

# Wonjae Choi

BLOCKCHAIN RESEARCH ENGINEER

Seoul, Republic of Korea

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”Trust the Trustless”

## Education

### Seoul National University

Seoul, Korea

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

Sep. 2024 - Expected

- Virtual Machine & Optimization Lab
- Blockchain and cryptography research
- Expected enrollment in September 2024

### Yonsei University

Seoul, Korea

B.S. CANDIDATE IN COMPUTER SCIENCE

Mar. 2020 - Aug. 2024

- Scholarship Granted by Wemade (₩ 5,000,000)

## Skills

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|--------------------|--|
| <b>Programming</b> | Good: Rust, Solidity, Python Intermediate: C/C++, Go, Javascript |
| <b>Blockchain</b>  | Ethereum, Bitcoin, XRP Ledger, Solana, Hyperledger Fabric        |
| <b>Research</b>    | Blockchain, Cryptography, Layer 2, Zero-Knowledge Proof, DeFi    |
| <b>Others</b>      | Git, Linux, Docker, SQL, NoSQL, Kafka                            |

## Working Experience

### Nethermind

London, England (Remote)

RESEARCH ENGINEER INTERN

June. 2024 - Present

- Research and development on FRIDA which is DAS using FRI.
- Research on based rollups and preconfirmations.

### 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

- Developed DEX platform on XRPL.
- Researched and developed WASM contract on XRPL.
- Made an technical documentation for Korean XRPL developers.
- Technical sessions on several meetups.
- Provided technical support for the XRPL developers.

### Web3Mon

Korea

SMART CONTRACT & BACKEND DEVELOPER

Feb. 2023 - May. 2023

- Developed smart contracts(programs) using Rust for Solana.
- Maintained and developed Rust backend server.
- Conducted research on the novel cross-chain implementation using virtual state channel.

## 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

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### 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 sessions about "BitVM", "Future Bank" and published the researches on Medium.

### Blockchain at Yonsei

[Yonsei University, Korea](#)

TECH LEAD & BOARD MEMBER

Sep. 2022 - Aug. 2023

- Drove research initiatives on emerging topics in blockchain and web3 technologies.
- Prepared and lectured solidity smart contract development for 12 hours course.
- 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.

## Honors & Awards

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### INTERNATIONAL

#### Chainlink Constellation Hackathon

[Online](#)

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

[Online](#)

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

[Online](#)

GRAND PRIZE

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

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### XRPL Swap

XRPL Ledger

LEAD DEVELOPER

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

Confidential

RESEARCHER & DEVELOPER

Feb. 2024 - Present

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

## Presentation

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### Blockchain at Yonsei Regular Session

Yonsei University, Korea

PRESENTER FOR <REGULAR SESSIONS IN BLOCKCHAIN AT YONSEI>

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

Seoul, Korea

PRESENTER FOR <XRP LEDGER DEV SESSION>

Aug. 2023

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