Lawrence Lim

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EDUCATION

New York University

Expected Completion: Sep 2021 - May 2025

Bachelor's Degree, Computer Science Major

New York, NY

• Cumulative GPA - 3.83/4.00; Major GPA - 3.85/4.00

SJTU-THU-PKU Summer Program

July 2023

Summer School in Computer Science

Shanghai, China

• Course List: Cryptography and Blockchain, Artificial Intelligence

WORK EXPERIENCE

Software Engineer Intern

Mar 2023 - Present

Knn3 – User-centric DataFi solution for d/Apps and smart contracts

(Remote) Singapore

- Developed chat agent app with web search, web scraping, and full-text search enhanced with vector similarity
- Implemented hybrid search system ranking search results and utilizing sparse and dense vector representations
- Significantly improved information retrieval performance by leveraging concurrent search and caching
- Deployed to staging with Docker, automated building, testing, and deployment to AWS with Jenkins CI/CD

Technology Consultant Intern

Sep 2022 - May 2023

Jika.io – Social community platform built for investors

(Remote) Tel Aviv, Isreal

- Tripled data analyst work efficiency by constructing MongoDB to Google Bigquery data pipeline with BI frontend
- Architected relational database, employing third normal form for optimal schema design and query efficiency.

Blockchain Research Analyst

May 2022 - Sep 2022

TokenInsight – Platform that provides crypto data and research content.

(Remote) Beijing, China

- Research topics include zero-knowledge-proof rollups, optimistic rollups, and Ethereum's development timeline.
- Wrote technical articles on various blockchain protocols and architecture. Also researched blockchain valuation and risk assessment. Served as core member of TokenInsight's research team.

RESEARCH

Research Assistant - Packet Trace Anonymization

 $\rm Dec~2022$ - May 2023

NYU Shanghai Computer Science Department - Advised by Prof. Guyue (Grace) Liu

Shanghai, China

- Built, modified, and tested network packet anonymization tools. Analyzed and compared their TCP/IP anonymization policies by conducting literature review, analyzing source code, and reading documentation.
- Using methodologies from tcpdpriv, tcpmkpub, and tcpdpriv to develop new secure packet anonymizer in C.

Research Project - Crypto Asset Rating Methodology Framework

May 2022 - Jan 2023

Dean's Undergraduate Research Fund - Advised by Prof. Jiding Zhang

Shanghai, China

- Investigated how crypto rating methodologies can be improved through a holistic overview of the project, conducting data analysis on off chain metrics and on chain data to derive a performance rating, and using smart contract code auditing to determine a security rating.
- Developed smart contract applications to understand full stack smart contract development and security practices.

PROJECTS

HealthFirstAI Prototype - AI Powered Health and Fitness Coach View Project

- Led a backend team of 3 (utilizing DVCS) to collaboratively build the MVP backend of our AI health coach
- Designed nutrition and food recommendation algorithm leveraging vector cosine and euclidean distance metrics
- Researched and tested ReAct, Plan-and-Execute, and Tree-of-Thoughts patterns for optimal chat agent design

Airline Booking System – Full Stack Python Web App View Project

- Engineered an airline booking system, inspired by Expedia.com, leveraging Flask, MySQL database, and Bootstrap.
- Employed advanced features including user session tokens, secure user password hashing, and SQL triggers

Decentralized Crowd Funding – Full Stack Solidity and JavaScript d/App View Project

- GoFundMe inspired app providing users with intermediary-free campaign creation, contribution, and withdrawal
- Integrated real-time data with Chainlink Price Feeds, user payments via MetaMask and Ethereum Provider API

MeChat – Python GUI Desktop Chat App View Project

- Utilizes web sockets for communication, end-to-end RSI encryption for security, and client-side multi-threading.
- Uses Tkinter Python library used for the GUI. Project currently used as a showcase in Intro to Comp. Sci class

LEADERSHIP & ORGANIZATIONS

President May 2022 - May 2023 Shanghai, China

- Undergraduate Business Association (UBA) @ NYU Shanghai
- Managed a club of 80+ members that held workshop, speaker series, and mentorship events on a weekly basis.
- Hosted inaugural UBA Spring Business Competition with data analysis, investing, and marketing tracks
- Our organization's impact on campus was recognized with the "Trailblazer" award, given to the most innovative and pioneering student organization in NYU Shanghai.

Director of Tech Consulting

Undergraduate Business Association (UBA) @ NYU Shanghai

May 2022 - May 2023 Shanghai, China

- Founding member of inaugural TAMID Tech Consulting branch at NYU Shanghai.
- Hosted tech education workshops for students such as Intro to the Terminal, Git and Github and Intro to Data Analysis

Orientation Ambassador Captain

New Student Programs @ NYU Shanghai

Mar 2022 - Sep 2022 Shanghai, China

- Led a team of eight Orientation Ambassadors over four months to plan and host a Game Night during Freshmen Orientation Week, one of the four major OA organized events.
- Primarily delegated tasks, managed budget, and coordinated with Student Life staff to achieve a successful event.

Class of 2025 President

Student Government @ NYU Shanghai

Sep 2021 - May 2022

Shanghai, China

- Led the organization and planning of NYU Shanghai's week-long Spirit Week event and received over 100+ registered participants on kick-off day.
- Worked with the Class Engagement Board to plan and host a week of online events to support NYU Shanghai students during the 2022 Shanghai Lockdown.
- Served as the voice of my class and aggregated questions and concerns from the student body, and presented them, in the form of a report, at weekly student government meetings.

TECHNICAL SKILLS AND INTERESTS

Programming Languages: Python (fluent), SQL (fluent), HTML/CSS (proficient), Node.js (proficient), C (prior experience), Solidity (proficient), Shell (proficient), Lua (prior experience), Rust (learning)

Cloud/Databases: PostgreSQL, MySQL, Redis, pgvector, Pinecone, Elastic Search (OpenSearch, Kibana)

Developer Tools: Git and Github, Docker, Jenkins, Github Actions, Debian Linux, venv/Poetry, Vim/Neovim

Coursework: Databases, Computer Architecture, Data Structures, Discrete Math, Linear Algebra

Areas of Interest: Blockchain Development, Zero Knowledge Proof Applications, Artificial Intelligence

HONORS AND AWARDS

- Leadership in Action: Outstanding individual leadership in NYUSH student organizations
- April 2023
- Recognition Award: Excellent academic performance and contributions to the NYUSH community July 2022