BRAINCO COLLABORATION

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BrainCo Collaboration

- Invited by Ray Niehaus
- Perry Central High School
- MIT and Harvard joint project
- IOT Lab in Fishers IN

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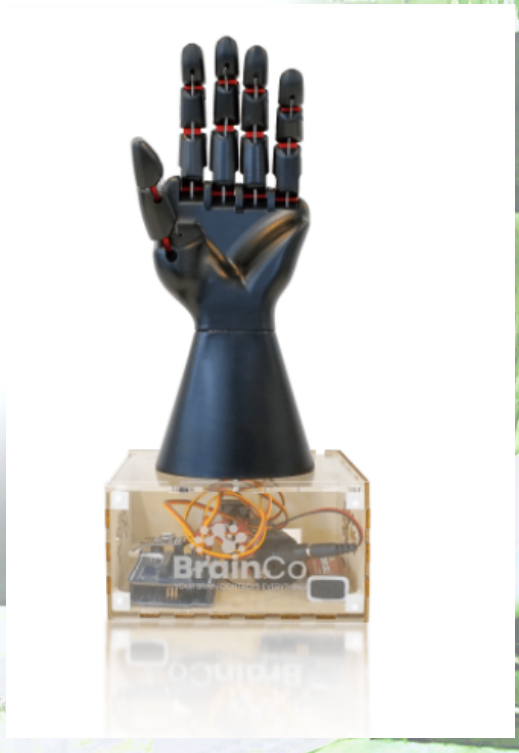
What is BrainCo

- BrainCo STEM Hand Base Set Includes:
- All Ready-to-Build Hardware
- Motors, Controllers, Sensors, IR Remote, Cables and more
- Full Curriculum Access
- Block Based Programming Platform or
- Python Based Programming

This is the base for testing and integrating with the other devices



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NeuroMaker

- NeuroMaker BCI utilizes high tech, safe EEG hardware that detects and digitizes brain activity for analysis and data science applications.

This is for developing control over the bionics with brain waves

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Be the first to review this product

