

Wonjae Choi

BLOCKCHAIN DEVELOPER · RESEARCHER

Seoul, Republic of Korea

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”Blockchain Core Researcher”

Education

Seoul National University

Seoul, Korea

INTEGRATED M.S. AND PH.D. IN COMPUTER SCIENCE (EXPECTED ENROLLMENT)

Sep. 2024 - Expected

- Virtual Machine & Optimization Lab
- Focus on blockchain core research and development.
- Currently participating as an undergraduate research intern.

Yonsei University

Seoul, Korea

B.S. CANDIDATE IN COMPUTER SCIENCE

Mar. 2020 - Aug. 2024

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Skills

Programming	Python(very good), Rust, Solidity(good), C/C++, Go(Intermediate), JavaScript/TypeScript(novice)
Blockchain	Ethereum, Hyperledger Fabric, Solana, XRP Ledger, Foundry
Research	Blockchain Core, Cryptography, Zero-Knowledge Proof, DeFi
Others	Git, Linux, Docker, DB(SQL, Redis), Kafka

Working Experience

Seoul National University Virtual Machine & Optimization Lab

Korea

UNDERGRADUATE RESEARCH INTERN

Feb. 2024 - Present

- Working as an intern researching blockchain core.
- Will begin my Integrated Master's and Ph.D studies in September 2024.

XRPL Korea

Seoul, Korea

DEVELOPER RELATIONS

June. 2023 - Sep. 2023

- Made an technical documentation for korean XRPL developers.
- Held a one hour developer session about the core of XRPL at the meetup.
- Provided technical support for the XRPL developers.

Web3Mon

Korea

SMART CONTRACT & BACKEND DEVELOPER

Feb. 2023 - May. 2023

- Made smart contracts using Rust for Solana.
- Maintained and developed Rust backend server.
- Conducted research on optimizing virtual state channel for crosschain implementation.

Contract in Person

Remote

QUANTITATIVE DEVELOPER

Oct. 2021 - Jan. 2023

- Algorithmic Trading:
 - Developed trading algorithms using technical analysis and AI.
 - Handled large and performance-sensitive data pipeline.
- DEX Arbitrage:
 - Conducted research on various MEVs.
 - Developed a cross-DEX, cyclic arbitrage bot using flash swap.
- AUM \$400k

Extracurricular Activity

Decipher

Seoul National University, Korea

RESEARCHER

Sep. 2023 - Present

- A member of Decipher, a blockchain academic club at Seoul National University.
- Technical research and sessions about various topics of blockchain.
- Team Opensource Warriors
 - Contributed to ERC-6900 github and Alchemy team.
 - Conducted research and made a simulation model for LVR minimization method on AMM DEX.
- ZK Research Team
 - Conducted various research on ZKP and rollup architectures.
 - Made PoC level implementation of MSM computing network for ZKP using gRPC.
- Held weekly session about the "Future Bank" and published the research on Medium.

Blockchain at Yonsei

Yonsei University, Korea

TECH LEAD & BOARD MEMBER

Sep. 2022 - Aug. 2023

- Completed two semester activity of Blockchain at Yonsei, a blockchain academic club based on Yonsei University.
- Drove research initiatives on emerging topics in blockchain and web3 technologies.
- Held 2 hours sessions about Solidity smart contracts for 6 weeks as a lecturer.
- As a board member, I have structured the semester curriculum and presented three blockchain sessions for the regular session.
- Conducted research on MEV and made arbitrage bot using cyclic arbitrage method on DEX.

Morgorithm (Algorithm Club at Yonsei University)

Yonsei University, Korea

MEMBER

Mar. 2020 - Mar. 2022

- Solved and learned algorithm problems in depth and improved coding skills.
- Participated Morgorithm algorithm camp, studied various in-depth algorithms.
- Participated ICPC Sinchon, which is an algorithm competition

Honors & Awards

INTERNATIONAL

Chainlink Constellation Hackathon

Virtual

TOP QUALITY PRIZE, BEST USE OF SUBGRAPH

Dec. 2023

- Crosschain Lending Protocol
- Implemented crosschain functionalities with CCIP(crosschain interoperability protocol).
- Used DID, graph, oracle services.

Viction Horizon Hackathon

Virtual

DEFI TRACK 3RD PRIZE

Dec. 2023

- Delta Neutral Stablecoin using Perpetual DEX.
- Used Layerzero for crosschain support.
- Used VRC-25 for native gas paymaster usage.
- 4 days full-sponsored tour to Vietnam hosted by Coin98.

XRPL Summer Hackathon | Ripple

Virtual

WINNER (1ST PLACE)

Aug. 2023

- Implemented concentrated liquidity pool.
- Used XRPL hooks which is a Web Assembly based smart contract on XRP Ledger.

Ethereum Global Tokyo Hackathon

Tokyo, Japan

POLYGON TRACK PRIZE

April. 2023

- Federated learning on public blockchain.
- Implemented p2p AI learning protocol.

DOMESTIC

Yonsei Computer Science Graduation Project Exhibition

Yonsei University, Korea

1ST PLACE

June. 2023

- Data NFT marketplace.
- Process the private data batch into anonymous data set and make it as a NFT for easy usage and incentives.
- Built with Hyperledger Fabric.

Projects

XRPL Swap

LEAD DEVELOPER

XRPL Ledger

June. 2023 - Oct. 2023

- Made a DEX platform on XRPL.
- WASM Smart Contract (XRPL Hooks) & Backend.
- Designed novel tokenomics leveraging native AMM auction on XRPL.
- Pitched on XRPL side event of Korean Blockchain Week(KBW).

Bitcoin Layer 2

RESEARCHER & DEVELOPER

Confidential

Feb. 2024 - Present

- Conducting research on smart contract layer of Bitcoin.
- Researching layer 2 solution of Bitcoin.

Presentation

Blockchain at Yonsei Regular Session

PRESENTER FOR <REGULAR SESSIONS IN BLOCKCHAIN AT YONSEI>

Yonsei University, Korea

Mar. 2023 - July. 2023

- Held three 1-hour sessions with below topics.
- Bitcoin and Blockchain
- Ethereum and Smart Contract
- Hyperledger Fabric Architecture

XRP Ledger Korea Dev Meetup

PRESENTER FOR <XRP LEDGER DEV SESSION>

Seoul, Korea

Aug. 2023

- Introduced XRP Ledger architecture and technical features.
- Held practice session to help developers on-boarding.