Luke Jansen

Gantt Chart for January:

QUAD CHART

2/4/2024 | ME TEAM

JUNIOR JAY

Timeline	Progress
See Below	-Meeting times and locations agreed for EE -Tested prints for eyebrows and beak -Removed eyes from retired head -Removed helmet from retired head
Issues	**Goals**
Uncertainties with servo control and space for electrical components	- Print test parts for eyelids - Reprint parts to scale - Submit orders for parts - Submit 3D print files

							DECEMBER					JANUARY				F
							11/27	12/4	12/11	12/18	12/25	1/1	1/8	1/15	1/22	
6	Prototypes															
6.1	3D print and machine parts for all components	ME Team	12/1/23	1/20/24	49	10%										
6.2	Assemble components	ME Team	1/20/24	2/5/24	15	0%										
6.3	Test and evaluate performance of parts	ME Team	1/23/24	2/5/24	12	0%										
6.4	Generate design changes and concepts	ME Team	2/5/24	2/20/24	15	0%										
6.5	Divide components among ME members	ME Team	2/5/24	2/5/24	0	0%										

QUAD CHART

2/11/2024	ME TEAM

JUNIOR JAY

Timeline	Progress
See Below	-tested eyelid prototype and other eyebrow prototypes. Created list of parts to submit to order

Issues	Goals
Uncertainties with servo control and space for electrical components	- test any ordered parts - Reprint parts to scale - Submit orders for parts - Submit 3D print files

							DECEMBER				JANUARY				
							11/2	12/4	12/11	12/18	12/25	1/1	1/8	1/15	1
5	Prototypes														
5.1	3D print and machine parts for all components	ME Team	12/1/23	1/20/24	49	10%									
5.2	Assemble components	ME Team	1/20/24	2/5/24	15	0%									
5.3	Test and evaluate performance of parts	ME Team	1/23/24	2/5/24	12	0%									
5.4	Generate design changes and concepts	ME Team	2/5/24	2/20/24	15	0%									
5.5	Divide components among ME members	ME Team	2/5/24	2/5/24	0	0%									

QUAD CHART

2/18/2024	ME TEAM

JUNIOR JAY

Timeline	Progress
See Below	- Completed requisition form - Most parts of comprehensive BOM ordered - Eyebrow testing with servos
Issues	**Goals**
Waiting for parts to arrive for CAD designs and testing	- Test any ordered parts - Update EE team - Model parts with given part dimensions - Mount test any ready parts/components

							JANUARY				FEBRUARY				
							12/25	1/1	1/8	1/15	1/22	1/29	2/5	2/12	2/19
6	Prototypes														
6.1	3D print and machine parts for all components	ME Team	12/1/23	1/20/24	49	50%									
6.2	Assemble components	ME Team	1/20/24	2/5/24	15	25%									
6.3	Test and evaluate performance of parts	ME Team	1/23/24	2/5/24	12	25%									
6.4	Generate design changes and concepts	ME Team	2/5/24	2/20/24	15	50%									
6.5	Divide components among ME members	ME Team	2/5/24	2/5/24	0	60%									

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.