

LIHENG CAO

lihengcao@gmail.com | linkedin.com/in/lihengcao | github.com/lihengcao | [Personal site](#)

EXPERIENCE

Meta/Facebook

Aug. 2022 – Feb, 2024

Software Engineer on Facebook Feed Health

Seattle, WA

- Efficiency: Saved **\$2M** from CPU wins across various projects by ideating, optimizing, and experimenting.
- Reliability: Designed, implemented, & deployed an automatic throttling platform across Feed to **auto-mitigate an entire class of reliability regressions**, preventing overnight pages.
- Augmented internal tools to simplify workflows and increase developer velocity for identifying efficiency wins.
- In a **tier 1 oncall**, prevented major site uptime, user experience, and revenue regressions by **live debugging**.

Machines in Motion Lab at NYU Tandon

Jun. 2021 – May 2022

Undergraduate Research Assistant

Brooklyn, NY

- Contributed to research for **contact detection for legged locomotion** and **path integral for policy improvement**
- Assembled, tested, and repaired robots for **research and teaching**
- Developed Python/C++ bindings for IMU sensor, and modified USB driver and serial reader code
- Operated Vicon motion tracking system and integrated with robot motion
- Created poster documenting research and presented to lab

NYU RoboSub VIP Team at NYU Tandon

Aug. 2021 – May 2022

Software Team Lead

Brooklyn, NY

- Assigned tasks and supervised team members in motor control, vision, task planning, and localization
- As inaugural software lead, researched relevant topics and trained the team
- Developed the vision and task planning of the robot to allow autonomy

NYU Robotic Design Team VIP Team at NYU Tandon

Sep. 2020 – Sep. 2021

Software Competency Member

Brooklyn, NY

- Competed in the NASA Robotics Mining Competition
- Wrote code to allow communication between server and robot to keep the robot lightweight
- Integrated sensor data to allow robot movement

EDUCATION

New York University, Tandon School of Engineering

Brooklyn, New York

Bachelor of Science in Computer Science, Minor in Mathematics, Magna Cum Laude

Sep. 2019 – May 2022

SELECT PROJECTS — MORE ON [GITHUB](#) AND [PERSONAL WEBSITE](#)

Character recognition neural network in the browser

- Trained my own convolutional neural network using Pytorch on the EMNIST dataset
- Set up a no backend website to demo the model with a mouse cursor drawing.
- No backend! Everything runs on your browser.

Cost Splitter App

- Built a Cost Splitter app from scratch using basic web dev. for my roommates
- Receives name, price, and people to split amongst
- Outputs how much each person pays
- Allows roommates to split group grocery runs at Costco

CRUD App

- Built a distributed Create, Read, Update, Delete database app using Go
- Split into multiple frontends and backends
- Implemented the Raft consensus algorithm
- App could be accessed from multiple frontends, and data was distributed over multiple backends

Sign Language Classifier

- Trained various models with a partner to classify the MNIST Sign Language dataset
- Created a presentation of results and presented to members of the Introduction to Machine Learning course

SCUDEM V 2020 Differential Equations Modelling Competition

- Modeled and animated the physics of a bird spinning around on a bicycle wheel as a part of a 3 man team
- Scored the highest score (4.875/5) out of 180 other teams

KEY SKILLS

Software Engineering, Performance Optimization, Reliability, Efficiency, Latency, Machine Learning, Parallel and Distributed Systems, Robotics, Networking, Full Stack