

Muyuan Zhang

Berkeley, California

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Education

University of California, Berkeley

Bachelor of Science in Computer Science

GPA: 3.7/4.0

Berkeley, CA

Expected May 2021

Work Experience

Certified Kernel Tech LLC

Security Engineer

New York, NY

July 2021 - May 2023

- Audited 10,000+ lines of code and 30+ blockchain smart contracts (Solidity, Rust, Go).
- Identified and mitigated 400+ security vulnerabilities.
- Analyzed 50+ blockchain security incidents and performed 20+ Solidity smart contract attack tests.
- Conducted security audits, unit tests, and integration tests for 5 large-scale DeFi projects.

Certified Kernel Tech LLC

Research Development Intern (Backend)

New York, NY

May 2020 - Dec 2020

- Developed 5+ new features in Go for a blockchain Oracle Module.
- Engineered a robust, scalable blockchain distributed system using Cosmos SDK and Tendermint.
- Designed validation and certification modules to enhance scalability.
- Built RESTful API integrations for seamless frontend-backend communication.
- Conducted research on Ethereum smart contracts and DeFi projects like Compound.

Better Printer Institution Inc.

Co-founder

Berkeley, CA

Manager

Jun 2018 - Present

- Led and trained a team of 5, customizing slicing software from open-source PrusaSlicer.
- Designed Foldy, a foldable 3D printer for competitive robotics teams.

Landhigh Tech - VSO China

Software Developer Intern

Suzhou, China

June 2019 - Aug 2019

- Automated real-time uploads, improving workflow efficiency and user engagement.
- Optimized workflow management using OpenCV, FFmpeg, Aspera, and FTP.
- Developed a React-based UI module, improving user experience for 200+ customers.
- Resolved 20+ software bugs, launched 2 major patches, and delivered 10+ minor updates.

Technical Skills

Languages: Python, Go, C, C++, Java, JavaScript, MySQL, Assembly, Solidity

Technologies: TensorFlow, Cosmos SDK, Tendermint, Docker, Kubernetes

Machine Learning: Linear Regression, Logistic Regression, Decision Trees, KNN, SVM, Neural Networks, RNN, Diffusion Models

Expertise: Machine Learning, OS Design, Game Theory, Blockchain Security

Academic Projects

Operating System Design

Aug 2020 - Dec 2020

- Developed a Linux-like OS based on Stanford's PintOS project.
- Implemented process control, parameter passing, and file system syscalls.
- Built a multi-thread priority scheduler using a clock algorithm.
- Designed a file system with buffer cache, ensuring synchronization via mutex locks.
- Developed a simple HTTP server and automated testing with Unittest.

Database System Optimization

Aug 2020 - Dec 2020

- Built a B+ Tree index to enhance data retrieval performance.
- Optimized query execution with block nested loop join and grace hash join.
- Implemented multi-a locking and two-phase locking to improve concurrency.
- Ensured data durability and consistency with WAL-based recovery protocols.