SDSU

San Diego State University

HANDHELD FISHING LAUNCHER FOR DISABLED VETERANS



Be Adaptive Seat Pan

Custom Rod Holder

User

Control Panel

Power House

Step Down Transformers

Battery

Button 1



Team FISH (Fishing Innovations for Service Heroes)

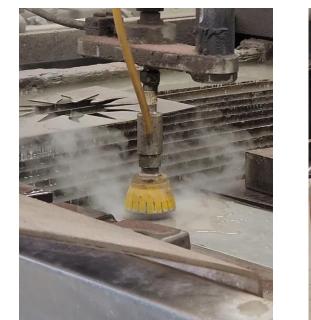
Meet the Sponsor

Quality of Life Plus (QL+) is a national non-profit organization that provides personalized engineering solutions to promote independence, mobility and activity participation, enhancing the quality of life for disabled veterans and first responders.

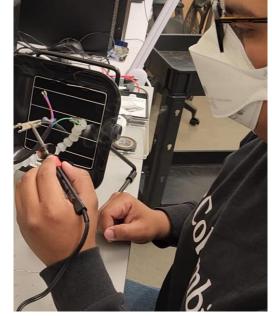
Project Overview

Team FISH was tasked with creating an adaptive fishing device for incompletequadriplegic veterans. The device assists with safely casting and retrieving lures, rigs, and fish with minimal physical strain.

Manufacturing



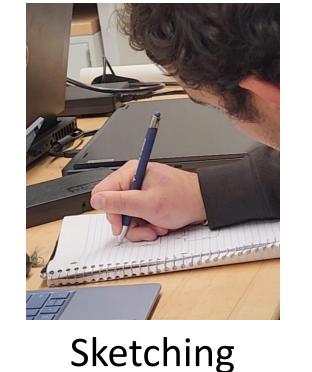
Waterjet

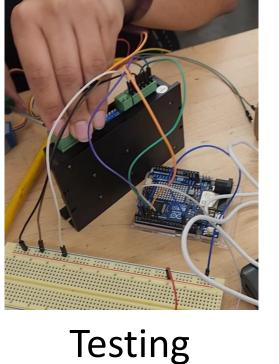




3D Printing Soldering

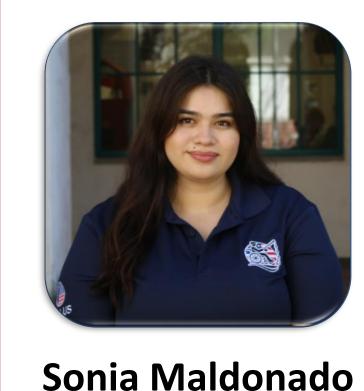
Prototyping







Meet the Team



Team Lead

Trigger Assembly (Gear Rack)

Trigger Cap

Gear



Electrical Lead



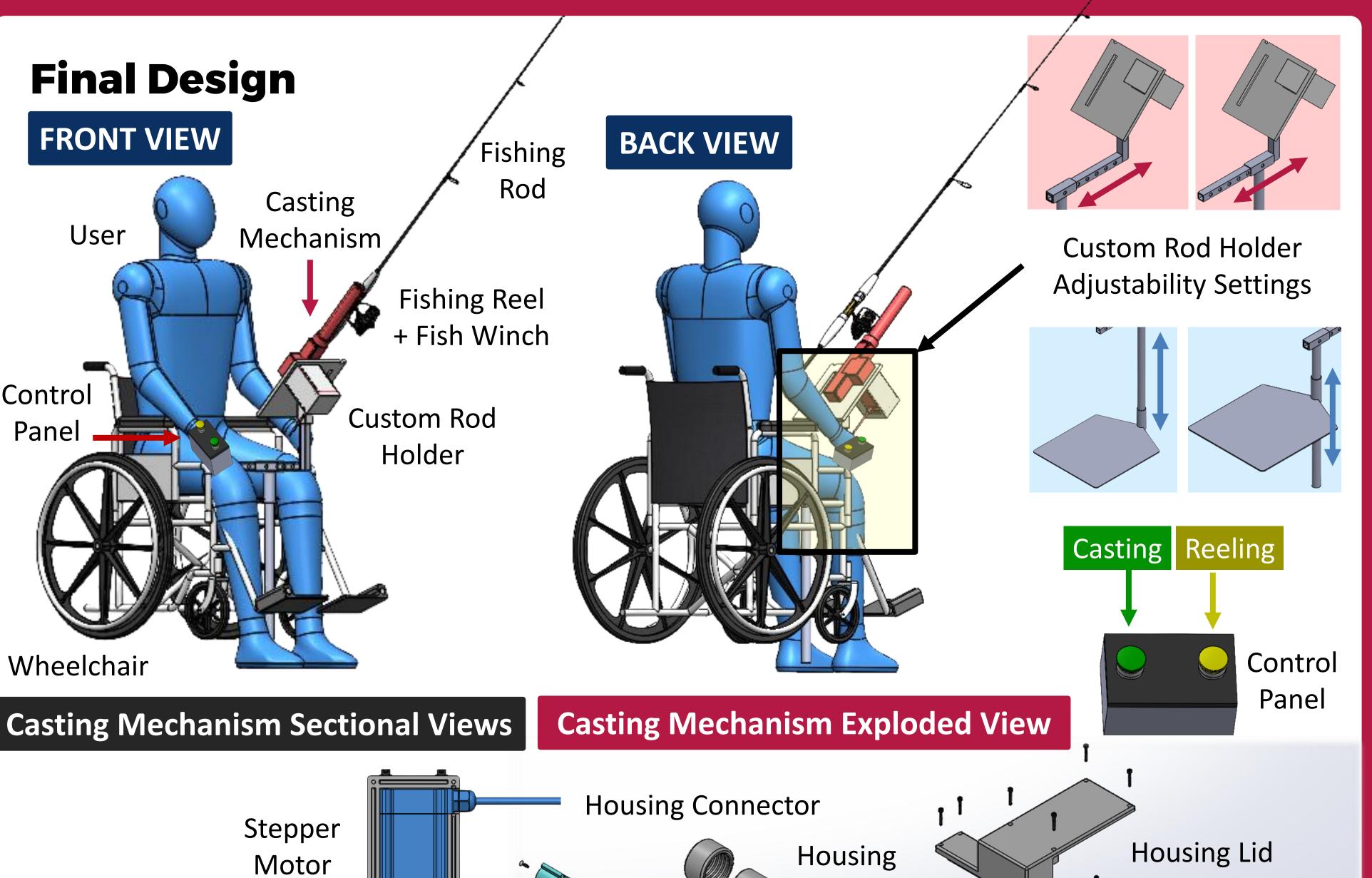
Design Lead





Omar Krichati Manufacturing Lead

Max Brown Analysis Lead



Spring

Tube

Locknuts

Clutch

Housing Base

Pinion Gear Rotation Arduino UNO **Activated Trigger Electrical Components**

System Level Diagram

Wheelchair

Fishing Rod

Reeling Mechanism

Fishing Reel

Fish Winch

Casting Mechanism

Stepper Motor

Electric Clutch Engaged

Spring Compression

Lure, Rig, Bait Release

User Equipment

Acknowledgements

Team FISH thanks Dr. Scott Shaffar for arranging and advising this project and Michael Lester for supporting some manufacturing processes of this project. Additionally, the team would like to thank Scott Huyvaert from QL+, Donna Goldberg from Craig Hospital, and Bob Adwar from River Deep Foundation for making this project possible through their generous sponsorship and continuous support.