Chenyi "Lisa" Zhu

(443) 604-3051 | cyzhu2000@gmail.com | chenyi00.github.io | chenyi-jhu | chenyi00

Education

Johns Hopkins University **Baltimore, MD**
Majors: *B.S. Computer Science, Applied Math (GPA 3.52)* *Expected May 2022*
Honors: *Dean's List, Malinow Grant ($4,000)*
Courses: *Algorithms, Object-Oriented Programming, Data Mining, Optimization, Machine Learning, Computer Systems, Probability, Statistics, Linear Algebra & Differential Equations, Calculus*

Skills

Programming: Java, C/C++, Python, HTML/CSS, JavaScript (Ember), MATLAB, R, Assembly x86, SQL (Postgre).
Software: Git, PyTorch, AWS, LaTeX, CAD, Bloomberg Terminal, Microsoft Office.
Certificates: BMC Certificate (Bloomberg LP, 6/2020), Telescope Operator (Space Grant Consortium, 6/2019).
Languages: Mandarin, English, French.

Internships & Projects

Internship: Site Reliability Engineer @ LinkedIn **Sunnyvale, CA**
Undergraduate Intern · LinkedIn Marketing Solutions *June 2021∼ Present*

- Built real-time feedback mechanisms into internal availability diagnostics tool to collect actionable developer feedback and to effectively analyze user sentiment, enabling the team to improve the existing application and to add/adjust features accordingly.
- Performed on-call duties to manage and debug system outages or performance issues.

Research: Neural Machine Translation **Baltimore, MD**
Student Researcher · Center for Language and Speech Processing *Aug 2020 ∼ Present*

- Synthesized parallel corpora to include previously unseen single-word terminologies to distribute relevant information on the global pandemic through the TICO-19 dataset for low-resource languages.
- Working to incorporate multi-word terms by generating efficient, order-sensitive embeddings with Python.

Design Team: GOOSE **Baltimore, MD**
Software Engineer · Department of Computer Science *Aug 2020 ∼ Dec 2020*

- Created **MyCooksApp**, a social network application to support local small businesses by connecting food trucks and potential customers; built mainly in Java following CI/CD and AGILE development principles.
- Integrated Google Maps JavaScript API, thus allowing food trucks to see and update locations, and customers to rank food trucks with regard to relative distances in real time.

Internship: Medical Image Segmentation **Baltimore, MD**
Delineator · Image Analysis & Communications Lab *Aug 2020 ∼ Present*

- Traced thalamus segmentation based on MRI scans and created training data for image segmentation algorithm.

Internship: Electro-analgesic Pain Modulation **Baltimore, MD**
Student Researcher · Neurosurgery Pain Institute *Mar 2019 ∼ Present*

- Reverse-engineered "Scrambler" electro-analgesic device for chronic pain relief with Arduino and various other electronic components, and reconstructed electrical waveforms with C/C++.
- Visualized individual waveforms with the Spike2 data acquisition system in combination with MATLAB and categorized each waveform based on its distinct stimulation patterns.
- Conducted testing trials and used ImageJ cellular analysis software to examine stimulation effects on DRG neurons.

Design Team: Weather Balloon Project **Baltimore, MD**
Project Lead · Bloomberg Center for Physics and Astronomy *Mar 2019 ∼ Present*

- Launched payloads with helium weather balloons to high altitudes of 84,000 feet; collected atmospheric data along the payload's ascent to and descent from the stratosphere.
- Designed robust reusable payload, modeled various components such as camera mounts using AutoCAD Fusion.
- Prepared electronic devices including cameras, atmospheric sensors, and APRS & GSM tracking modules, programmed with C, Python, and bash scripts, driven by Raspberry Pi.

Design Team: EpiX **Baltimore, MD**
Engineering Lead · Center for Bioengineering Innovation and Design *Nov 2018 ∼ May 2021*

- Perform product research and design novel **extendable Tuohy needle** prototypes aimed to reduce patient and physician discomfort in current epidural procedures and to save $162 million/year for hospitals.
- Prototype with Fusion360 CAD software and perform finite element analysis (FEA) to test model's efficacy and usability.
- Received Malinow Grant ($4,000) to fund project over summer of 2019 and to seek IRB approval.

- Presented product solution at American Society of Anesthesiologists' 2020 annual meeting.

Teaching Experience

Intermediate Programming **Baltimore, MD**
Course Assistant *Aug 2020 ~ Present*

- TA for core computer science course in C and C++, chosen from a pool of over a hundred highly competitive candidates.
- Help students in class with coding practices, hold office hours, and grade assignments.

Electromagnetism **Baltimore, MD**
Learning Assistant *Jan 2020 ~ May 2020*

- Aided lecture delivery, taught Friday sections to help students solve additional problems, and held office hours weekly.
- Compiled notes on mathematical backgrounds of electromagnetism to consolidate understanding of course materials.

Leadership

First-year Mentoring Group **Baltimore, MD**
Junior Mentor *Aug 2020 ~ Present*

- Support incoming freshmen through the COVID-19 pandemic and navigating an online college experience.
- Collaborate with faculty advisers to organize discussions regarding current issues/advancement in computer science.

Global Medical Brigades **Tegucigalpa, Honduras**
Executive Board Member *Jan 2019 ~ May 2020*

- Assisted three Honduran communities in building sanitation and clean water infrastructure.
- Headed donation drives with fellow volunteers to gather over 1,400 sanitation bundles to sponsor future brigades.