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　　　　　　　　　　　　　　　　　　　　　　　　*Shanghai, 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.

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

RESEARCH

Research Assistantship - Packet Trace Anonymization
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.

Resaerch 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.

LEADERSHIP & ORGANIZATIONS

President
May 2022 - May 2023

Undergraduate Business Association (UBA) @ NYU Shanghai
Shanghai, China

- 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
May 2022 - May 2023

Undergraduate Business Association (UBA) @ NYU Shanghai
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
Mar 2022 - Sep 2022

New Student Programs @ NYU Shanghai
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
Sep 2021 - May 2022

Student Government @ NYU Shanghai
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