

EDUCATION

UNIVERSITY OF CALIFORNIA, SAN DIEGO

Master of Computer Engineering

La Jolla, CA

Sep 2024 - Expected Jun 2026

TSINGHUA UNIVERSITY

Bachelor of Electrical Engineering

Beijing, China

Sep 2017 - Jun 2021

- Major in Electronic Information Science and Technology

- 4-year Outstanding Malaysian Award; 2017 Electrical Engineering Award for Outstanding Performance; Tsinghua-Inditex Scholarship

SKILLS

Programming Languages C/C++, JavaScript, TypeScript, Python, Rust, Shell, SQL, HTML, CSS, UE Blueprints

Frameworks and Tools React, MongoDB, GraphQL, RESTful API, Git, Docker, Kubernetes, Jira, CI/CD, AWS, Linux, OpenXR

WORK EXPERIENCE

LP-Research Inc. | Software Engineer

Tokyo | Jul 2021 - Jul 2024

Developed a multi-user large-scale VR solution, deployed across design centers and showcased at SIGGRAPH 2023.

- Improved system modularity and **multithreaded** network communications using ZeroMQ and factory design patterns. Decoupled nodes with a pub/sub system, achieving a 29% code reduction. Ensured stable releases with **CI/CD** pipeline and **address sanitizer**.
- Integrated **Protobuf** for efficient sensor data transfer, reducing data size by 60%.
- Customized ALVR for 2-stage optical-IMU fusion, reducing tracking vibration from 3° to 0.1°. Built Android releases for **Meta Quest Pro** using **CMake**, **Conan**, shared libraries, and **NDK**.
- Developed C++ data playback and monitoring tools, streamed over **VRPN**, **ZeroMQ**, and **WebSocket**, saving 1000+ hours in testing.
- Reduced setup time from 15 minutes to 5 minutes by creating **automation scripts** and a **GUI in Tauri**.

Core maintainer of [OpenZen](#), an open-sourced sensor library for streaming data.

- Architected a sensor manager for configuration and real-time logging, with auto-crash recovery as system service.
- Dockerized deployment with **Grafana** and **MQTT** broker, achieving 12,000+ packets per second on edge server.
- Refactored serial data parser to support multiple 1,000 Hz sensors while preserving backward compatibility.
- Established an automated **Docker** release pipeline, reducing release cycle by 15 minutes per iteration.
- Developed language bindings via **SWIG**, providing sample projects in C, C++, Python, Unity, and ROS 1/2 for cross-platform support on Windows and Linux.

ACY Finance | Lead Full-Stack Developer

Remote (Singapore) | Sep 2021 - Sep 2023

Led development of a decentralized trading platform, coordinating teams, and ensuring code meet business requirements.

- Launched a **React** UI for 20,000+ users with real-time data updates via **WebSocket** and **The Graph protocol**, utilizing **Styled Components**, **Ant Design** and **custom hooks** to reduce code complexity by 25%.
- Implemented **Redux** for efficient state management, reducing interaction complexity by 30%, and enforced code quality with **ESLint**.
- Boosted data retrieval performance by 40% through **Apollo client** caching and **useSWR**.
- Streamlined **Solidity** trading logic, achieving a 20% reduction in code complexity. Authored tests configurable deployment scripts, reducing average deployment attempts from 6 to 2.
- Managed timelines and tasks with **Jira**, increasing team efficiency by 30% and reducing average code delivery time by 3 days.

*Architected backend services for DeFi analytics on an **Express.js** framework.*

- Built a **Subgraph** tracking the top 5,000+ trading pairs with 7 financial features extracted on each transaction.
- Automated insights generation for 15+ API endpoints, producing over 500 daily analytics and airdrop lists stored in MongoDB.
- Developed a **multithreaded Python** market maker framework with sub-100ms tickers across 8 exchanges, deployed on **AWS EC2**.
- Configured **Jenkins pipelines** for service deployment, with logging and **Telegram bot** alerts, decreasing crash potential by 20%.

PROJECTS

ListenBrainz - Collect and Share Users' Listening History

Feb 2024

- Designed **Flask** services with scheduled jobs for batch-importing listening histories, saving 2 minutes for 32,000 users per import.
- Improved user experience by implementing an auto play-next logic for the of the **React** in-browser player.
- Refactored integration tests to enable partial test execution, reducing testing time from 5 minutes to 30 seconds.

Hippocratic Island - Taiko **Best App** (ETHTokyo 2023 Hackathon) | Lead Developer (4-member team)

Apr 2023

- Built a Lens protocol-based **React** gated discussion platform, designed for users with sensitive health conditions.
- Led the project architecture, rapidly prototyped with **Chakra UI**, set up a test chain for simulation, completing development in 2 days.

De-Chat – **1st Place** for XMTP Prize (ETHOnline 2022 Hackathon) | Lead Developer (5-member team)

Sep 2022

- Developed a web3 **React** chat app with XMTP, supporting in-chat token transfer, mobile notifications, and video calling.
- Implemented both the UI and **Solidity** functions, adding support to 5 messaging types including image and real-time video.