Michael Liang

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Education

University of California, San Diego — Expected 2027
Bachelor of Science, Computer Engineering — *La Jolla, CA*

- Coursework: Computer Architecture, Blockchain Security, Secure Systems in Rust, Machine Learning, Deep Learning
- Extracurriculars: SDX (Startup Accelerator)

Experience

Security Engineering Intern — June 2026 - September 2026
Asymmetric Research — *New York City, NY*

- Incoming Summer 2026

Research Intern — October 2025 – Present
San Diego Supercomputer Center, Advised by Dr. James Short — *La Jolla, CA*

- Contributing to two research streams: semantic data engineering for biomedical AI and blockchain security
- Building knowledge graph pipelines for drug discovery using RDF ontologies, integrating datasets across gene-disease relationships to accelerate biomedical research queries
- Contributing to ChainWatch blockchain anomaly detection by implementing data collection pipelines for network simulation environments and transaction pattern analysis

Director of Engineering — October 2025 – Present
Blockchain @ UC San Diego — *La Jolla, CA*

- Led technical education initiatives including Rust/Solana workshop series for 15+ students, covering Anchor framework, program security, and on-chain data structures
- Coordinated industry speaker events with engineers from Alchemy, Chainlink, and YC, managing logistics for 50+ attendees per event

Co-Founder, COO — September 2025 – Present
PlutoFi — *Vancouver, BC*

- Engineered a high-throughput data pipeline for Solana liquidity pool aggregation, using custom Rust parsers to decode intructions and events from geyser gRPC streams, transforming on-chain metadata into live market data across DEX protocols
- Built market data infrastructure with Redis for real-time OHLC aggregation and PostgreSQL for persistent storage, containerizing services with Docker and deploying on AWS EC2 with CI/CD pipelines

Undergraduate Researcher — June 2025 – November 2025
UC San Diego CSE, Advised by Prof. Deian Stefan — *La Jolla, CA*

- Developed heuristics to trace fund flows across privacy-preserving DeFi protocols (Railgun, Secret Swap, Houdini) by analyzing transaction graph patterns and clustering of deposits/withdrawals
- Analyzed anonymity set degradation under different attack scenarios, quantifying privacy leakage when users exhibit predictable behavioral patterns or operate during low-liquidity periods

Projects

Fault Tolerant KV Storage Server | *Rust, Docker, AWS*

- Implemented Raft consensus algorithm in Rust using Tokio for async RPC communication, building a distributed KV storage server that maintains cluster consistency during failures
- Optimized throughput by batching client requests and routing read-only operations to followers; deployed multi-node clusters on Docker and AWS EC2

Technical Skills

Languages & Core Skills: Rust, Go, Python, C++, TypeScript, Java, SQL
Blockchain & Distributed Systems: Anchor, Tokio, Geyser, Raft Consensus
Data Infrastructure: AWS (EC2), Docker, Git, Redis, PostgreSQL, MongoDB