USB Flexible Sensor Glove Kit

by Flexpoint Sensor Systems

In stock

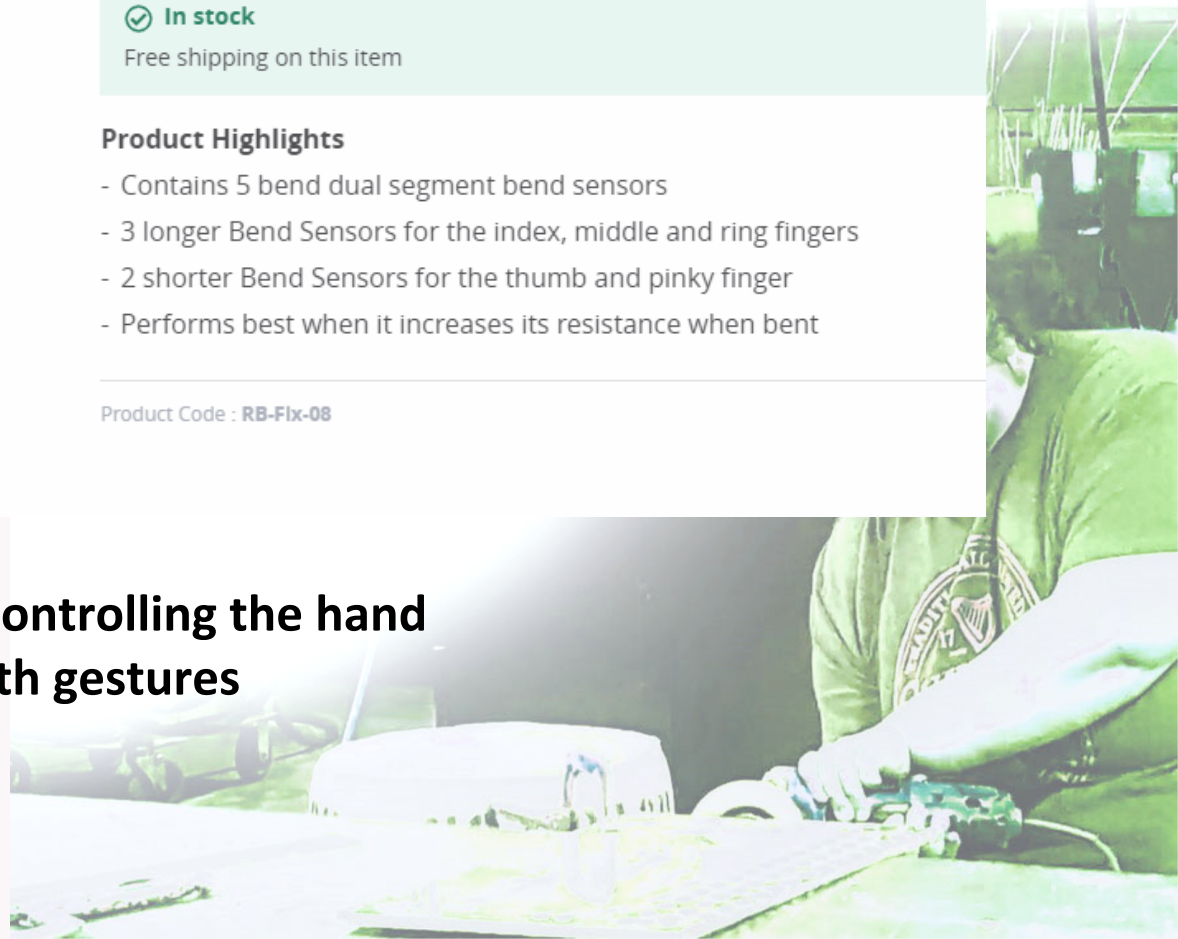
Free shipping on this item

Product Highlights

- Contains 5 bend dual segment bend sensors
- 3 longer Bend Sensors for the index, middle and ring fingers
- 2 shorter Bend Sensors for the thumb and pinky finger
- Performs best when it increases its resistance when bent

Product Code : **RB-Flx-08**

This is for controlling the hand with gestures



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Toys & Games › Learning & Education › Science Kits & Toys

Roll over image to zoom in

Robot Hand Five Fingers Solely Movement Bionic Robot Mechanical Arm DIY（Left Hand）

Brand: LewanSoul

★★★★☆ 10 ratings

Price: $99.99 prime & FREE Returns

Pay ~~$99.99~~ $0.00 after using available Amazon Rewards Visa Card Points.

Style: **left hand**

left hand	right hand
$99.99 prime	$99.99 prime

- Product weight: 184.8g
- Product size: 165*90mm(6.5*3.54in)
- Drive: LFD-01 anti-blocking servo
- Product material: Acrylic and aluminum alloy
- Age: 14 years and up

New & Used (4) from $83.71 prime

Report incorrect product information.

