

# Chou Cheng Lei (Eli)

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## Education

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**James Cook University**, Brisbane, Australia

2015 – 2019

- Bachelor of Information Technology - Computing and Networking

## Skills

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- **Languages:** JavaScript, TypeScript, Solidity
- **Frontend:** React, Next.js, Vue.js, HTML/CSS, Tailwind CSS
- **Backend:** Node.js, Nest.js, MongoDB, PostgreSQL
- **Blockchain:** Web3.js, Ethers.js, Wagmi, Viem, Hardhat, Foundry
- **Tools & Infrastructure:** Git, Docker, AWS (CDK), Jest

## Working Experience

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**Founding Fullstack Engineer, Aerix Protocol, Singapore**

*Feb.2025 – Present*

- Architected and built integrated DEX/yield aggregator platform from 0-to-1, designing scalable trading infrastructure that achieved \$1.4M+ volume and 7400+ active users within 8 weeks as sole technical lead.
- Developed Dijkstra-based routing algorithms incorporating order splitting across 15+ liquidity sources, enabling efficient multi-hop aggregation, minimizing slippage, and optimizing execution prices.
- Built proprietary quote aggregation engine processing 70K+ swaps with 99.9% success rate and supporting 30+ token pairs across multiple EVM chains.
- Optimized gas estimation middleware with simulation-based route protection, improving execution reliability and cutting failed transaction costs by 25%+.
- Designed novel intent-to-execution architecture with off-chain order book, solver network, and arbitrary fulfillment logic supporting cross-chain settlement.
- Engineered Permit2-based order system with pre/post-execution hooks, enabling programmable trade settlement and MEV-resistant batch fulfillment.
- Built high-performance order processing pipeline with PostgreSQL clustering, Redis caching, and WebSocket streaming, handling fills with sub-100ms execution latency.

**Lead Blockchain Software Engineer, zkLink Protocol, Singapore**

*Apr.2024 – Jan.2025*

- Led cross-functional development coordination across 14+ team members spanning smart contracts, backend infrastructure, and frontend teams, ensuring synchronized delivery and technical alignment.
- Spearheaded NovaSwap concentrated liquidity DEX from 0-to-1, leading team coordination for Uniswap V3-style pools achieving \$4M+ TVL across Layer 2 assets.
- Designed advanced multi-asset liquidity vault (ALP) architecture unifying spot swaps, market making, and leveraged trading through single liquidity source with dynamic risk management.
- Developed comprehensive yield optimization system aggregating rewards from EigenLayer restaking, LRT protocols, and zkLink incentives, delivering institutional-grade returns for liquidity providers.
- Built AGX perpetual trading protocol to production-ready state, implementing oracle-based pricing and zero-slippage execution with automated liquidation and funding rate mechanisms.
- Developed frontend interfaces for ALP supporting stablecoins, ETH, WBTC, and LRTs, enabling unified swap and leveraged trading while managing cross-team dependencies across 3 development streams.
- Implemented Pyth Network oracle integration and coordinated liquidation engine development for MEV-resistant execution across perpetual positions.
- Created comprehensive GraphQL indexing infrastructure using The Graph for LP positions, trading analytics, and real-time position tracking across both protocols.
- Implemented session key-based delegated signing in zkLink Nova's magicLink SDK, enabling secure cross-chain transactions through shareable links and improving developer integration workflow.

**Blockchain Software Engineer, OpenEden, Singapore*****Apr.2023 – Mar.2024***

- Built comprehensive DApp frontend supporting OpenEden protocol's growth to \$150M+ TVL, serving 130+ institutional clients across Binance Labs-backed tokenized US Treasury Bills platform.
- Developed cross-chain vault interfaces for Ethereum, Arbitrum, and XRP Ledger, enabling seamless interaction with Moody's "A"-rated TBILL tokens and automated yield distribution systems.
- Architected modular component library integrating Wagmi, Viem, Ethers.js, and Typechain for enterprise-grade KYC/AML workflows and institutional treasury management interfaces.
- Led frontend development for River Finance, implementing DFS automation with proxy account (DS-Proxy) interfaces for leverage vault management and automated rebalancing mechanisms.
- Implemented sophisticated FlashLoan integration and staking token incentive systems with comptroller-based point accumulation, contributing to institutional access for RWA-backed leveraged positions.

