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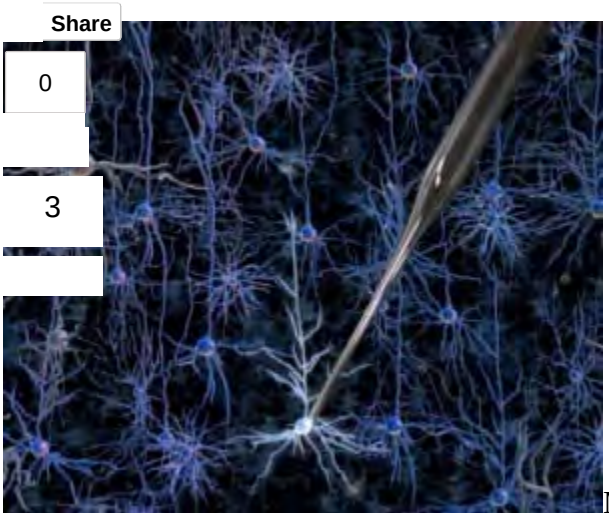
Brain

2012 by Lauren Landry Posted in Georgia Tech, McGovern Institute for Brain Research, MIT, MIT Lab, Robotics



Many of the inner workings of the brain remain a mystery. Yet, researchers from MIT and Georgia Tech might have cracked the code — and with what else than robots?

Using a robotic arm guided by a cell-detecting computer algorithm, the team has discovered a way to identify and record neurons in the living mouse brain with better accuracy and speed than a human experimenter, according to MIT News.

Through the automated process, scientists could categorize the thousands of different cells in the brain, map how they connect and then discover how diseased cells vary from normal cells. Studying brain disorders, such as schizophrenia, autism and epilepsy, could become easier.

Ed Boyden, a member of MIT's Media Lab and the McGovern Institute for Brain Research, told MIT News, "If we could really describe how diseases change molecules in specific cells within the living brain, it might enable better drug targets to be found."

The robotic arm was able to lower a glass pipette into the brain of an anesthetized mouse with micrometer accuracy, leading the system to detect cells with 90 percent accuracy and establish a connection with the detected cells nearly 40 percent of the time.

Researchers are now beginning to classify the thousands of types of neurons found in the brain, and Boyden says this could be just the beginning, telling MIT News, "a robot like this could potentially be used to infuse drugs at targeted points in the brain, or to deliver gene therapy vectors."

Although the image of a robot peeking around my brain slightly freaks me out, it's clear we're about to enter into a new era of robotics.

Graphic Courtesy of the Boyden Lab/MIT News

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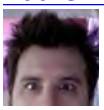
- 
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Thursday, May 24	
7:00pm	May EdTechup: Demo Night
Wednesday, May 30	
7:30pm	Boston Tech: Start-up Panel Discu
Thursday, May 31	
8:30am	MassTLC Robotics Cluster Meetin
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8:00am	ProductCamp Boston
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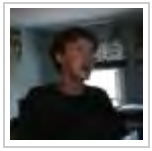
- 

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