Version Two Assembly

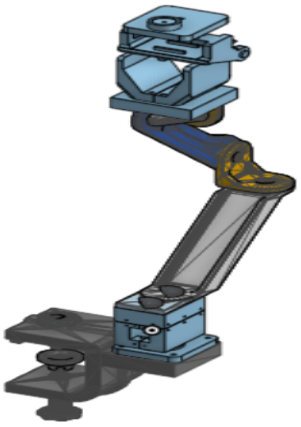
Thought process: A C-Clamp will clamp onto the arm of the wheelchair. A platform will extend from the C-Clamp that will hold the side-to-side movement motor.

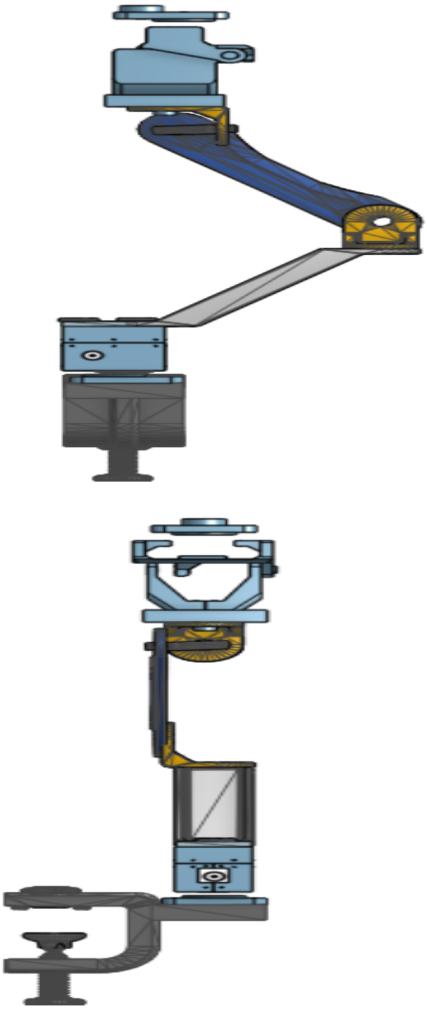
The arm will be able to extend in front of Timothy when he wants to take a picture. The camera mount will allow for tilting and landscaping. Timothy will control the movement of the arm through buttons. Once the dimensions of the electrical board is finalized, we will add a housing unit below the C-Clamp platform and a platform for the buttons.

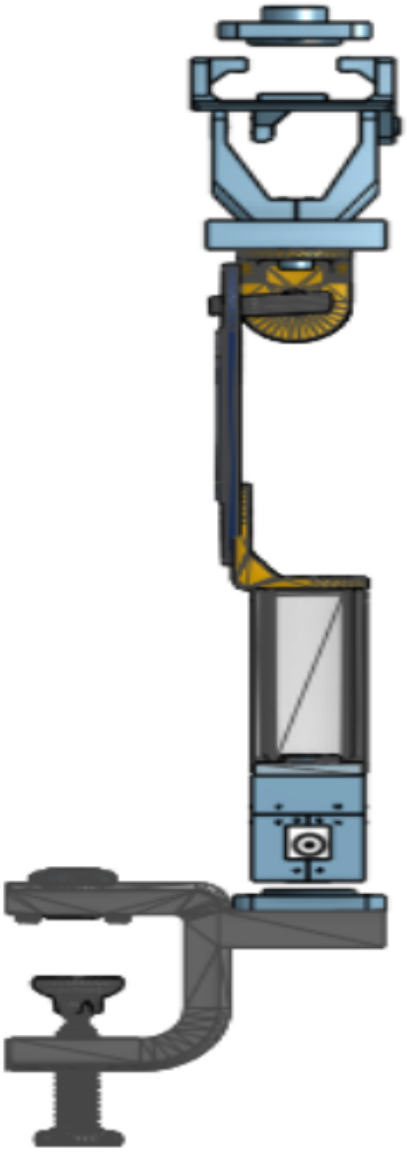
The platform only extends 74mm (2.91 inch) which will allow it to face inward/outwards in respect to the wheelchair. It will most likely clamp on the left arm rest and face inwards to avoid the risk of getting through small doorways.

The pictures of two models are seen below. These are rough models, our goal is to get approval of a model by Timothy before we begin the 3D printing process. The three motors are not pictured (one on the C-Clamp, the other two will be mounted at the top) along with some of the screws. The screw holes are present though.

