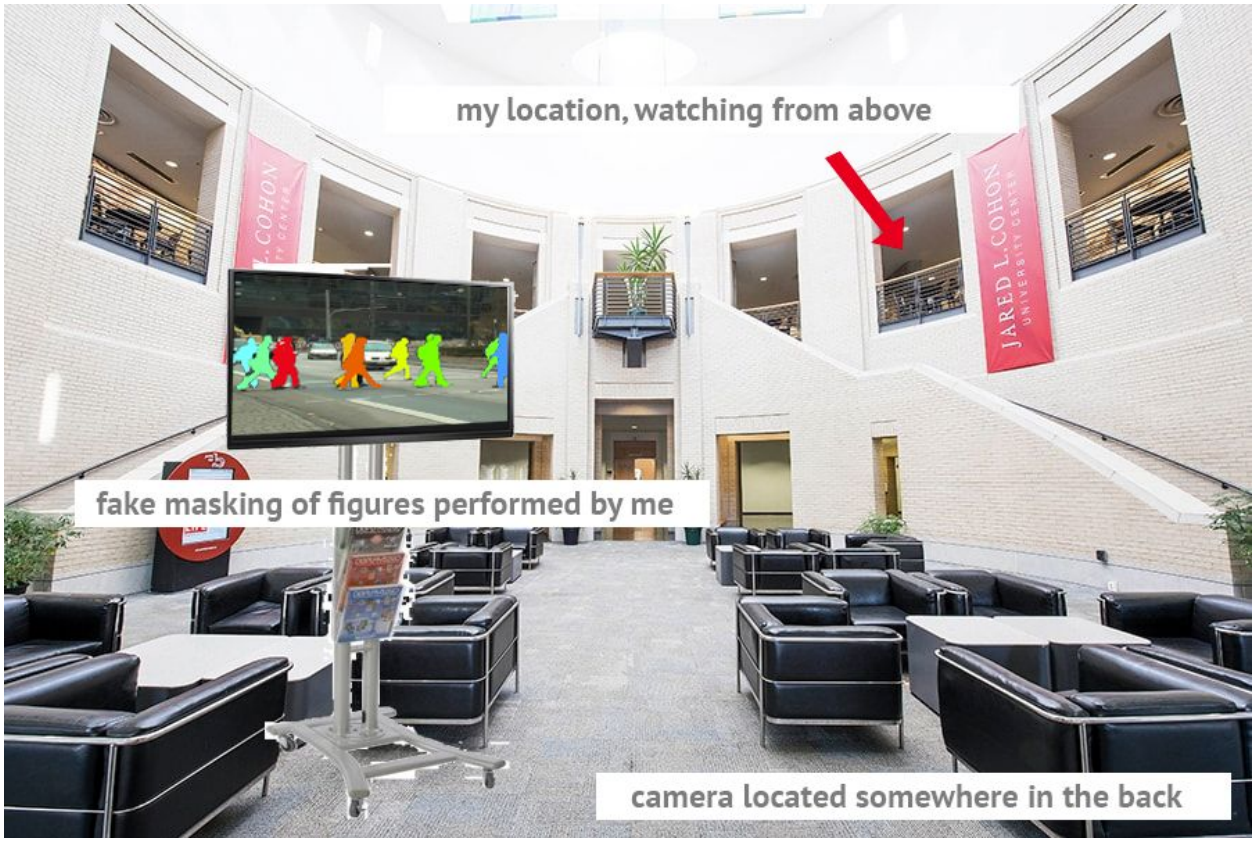
Overview

I propose to develop an on-campus performance and installation of a “fake” machine vision demonstration, much like the real ones currently on display in CMU’s Newell-Simon and Gates-Hillman buildings. This project will be developed iteratively, with a series of three trials, and will respond to viewer engagement with each iteration. My interest in pursuing this piece stems from our unit on “Performing as AI.” I hope to situate this project in dialogue with works we reviewed that underscore the human element of AI interfaces, such as Lauren McCarthy’s *LAUREN*. I am also motivated by my personal experience contributing to the development of a self-improvement tool for teachers with Erik Ulberg through Prof. Amy Ogan’s ClassInSight lab at CMU. In setting and in context then, I see this project as situated specifically at CMU.

What It Is



Sketch for installation in the Cohon UC.

Through my performance as the seeing machine, this project will mimic the existing demonstrations of machine vision already installed on our campus. I will perform as an object and body tracker, as well as an object identifier.

The physical setup will consist of a screen installed in an on-campus area frequented by students, a camera providing it with a live feed of the same space, and a computer mediating this live feed, operated by me, somewhere where I can view passersby interacting with the screen. My mediation will consist of digitally drawing, over the live feed, traditional machine vision “demo” graphics, such as tracking masks and rectangles, and labelled objects in the field of view. I hope to develop a simple GUI in p5js or Processing to help me rapidly and seamlessly act as the seeing computer in response to viewers interacting with the screen.

I am considering having a keyboard input in front of my display with a prompt for viewers to input object categories for me to track throughout the room. I am also interested in leveraging actual machine learning, through ml5js, to perform alongside me in this space.

Trajectories for Viewer Interaction

With humor, I hope to investigate the relationship between human- and AI-performers. Like many of the works we viewed in class, I want to demystify for my viewers the inner-workings of machine vision by highlighting the human-eyes behind their sight. But I also want to share with them the poetics present in the switch between machine vision and telepresent humans, how those two parties can share their eyes, and how they can share a stage as performers of a single play.

Background with ClassInSight

This project will also help me make sense of my experience with the ClassInSight app, which employed simple mL body position tracking in a tool designed to evaluate and provide feedback to educators about their nonverbal behavior in their classrooms.

During this project, I worked closely with Computational Design Masters student Erik Ulberg, whose work investigates AI’s ability to take the place of a tutor or teacher in a master-apprentice style relationship. This has inspired me to think of other areas, like performance onstage, where AI tries and falls short of fulfilling human roles in such relationships.

etc

I also want to review some of the critical video essays looking at this kind of performance and relationship to AI, chiefly Sebastian Schmieg’s *I Will Say Whatever You Want in Front of a Pizza,* so that I can build a critical vocabulary with which to discuss this work.