

# Subsystem: Claw (Pt. 2) [DEV LOG]



Arctos Autonomous  
Robot 2023

**Subteam:** Mechanical

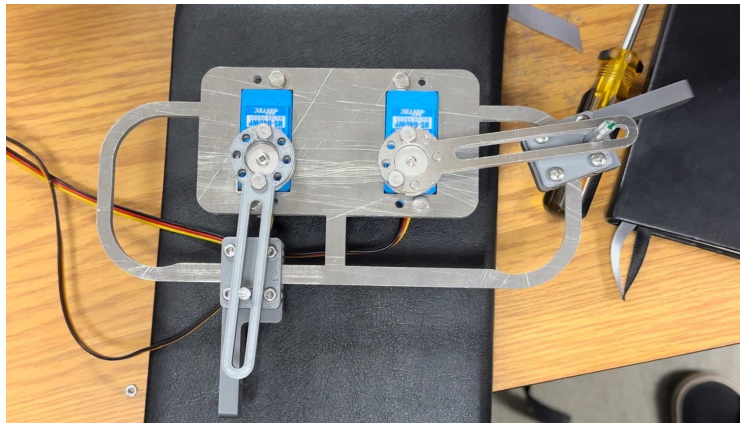
**Project:** Claw

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## V3.0



The cart and track system was developed to address the reliability concerns. This design comprises four bearings that slide along a track, enabling the claw to function as a parallel gripper. When not in use, the bearings slide along a thinner track, causing the grippers to rotate 180 degrees and fold into the robot, keeping them out of the way and preventing damage to the robot or gripper. The system is actuated by two servos utilising a pin and slot mechanism, facilitating the cart's movement along the entire track length. This mechanism grants precise control over the claw's maximum gripping force. Moreover, this design offers easy adaptability for the future; adjustments to the track length can extend the gripping range.

Once all the prototypes were functional, it was determined that v3.0 is the design which we will move forward with and develop into a fully functional claw.

Why was this design chosen? When brought forward to software subteam, they liked it because the grippers are parallel and move in a linear fashion. This made it easy to write code for. Additionally, while all three concepts were reliable, the complex design was deemed more capable.