

# Yen-Chih Liao

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## SUMMARY

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Seasoned R&D Engineer with over four years of software-industry experience across cooperative software development, product research, and implementation. Proficient with Linux-based workflows; skilled in tracing, analyzing, and presenting open-source projects. Strong background in blockchain/Web3 engineering and backend automation. B.S. and M.S. in Computer Science (National Taiwan University). Seeking to contribute to a forward-thinking organization.

## WORK EXPERIENCE

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### Web3 Engineer

Mar 2024 – Present

*XY Finance (Web3 team), Taipei, Taiwan*

- **Smart Contract Testing & Auditing:** Authored comprehensive unit tests for Ethereum smart contracts using Foundry; shrunk contract size by 20% and reduced gas cost by 5%; increased test coverage by 50%+.
- **Technical Support & Reliability:** Diagnosed and resolved rebuild errors in user environments using Foundry toolchain; proposed smart contract dryrun method that speeds up error detection by at least 20x.
- **Seamless Upgrades & Security:** Orchestrated contract upgrades to align with regulatory and business requirements; coordinated APIs, backend, and database changes achieving continuous availability; reduced later engineering effort by 7x and downtime by 10x.
- **Third-Party Integration:** Successfully integrated product with third-party smart contracts; 88.75% of users of the same transaction type now benefit from enhanced functionality.
- **Multi-Chain Support:** Broadened product support to L1 (Berachain), L2 (Scroll), and zk-sync L2 (Abstract) networks; introduced 2.1% traffic and expanded user access across multiple ecosystems.
- **EIP-7702 Frontend Service:** Built a modular wallet system in React/TypeScript supporting EIP-7702 authorization workflows, smart account creation, and multi-wallet compatibility (MetaMask, local keys) with ZeroDev integration.

### R&D Software Engineer

Nov 2021 – Jul 2023

*Taisys (GameFi development team), Taipei, Taiwan*

- **Full-Stack Web3 Development:** Launched Solidity contracts with Hardhat; built demo DApps with React; customized and deployed open-source stacks (Omni/TokenBridge, ProjectOpenSea/seadrop, Gnosis/MultiSigWallet); built automated data pipelines on GKE with real-time notifications.

### Contractor (R&D)

Apr 2019 – May 2020

*HTC DeepQ (ML/Healthcare division), New Taipei, Taiwan*

- Implemented a prototype of *MedRec* (Stanford academy paper) on a private blockchain in a team of five.

## SKILLS

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<b>Programming</b>	Solidity, Python, C++, JavaScript, TypeScript, Go, Shell Script
<b>Frontend</b>	React, Vue.js, Quasar Framework, Next.js
<b>Web3 Standards</b>	ERC20, ERC712, ERC721, ERC4337, ERC4626, ERC7702, ERC7579, Ownable, AccessControl, CREATE2, CREATE3, Upgradeable, Permit, Permit2
<b>DevOps</b>	Git, CircleCI pipelines, Docker, Kubernetes
<b>Cloud</b>	Google Cloud Platform (Cloud SQL, IAM, Secret Manager, GKE)
<b>Practices</b>	Object-oriented design, design patterns, code tracing & refactoring, CLI workflows

## EDUCATION

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**National Taiwan University** Taipei, Taiwan

**M.S., Networking and Multimedia** Sep 2018 – Jan 2021

- Research focus: blockchain consensus algorithms for consortium chains.
- Publication: *View-base Federated Byzantine Agreement System for Environmental Blockchain* (BRAINS, Jul 2021).

**B.S., Computer Science and Information Engineering** Sep 2014 – Jun 2018

- Publications: *Applying Blockchain to an Automated Clearinghouse System* (TANET, Oct 2017); *Governance on the Drug Supply Chain via Gcoin Blockchain* (IJERPH, May 2018).

## LANGUAGES

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 Mandarin (native) | English (fluent) | Japanese (intermediate; JLPT N2)