Jackie Liu • 刘嘉伟

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EDUCATION

Cornell University   (expected) Aug 2019-May 2024
(expected) B.A. Computer Science, math specialization
- Coursework: Algorithms, OS, Databases, Programming languages, Machine learning
- Activities and organizations: eSports, IB finance club, Cornell Blockchain

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WORK EXPERIENCE

Retail Business Services, Ahold Delhaize   (expected) January-June 2023
Software Engineer Co-op
- Work in full stack web development for omnichannel retail

Nethermind   April-May 2021
Software Engineer Intern, MEV Research
- Worked on Flashbots v0.1 in Nethermind C# Ethereum client and cross-chain token recovery
- Collaborated with Flashbots organization for MEV infrastructure in Eth2 for ScalingEthereum

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OTHER EXPERIENCE

Undergraduate researcher   Oct 2022
- Develop Rust OS targeting AArch64 architecture, without a C or C++ runtime, based on TheseusOS
- Advised by Professor Robbert van Renesse

FTC Robotics, Lead programmer, autonomous control   May 2019
- Managed small team of programmers working on an Android mobile app for computer vision and sensor integration

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SKILL STACK

Common: Proficient in Python, Javascript/Node.js, Solidity; some experience with Rust, Go, C, C#, OCaml, Java, Typescript
Tools: Linux, WSL, AWS, git, LaTeX, Docker
Web: HTML, CSS, Twelve-Factor and CRUD Apps
Web3: web3.js, ethers.js, Geth, Erigon, Foundry, DeFi, HardHat, Onchain analysis
Correctness: Some experience with K
ML: numpy, scikit-learn, Jupyter

SELECT PET PROJECTS

MEV arbitrage bot
- Microservices for monitoring and executing pure revenue opportunities such as liquidations for lending pools
- Express, Redis, Bull job queue, clusters and workers, GraphQL, Docker, AWS, Erigon, Foundry, flash loans and swaps, price feeds

Risk markets protocol
- Protocol and interface for exchanging risk and taking directional positions in token markets, e.g. hedging leverage spirals and going long
- React and Bootstrap CSS interface, liquidity and external yields from lending pools

Language formalization
- Provable executable semantics for a core subset of Solidity
- Definitions using the K framework for a stack-based VM