This is for testing the use of servo motors and linkages on fingers

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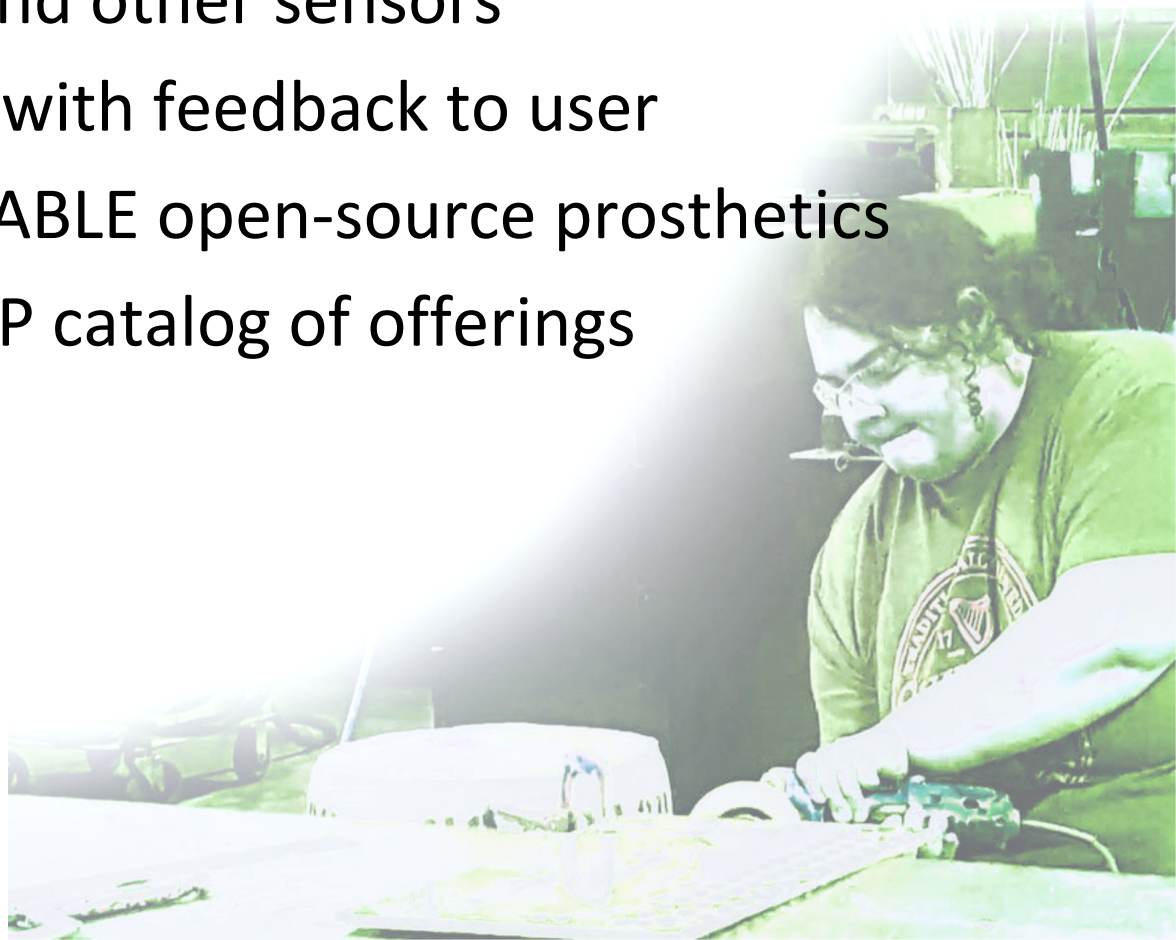
What is our role?

- Automate a wrist for this hand
- Test piezo and other sensors
- Experiment with feedback to user
- Tie into e-NABLE open-source prosthetics
- Tie into NIOP catalog of offerings



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Who and When

- Students and community partners will start meeting right away to develop a plan.
- This summer will have virtual or face-to-face meetings to test these parts. Older students from previous camps will be invited. There will be no additional cost for these “inventor camps”.
- The team will collaborate with Ray Niehaus and his connections to share information and progress.

