Assistive Fishing Device

Overview
Many people are suffering from debilitating diseases which are keeping them from being able to hold a fishing rod. This project was to design and build prototypes to allow a person with limited arm and hand functionality to easily grasp a fishing rod.

Objectives
The purpose of this project is to design and build an economically feasible and lightweight assistive device that will allow a person with limited hand mobility to hold a fishing pole.

Approach
Two prototypes have been built which include a low-tech model and a high-tech model. The low-tech prototype features elastic Velcro straps to attach the device to the arm and an open sleeve with straps to attach the rod. This provides easy attachment of the device to the arm when wearing multiple layers of clothing. Also, switching rods can be done easily and efficiently without having to loosen or unstrap the device from the arm. The high-tech prototype features an electric clamping system that uses sensors to activate two servo-powered clamps when the rod is in position. This provides a quick and easy way for the user to attach and detach the fishing rod.

Outcomes
Low-Tech Prototype
- Featured for customers that prefer a natural and simple way to fish
- Straps quickly and securely fasten the assistive device to the user’s arm
- Low-budget prototype and easy to build

High-Tech Prototype
- Infrared activation to allow for quick and easy access to different fishing rods
- Device is lightweight, waterproof, and battery-operable.
- Motorized support to help with the physical demands of fishing