Lawrence Lim

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EDUCATION

New York University   Expected Completion: May 2025
Bachelor's Degree, Computer Science Major   *New York, NY*

- Cumulative GPA - 3.8/4.0; Major GPA - 3.9/4.0
- Coursework: Cryptocurrencies & Decentralized Ledgers (Graduate), DevOps & Agile Methodologies (Graduate), Algorithms, Databases, Computer Architecture, Data Structures, Discrete Math, Linear Algebra, Calculus III
- Honors & Awards: Leadership in Action Award (2023), Student Organization Trailblazer Award (2023), Recognition Award (2022), Dean's Undergraduate Research Fund Recipient (2022), Dean's Honor List (2021 - 2023)

WORK EXPERIENCE

Software Engineer Intern   May 2023 - Aug 2023
Knn3 Network – User-centric data provider for decentralized apps and smart contracts   *Singapore*

- Developed LLM chat API with features such as interactive web search, web scraping, and document retrieval
- Built FastAPI backend with MySQL database, SQLAlchemy ORM, and Pinecone for document similarity search
- Implemented web scraping with BeautifulSoup and Selenium, and chat message history caching with Redis
- Wrote unit tests with Pytest achieving 95% code coverage, and documented API with Swagger and mkdocs
- Containerized microservice with Docker, automated building and deployment to Amazon EKS with Jenkins CI/CD

Data Engineer Intern   Feb 2023 - May 2023
Jika.io – Social community platform built for investors   *Tel Aviv, Israel*

- 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.
- Analyzed NoSQL database schema and wrote SQL scripts to clean, transform, and insert data into relational tables

PROJECTS

NYU Blockchain & Fintech Poker – Secure Trustless Online Poker View Project

- Developed game initiation (buy-in, blinds) and action (check/bet/fold) verification on EVM smart contracts
- Implemented Mental Poker cryptography protocol to enable trustless and provably secure shuffling and dealing
- Utilized state channels to minimize on-chain transactions and gas fees, while maintaining game integrity
- Employed Python web socket server and test client to facilitate state channel communication between players
- Leveraged crypto primitives such as RSA signatures, verifiable randomness, and commutative encryption

HealthFirstAI Prototype – AI-Powered Health and Fitness Coach View Project

- Built personal coach chatbot that provides health and fitness advice to users based on their goals and profile
- Developed user profile and goal tracking system with PostgreSQL, and chatbot with LangChain, and FastAPI
- Designed personalized food recommendation algorithm comparing nutrition vector cosine similarity and distance

LEADERSHIP & ORGANIZATIONS

- **Development Team**, NYU Blockchain and Fintech   Oct 2023 - Present
- **CEO & Founder**, HealthFirstAI - AI-Powered Personal Coaching   Jul 2023 - Present
- **President**, Undergraduate Business Association @ NYU Shanghai   Sep 2022 - June 2023
- **Co-Director of Tech Consulting**, TAMID (Tech Track) @ NYU Shanghai   Feb 2023 - May 2023

TECHNICAL SKILLS AND INTERESTS

Programming Languages: Python, SQL, C, HTML/CSS, JavaScript, Solidity, Java, Shell, Lua, Microsoft Office
Libraries/Frameworks: FastAPI, Flask, SQLAlchemy, Pandas, NumPy, LangChain, Bootstrap, Node.js, Hardhat
Cloud/Databases: PostgreSQL, MySQL, Redis, Pinecone, Google Cloud BigQuery, Amazon EKS, MongoDB
Developer Tools: Git, GitHub, Docker, Linux, Kubernetes, Jenkins, Terraform, VMware, Zenhub, GitHub Actions
Areas of Interest: Blockchain, Cryptography, Artificial Intelligence, Backend Web Development