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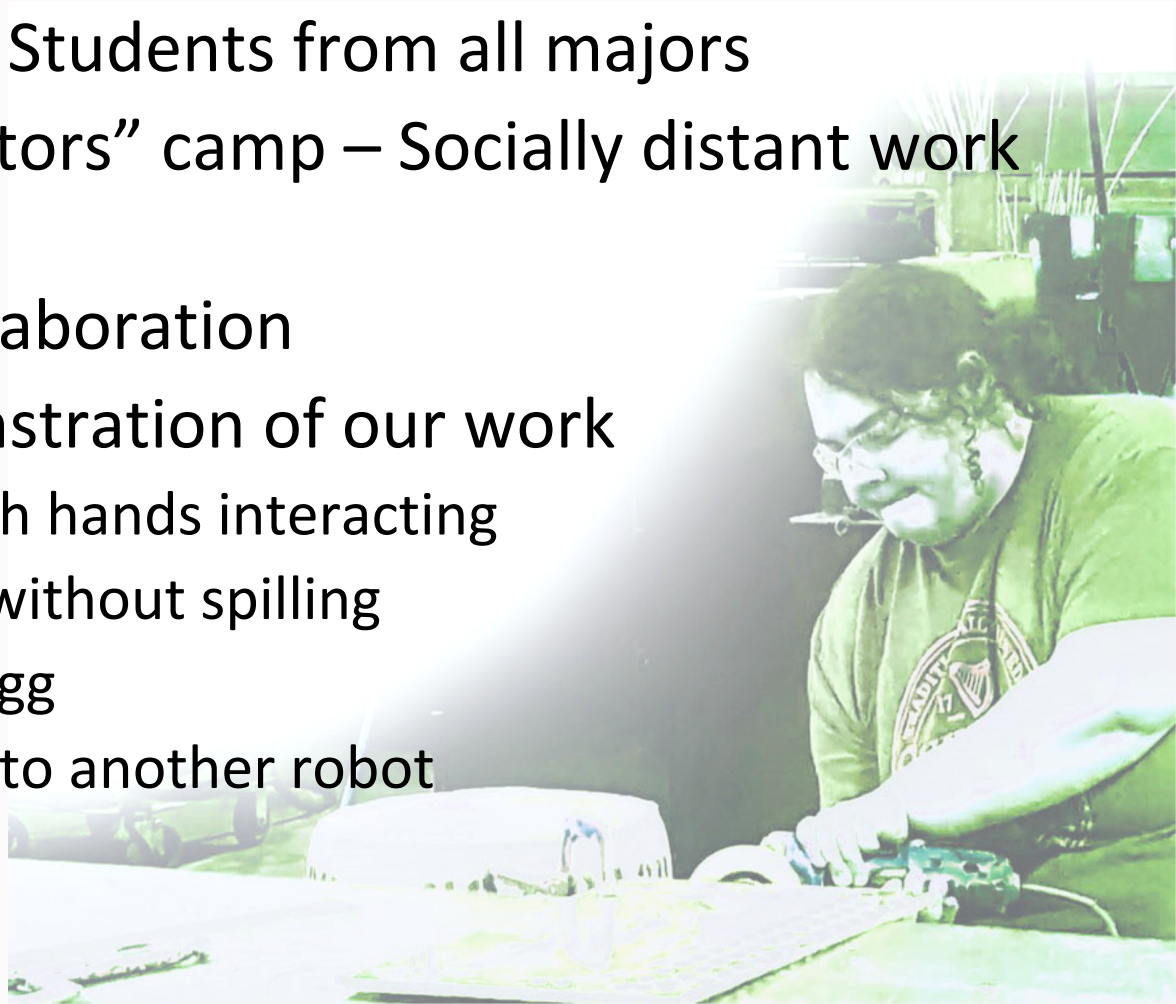
What is in it for us?

- Ties in with our AART and Design Curriculum
- Robotics Club – Students from all majors
- Summer “inventors” camp – Socially distant work possible
- Community collaboration
- A showy demonstration of our work
  - Two robots with hands interacting
  - Pouring liquid without spilling
  - Picking up an egg
  - Passing an egg to another robot



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Deliverables

- By the end of the summer we will deliver:
  - A mechanized wrist that can operate with one or more prosthetic hands.
  - The ability for students to run the BrainCo and Mechanical hands.
  - Test results from the NeuroMaker, Sensor Glove, and other sensor control options.
  - The possibility to do demonstrations and hands-on activities that can amaze and inspire.
  - Data and design information to share with the e-NABLE and other open-source communities.

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What else could we do?

