Direct Connection Technology between Disabled and Prosthetic Robot Hand

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Despite there are lots of prosthetic robot hands are developing, disabled people can't use these technologies in their daily life. I thought these problem exist because of connection technologies between disabled and prosthetic robot hand. Current technologies use various kinds of sensors to measure the movement of muscles or undergo surgical procedure but these methods are commonly too expensive. And First, their expressable motions are limited with saved form. Second, take a long time to express motions by disabled's will. Third, each finger is hard to move simultaneously. Forth, each finger's controllable bending degrees are limited. Finally, wearable device are complicate to use. So I started this research to solve problems of connection technology between disabled and prosthetic robot hand. I used force sensing resistor to measure data values of according to fingers' bending degree. As a result, each fingers can operate simultaneously and each motion can act within 0.5 seconds. also each finger can devide bending degree about 700 unit. And these all operate By merely wearing the wrist band. And it's affordable price of the connection technology for disabled people.

Awards Won:
Fourth Award of $500