Robotic Exoskeleton for Rehabilitation Applications

Rader, Maxwell (School: Minnetonka High School)
Simmons, Christopher (School: Minnetonka High School)

Stroke is an increasingly common injury in the world today and it can cause serious long-term problems with mobility in many body parts, including the arms and hands. Many researchers have developed exoskeletal systems to help combat these injuries, but the majority of currently available designs are expensive, bulky, incomplete, or otherwise impractical for the majority of patients with these disabilities. This research aimed to help change that by developing an inexpensive, compact, and easy-to-use hand exoskeleton. This was done by combining 3d printed parts with consumer grade electronic components to produce an inexpensive prototype of a therapeutic exoskeleton.

Awards Won: