Luke Jansen

Gantt Chart for January:

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Feb 2024

This month we made good progress on the development of our three actuation systems. I have been at work making CAD models, printing, and testing each week. We met with the engineering machine shop directors and discussed plans to machine a parts for the cam. After meeting with them, it seems it will be hard to machine that part, so I made a simpler concept for a direct beak-to-servo attachment. I have also progressed the concepts for the eyebrows. The design incorporates two servos stored inside the head, with linkages protruding outside the head but hidden behind the eyebrow (essentially a 3-bar linkage). We ordered some magnets to use for a potential backup concept. Scott has done work on the eyelid mechanism. This month I wrote a python script that tracks eye movement and moves the eyebrow servos accordingly.

Next month, I plan to work closer with the EE team to make sure that the current draw of our servos is acceptable. I met with Bao on Friday, and the eyebrow servos are drawing 300mA, which is apparently quite a lot. We will need to coordinate some housing for the servos and electrical components so the wearer is not shocked. I am also meeting with Josie to bring her up to speed on the computer vision research I have done. I am also trying to target this Friday as our day to install components into the head, so we can accelerate our timeframe and make sure our prototypes can fit in the space constraints.