# Wonjae **Choi**

BLOCKCHAIN DEVELOPER · RESEARCHER

*Seoul, Republic of Korea*

 (+82) 10-8319-1012 | ✉ choi@wonj.me | ⌂ wonj.me |  wonj1012 |  wonj | 0xwonj | wonj1012

*"I study and develop Blockchain"*

## 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*

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

## 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**                                                    *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*

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
*XRP 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

### 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.