

Elaine Leiyong

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Education

Boston University

Boston, MA

Bachelors of Arts in Computer Science, GPA 3.63/4.00

Expected May 2025

- **Selected Coursework:** Data Structures, Computer Systems (Unix/Linux), Analysis of Algorithms, Probability in Computing, Software Engineering, Distributed Systems, Full-Stack Development (current), Intro to AI (current)
- **Leadership:** Upsilon Pi Epsilon Computing Honor Society (Vice-President), Phi Chi Theta Professional Fraternity (VP of External Development, VP of Technology), BU Finance & Investment Club (Quantitative Developer)

Experience

Boston University – Department of Computer Science

Boston, MA

Undergraduate Researcher

Sep 2023 – Present

- Exploring function program verification in correct-by-construction code design using proof assistant **Lean** and **Racket** languages, working to create easy-to-use and user-friendly Linear Algebra material for educational settings.

Nutanix

San Jose, CA

Hybrid Cloud Data Engineer Intern

Jun 2023 – Aug 2023

- Collaborated with the File System team to design and develop new features encompassing **AWS S3 object** stores, leveraging **React**, **Flask**, **Snowflake**, and **Linux** to allow users access to audit events and activity on S3 objects.
- Retrieved file activity and handled 100+ file audit events by implementing **REST APIs**, fetching data from **Snowflake** using **SQL**, and writing data library classes and tests using **Python** and **Unittest**.
- Leveraged **Gerit** and **Git** for version control, allowing seamless integration of code changes while working on expanding and adding features to the product.

Boston University Spark!

Boston, MA

Innovation Fellowship Software Developer

Jan 2023 – May 2023

- Developed resource dashboard using **React** and **Firebase** technologies, increasing accessibility to stigmatized topics.
- Utilized **OpenAI API** and **Google Search API** to search, summarize, and categorize women's health articles to 10 key topics, enhancing content organization and resource access.
- Conducted user research through 20+ user interviews and gathered 50+ touchpoints to validate product hypothesis.
- Collaborated with a cross-functional team by utilizing collaborative softwares **Jira** and **Miro** and implementing **SCRUM** principles and **Agile** development processes.

Major League Hacking – Powered by Meta

Remote

Production Engineering Fellow

May 2022 – Aug 2022

- Developed web app with **Python**, **Flask**, **Jinja**, and **MySQL**; automated testing and deployment with **GitHub Actions**; and set up container monitoring, alerting, and visualization using **Prometheus** and **Grafana**.
- Completed 12-weeks of Meta Production Engineering Track training requiring **tmux**, **Bash scripting**, **regex**, **test-driven development**, **unit testing**, **system services**, **Docker**, **Nginx**, and **CI/CD**.

Personal Projects

Spotify Song Recommender

Spring 2023

- Developed a dynamic Spotify app using **React**, **Firebase**, **Express**, and **Node.js** to deliver personalized music recommendations based on location and weather conditions.
- Utilized **Firebase** as a reliable and secure database solution, effectively storing and accessing users' Spotify access tokens for seamless integration with the **Spotify API**.
- Leveraged **Geocoder API** and **OpenWeather API** to determine user location and weather conditions, customizing genre and acousticness parameters for Spotify API requests, enabling highly tailored song recommendations.

Statistical Arbitrage Model

Spring 2023

- Utilized **Python** and backtesting techniques to implement pre-existing **statistical arbitrage** strategies for Bitcoin and Ethereum, simulating practical experience in cryptocurrency trading and financial markets.
- Conducted data analysis and research on Bitcoin and Ethereum using **Pandas**, **PyPlot**, and **Yahoo Finance** to analyze and construct a mean-reverting spread from historical data.

Technical Skills

Languages: JAVA, Python, HTML/CSS, Swift, Bash, Go, JavaScript

Tools: Linux, Git, Docker, XCode, VSCode, MySQL, Microsoft Office, Google Suite

Technologies/Frameworks: NumPy, Pandas, Flask, Jinja, React.js, Express.js, Firebase