1st model:





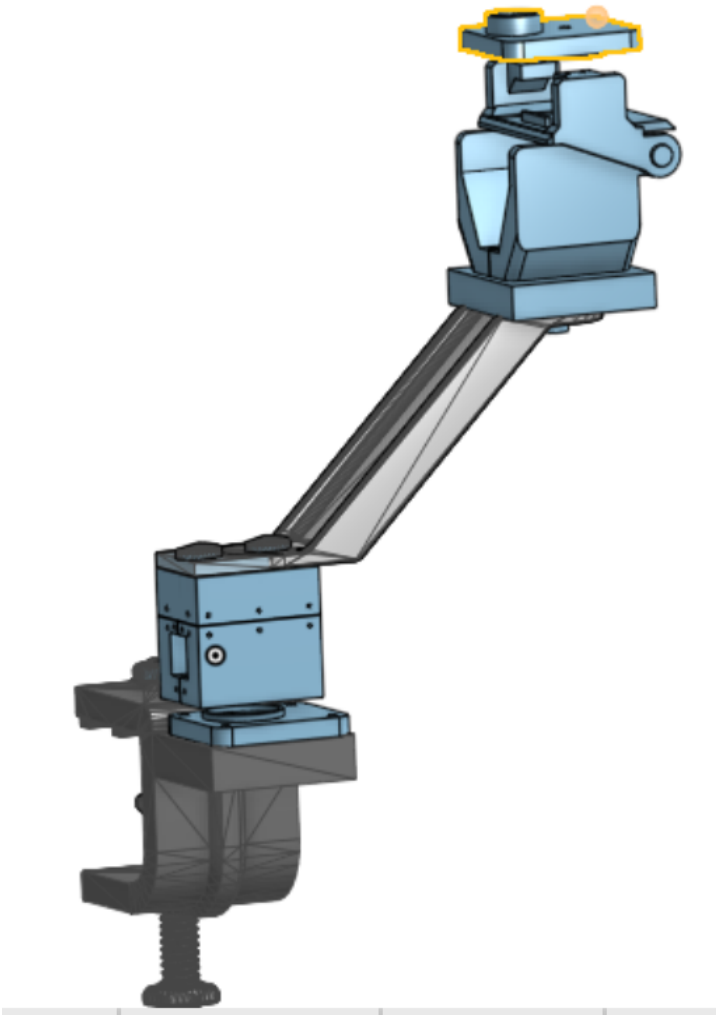


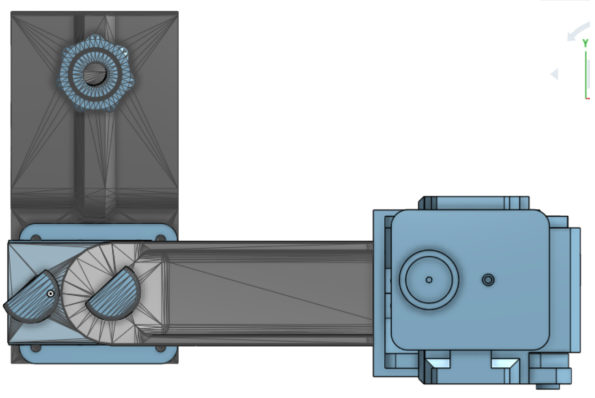
Drawbacks of this model:

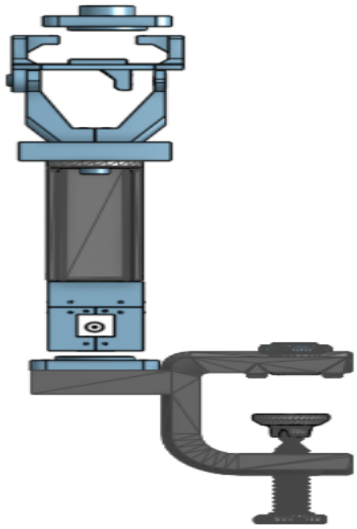
1) It may be unstable at the top….
    a) Solutions
        i) Create the L-connector much bigger/thicker
        ii) Thicken the platform extending from the C-Clamp
        iii) Scale all objects to be smaller
2) Will take longer to 3D print compared to the 2nd model

2nd Model

In this model, we took away the 2nd swivel arm and mounted the platform for the camera on top of the 1st swivel arm. Pictures of the design are seen below:







Drawbacks:

1) Might still be unstable
    a) Solutions:
        i) Provide more connection points between the swivel arm and the motor
        ii) Make the swivel arm smaller

Please reach out to us if you have any questions or concerns. Thank you.