

**Shichang Ke**  
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## EDUCATION

### Johns Hopkins University

Baltimore, MD

*Bachelor of Science: Neuroscience & Computer Science*

Expected May 2023

- Dean's List for 6 finished semesters
- Relevant coursework: Machine Learning, Computer Networks, Data Structures, Automata & Computation Theory, Computer System Fundamentals

## SKILLS

- Programming Languages: HTML, C/C++, Python, Java, JavaScript, CSS, Matlab, Assembly
- Tools & Frameworks: MongoDB, Express, React, Nodejs, Django, Scikit-Learn, Pytorch, Scipy, Tensorflow, Matplotlib, GIT, Jupyter Notebook, Wireshark

## WORK EXPERIENCE

### JOHNS HOPKINS INSTITUTE OF ASSURED AUTONOMY

Baltimore

*Autonomous System Research Assistant*

May 2022 - Present

- Prototyped a software real world, autonomous system based on the vehicular ad hoc networks
- Configured open-source projects including Veins and its forked extension Artery

### JOHNS HOPKINS UNIVERSITY

Baltimore

*Research Assistant - The Mysore Lab*

September 2021 - Present

- Examined Fluorescence imaging data, fine-tuned pipeline for lab's data
- Debugged the MERN stack used for experimental data collection
- Conducted mice behavioral training on visual-spatial attention

## PROJECTS

### THE DELINEO DISEASE MODELING PROJECT

May 2022 - Present

*Fullstack Developer*

- Maintained and updated the public website which uses the MERN stack
- Implemented responsive elements to the website using React bootstrap framework
- Maintained the servers where all data/code is stored, and made sure all the connections between the servers were functional

### MACHINE LEARNING: LIVE TRANSLATION OF SIGN LANGUAGE

March 2022 - June 2022

*Project Lead*

- Built classifiers and object detectors, in Python, for images of various users and backgrounds for American Sign Language letters
- Improved model so it can preprocess raw videos of people making ASL alphabet gestures

### DEEP LEARNING PIPELINE FOR NEURON DETECTION

September 2021 - January 2022

*Independent Project*

- Designed a deep learning pipeline for automatic analysis of neuronal activities in Ca<sup>+</sup> imaging data
- Included an automatic image preprocessing step by using Matlab and ImageJ
- Researched on various open-source software and experimented on different parameters to finetune signal extraction pipeline for data of mice brain activity recordings