Laryn Qi

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Education

University of California, Berkeley **GPA: 3.95/4.00**

M.S. Electrical Engineering and Computer Science *May 2024*

- **Thesis**: LLM-Based AI Tools for CS Education
- **Courses**: Generative AI & LLMs, Deep Reinforcement Learning, Natural Language Processing, Convex Optimization

University of California, Berkeley **GPA: 3.82/4.00**

B.A. Computer Science, B.A. Music *May 2023*

- **Courses**: Combinatorial Algorithms & Data Structures (Graduate), Randomized Algorithms, Computability & Complexity Theory, Programming Languages & Compilers, Machine Learning, Data Science, Operating Systems, Security, Computer Architecture, Probability & Stochastic Processes, Linear Algebra, Discrete Math, Signals, Circuits
- **Honors**: Upsilon Pi Epsilon (UPE) CS Honor Society, College of Letters & Science Honors 2020-2021

Experience

Berkeley Artificial Intelligence Research Berkeley, CA

Researcher *August 2023 – Present*

- Leveraging LLMs to build an AI assistant for intro CS students via a VS Code extension and command line integration
- Published paper on the tool's positive effects on office hour loads at NeurIPS'23 Generative AI for Education workshop

UC Berkeley EECS Department Berkeley, CA

Lecturer – CS 61A The Structure and Interpretation of Computer Programs *June 2022 – August 2022*

- Gave lectures, wrote exams, and hired staff of **25+** TAs/tutors and **50+** academic interns for class of **400+** students
- Taught abstraction, recursion, OOP, trees, linked lists, complexity, and interpreters in Python, Scheme, and SQL

Amazon Seattle, WA

Software Development Engineer Intern – Threat Intelligence *May 2021 – August 2021*

- Built intelligence collection service to improve threat discoverability via fast searching through large datasets
- Resulted in **30%** improvement in Analyst efficiency, saving **300** person-hours a month at a cost of less than **$2/hour**
- Used serverless AWS infrastructure to implement a scalable, cost-efficient, fault-tolerant, extensible, and secure system

UC Berkeley EECS Department Berkeley, CA

Head TA – CS 61A The Structure and Interpretation of Computer Programs *January 2020 – December 2023*

- Lead team of **9** Head TAs and collaborate with professors to manage **70+** general course staff members
- Hold multiple weekly discussions, labs, and office hours & maintain infrastructure/website for class of **2000+** students
- Average teaching effectiveness rating of **4.52/5.00** by students, won **Outstanding Graduate Student Instructor Award (2022)**, awarded to **top 10% of TAs university-wide**, and won **Outstanding Academic Intern Award (2020)**, awarded to **top 7% of CS 61A Spring 2020 interns**

Projects

Meta (Contract Tech Lead) *February 2024 - Present*

- Optimizing CPU operators for ARM architecture using auto-vectorization to speed up Meta's ML workflows

San Francisco Conservatory of Music (Contract Lead Software Engineer) *May 2022 - January 2023*

- Built a dashboard for SFCM to increase concert turnout by parsing, aggregating, and visualizing historical data
- Trained **6** developers with no web dev experience to build a full-stack web app using React, Express, and PostgreSQL

Mothership (Contract Lead Software Engineer) *December 2021 – May 2022*

- Sourced & specced data science/backend project to serve carrier supply & shipment demand density in metro areas
- Led **6** developers through system architecture research, design doc, data analysis, service deployment, and testing
- Created ramp-up project & organized weekly syncs, worksessions, retros, check-ins, client stand-ups, and socials

BlueConduit (Contract Software Engineer) *August 2021 – January 2022*

- Built web app for city officials to upload & visualize water service pipeline data for finding best replacement locations
- Part of a multimillion collaboration between BlueConduit and Google.org to support lead service line replacements
- Used Django REST framework & JSON web tokens to handle user authentication and Mapbox API for visualizations

Relativity Space (Contract Software Engineer) *February 2021 – May 2021*

- Developed web app for visualizing real-time time-series data streaming from sensors on rockets into InfluxDB
- Built APIs, sockets, React dashboards, D3 graphs with custom absolute/relative timeranges for multiple data streams
- Emphasized improved performance over Grafana through streamed data caching and client-side shared global state

Skills

Languages: Python, Java, C, SQL, Go, JavaScript, TypeScript, OCaml, LaTeX, Assembly, Lisp, HTML/CSS

Tools & Frameworks: Git, AWS, GCP, Unix, Linux, Docker, Heroku, MongoDB, InfluxDB, React, Vue, Express, Flask, Django, pandas, NumPy, PyTorch, MatPlot