

Minsi Hu

 minsihu.com |  [minsi-hu](https://www.linkedin.com/in/minsi-hu) |  minsihu2004@gmail.com |  [Mimsqueeze](https://github.com/Mimsqueeze)

Education

University of Maryland, College Park (UMD)

GPA: 4.00 / 4.00

- ❖ B.S. Computer Science (Machine Learning Track)
- ❖ B.S. Mathematics (Applied Math Track)

Expected May 2026

Relevant Coursework

- ❖ Machine Learning | Deep Learning | Computer Vision | Cryptography | Graph Theory | Algorithms | Advanced Data Structures | Web Development | Data Science | Real Analysis | Numerical Analysis | Probability Theory | Theory and Methods of Statistics | Advanced Numerical Optimization

Work Experience

Teaching Assistant | [University of Maryland](https://www.universityofmaryland.edu)

August 2023 – Present

- ❖ Teaching Assistant for the CMSC132: **Object-Oriented** Programming, CMSC216: Introduction to **Computer Systems**, CMSC330: Organization of **Programming Languages**, and STAT410: Introduction to **Probability Theory** courses.
- ❖ Taught discussion sections, held office hours, and designed coursework for over **3000 students**.

Course Instructor | [University of Maryland](https://www.universityofmaryland.edu)

December 2024 – Present

- ❖ Instructor and facilitator for **CMSC389E**: Digital Logic Design Through Minecraft, responsible for managing course logistics, organizing materials, designing projects, and delivering weekly lectures to over **50 students**.

Undergraduate Research Assistant | [University of Maryland](https://www.universityofmaryland.edu), [NMCL](https://www.nmcl.org)

December 2023 – Present

- ❖ Developed [software](#) to assess the efficacy of various **feature extraction** methods (functional connectivity, graph centralities) and **machine learning models** (SVMs, MLPs, CNNs) for classifying **electroencephalography** (EEG) data.
- ❖ Currently [investigating](#) the viability of **deep neural networks** as classification algorithms for EEG and utilizing **saliency methods** (heat maps) as a post-hoc analysis to reveal insights into important connections between different brain regions.

Personal Projects

[DeepCore](#) | C++ & CUDA

May 2024 – June 2024

- ❖ Engineered a C++ **neural network library** from scratch, leveraging NVIDIA's [CUDA](#) platform to accelerate **tensor** operations with **parallel computing** on the graphics processing unit (GPU). Evaluated to recognize handwritten digits from the [MNIST](#) database with over **98% accuracy**.

[Emotion AI](#) | Python & TypeScript | Bitcamp 2024

April 2024 – April 2024

- ❖ Developed a facial sentiment analysis and chatbot application using **OpenCV**, **TensorFlow**, **OpenAI API**, and **React + TypeScript** to recognize facial expressions in **real-time** with a custom-trained CNN, and curate personalized responses based on detected emotions.

[Sorting Simulator](#) | Java | Bitcamp 2023

April 2023 – May 2023

- ❖ Designed an advanced sorting algorithm visualizer with **Java Swing**, showcasing real-time array updates and collecting metrics (swaps & insertions) as various **sorting algorithms** (mergesort, quicksort, introsort) are applied, enabling **algorithm evaluation**.

Skills

Languages | Python, C++, C, Java, Rust, OCaml, R, Javascript, Typescript, SQL, C#

Other | CUDA, Pandas, TensorFlow, OpenCV, HTML, CSS, React, MATLAB, Git, LaTeX