**Blockchain Frontend Engineer, KONOMI Network & So-Col, Singapore**  
***Apr.2022 – Apr.2023***

- Built comprehensive P2P lending protocol frontend for KONOMI Network enabling user-controlled yield farming with custom pool creation, interest rate setting, and collateral management on Polkadot ecosystem.
- Developed cross-chain asset management interface integrating custom Konomi Oracle for accurate price feeds across BSC, Ethereum, and Polkadot networks supporting minority currency lending markets.
- Engineered real-time WebSocket and Server Side Event systems processing 10K+ concurrent users for live trading data, liquidation alerts, and governance proposal updates.
- Contributed to So-Col Web3 social platform development, implementing NFT-gated community features and creator monetization tools for \$4.5M DWF Labs-backed platform serving 300+ creators.
- Applied Agile methodologies using JIRA, Jenkins, and GitHub for continuous integration across both protocols, maintaining 95% test coverage with Jest and comprehensive Solidity unit testing.

**Software Engineer, DBS Bank, Taipei, Taiwan*****Mar.2021 – Mar.2022***

- Selected through competitive DBS Hack2Hire program, joining DBS Taiwan engineering team to develop enterprise-grade digital banking and credit card solutions serving millions of customers.
- Implemented critical hot-fixes and new features for credit card and lending platforms, collaborating with Singapore-based engineering teams on mission-critical financial services.
- Optimized Digital Taiwan application performance achieving 25% system improvement and 40% crash rate reduction through advanced debugging and code refactoring techniques.
- Built responsive React-based interfaces with TypeScript, Redux-Saga state management, and comprehensive Jest testing frameworks meeting financial industry compliance standards.
- Collaborated across Singapore-Taiwan engineering teams using Agile methodologies, JIRA workflow management, and Jenkins CI/CD pipelines for seamless cross-border development coordination.

**Frontend Developer, Eatgether (Eatme Internet), Taipei, Taiwan** ***Mar.2020 – Nov.2020***

- Developed and maintained Taiwan's largest social meetup platform serving 1M+ users, enabling face-to-face social connections through 10,000+ hosted gatherings with zero safety incidents.
- Built comprehensive admin dashboard for sales department optimizing advertisement implementations and essential platform controls, supporting 290% monthly revenue growth.
- Implemented real-time features using Vue.js, React, WebSocket, and SASS, integrating AWS Lambda and S3 for scalable cloud infrastructure supporting rapid user growth.
- Collaborated with backend teams on platform development during company's pre-Series A funding round, contributing to expansion plans targeting East Asia's largest meetup platform.

**Certifications****DBS Bank SRE Advanced Practitioner Certification*****Oct.2021***

Site reliability engineering and production infrastructure management

**DBS Bank Application Security Titan Bronze Level*****Mar.2021***

Advanced application security practices and vulnerability assessment

## Selected Projects

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### **create-web3-turbo - Web3 Development Monorepo Template**

*Oct.2022*

*TypeScript, Next.js, Turborepo, Hardhat — [github.com/memoriaXII/create-web3-turbo](https://github.com/memoriaXII/create-web3-turbo)*

- Architected production-ready Web3 monorepo template achieving 144+ GitHub stars and 23+ forks, serving as foundation for multiple DeFi projects.
- Built comprehensive development stack integrating Next.js 14, WAGMI hooks, RainbowKit, Hardhat, and Typechain with advanced CI/CD workflows.
- Designed modular architecture supporting smart contract development, frontend integration, and shared component libraries with Docker containerization.

### **SkyArk Chronicles Genesis NFT Marketplace - Blockchain Gaming Platform** *Feb.2022 – Nov.2022*

*React, TypeScript, Web3.js, Solidity — Binance Labs-backed, \$15M funding*

- Contributed to Singapore's first AAA blockchain gaming studio backed by Binance Labs, developing DeFi protocol DApps for fantasy JRPG with interoperable NFTs and play-and-own mechanics.
- Built sophisticated GameFi interfaces utilizing Solidity smart contracts with comprehensive unit testing and SDK integration, supporting SkyEngine's blockchain-as-a-service platform.
- Implemented real-time WebSocket and Server-Side Event systems for multiplayer gaming features, NFT marketplace functionality, and efficient data communication across the SkyArk Chronicles trilogy.
- Developed frontend solutions using JavaScript, TypeScript, React, Redux-Toolkit, and Jest, integrating Web3.js and Hardhat for seamless Ethereum blockchain interactions.
- Applied Agile methodologies using JIRA, Jenkins, Git, and Docker for streamlined development processes, ensuring high-quality deliverables for this venture-backed gaming ecosystem.