LENDING A HELPING HAND
MICHIGAN NEUROPROSTHETICS
1 IN 2,500

AMERICAN PEDIATRIC UPPER LIMB REDUCTION

$1,279,751

AVERAGE LIFETIME COST

21.6%

DISCONTINUATION RATE
MISSION STATEMENT

- To design cost affordable, accessible, and scalable myoelectric prosthetic devices for pediatric patients.
THE SOLUTION

AFFORDABLE
Our team produces a device for under two-hundred USD and distributes in completely pro-bono to the family

LIGHTWEIGHT
All of our models have weighed under a single kilo, with the lightest design being only one pound.

CUSTOMIZABLE
Our team holds a continuous conversation with the patient and the family regarding their desires of the product.

SCALABLE
There is an extended guarantee with each device so that our team is able to ensure continued satisfaction.
OUR DESIGN
2020 DESIGN CYCLE
DESIGN GOALS

• Streamline palm string channels
• Add charging port
• Strengthen forearm-socket interface
• Improve aesthetic appearance
• Reduce weight of arm
Hand Redesign

Before

After
Hand Redesign

Before

After
Forearm Redesign

Before

After
Charging Port
Socket Joint Analysis

200 N
Socket Joint Analysis
WEIGHT REDUCTION

Before: 166.82g  After: 153.73g

8% Reduction
THANK YOU!
CONTACT MICHIGAN NEUROPROSTHETICS

https://www.umneuroprosthetics.org
michigan.neuroprosthetics@umich.edu
FUTURE GROWTH

- We are poised to expand our impact to new markers and greater opportunities in the coming year.

LEADERSHIP TEAM

Dr. Cynthia Chestek - Robotics Advisor
Kiana Sadri - President of Michigan Neuroprosthetics
Dani Garrido - Head Lead of Interfaces Design
Yvonne Lin - Mechanical Coordinator
Stef Reamer - Head Lead of Manufacturing Process
Olga Tsuker - Head Lead of Outreach
Allison Wilcox - Head Lead of Mechanical Engineering
Maxton Wilson - Head Lead of Computer Software
Daniel Yan - Head Lead of Electrical Hardware
OUR WORK IN ACTION

— We continuously develop relationships with new patients and help them reach their goals.

A dual motor device with a high range of motion and the ability to complete physical activity was designed for this eleven year old who wished to have an arm that would allow for him to participate in athletic competitions. An additional feature of touch screen capability was added, per parental request.