- Wellness Center - biofeedback
- Area Hospitals – neurology, biotech
- Service hours for high school students

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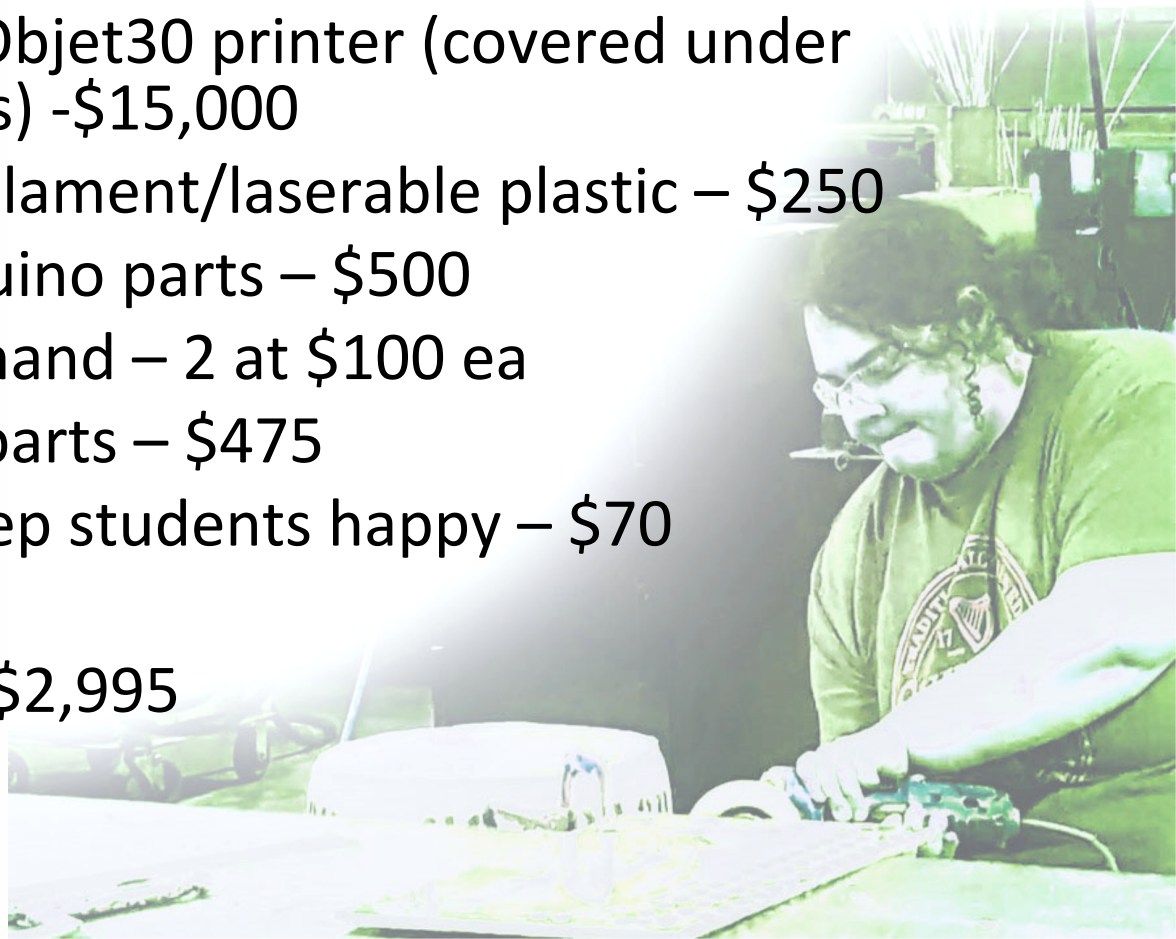
What do we need?

- BrainCo Hands – 2 at $500 ea
- One NeuroMaker BCI – 1 at $500 ea
- Upgrade to Objet30 printer (covered under Perkins funds) -$15,000
- 3D printing filament/laserable plastic – $250
- Sensors/Arduino parts – $500
- Mechanical hand – 2 at $100 ea
- Mechanical parts – $475
- Snacks to keep students happy – $70

Total request: $2,995



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