# Joss Duff

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## Education

Lehigh University  -  B.S. Computer Science and Business                        August 2019 - May 2023
Courses: Blockchain Algorithms, Blockchain Concepts, Operating Systems, Database Systems, Algorithms, Game Theory

Lehigh University  -  M.S. Computer Science                                               June 2025 - May 2026
Courses: Principles and Practice of Parallel Computing, Advanced Programming Techniques

## Skills

Rust, Solidity, Noir, Docker, OP Stack, SP1

## Experience

Founding Engineer  -  Sigil L2  -  Rust, Docker, OP Stack, SP1                September 2024 - September 2025
- Reverse engineered Succinct's prover network for <10% of the quoted price
- Maintained OP Stack rollup with ZK execution proving via op-succinct
- Easy to use docker-compose setup to allow users to run an RPC or Sequencer node

Software Engineer  -  Envio Indexer  -  Rust, Kubernetes, Linux SysAdmin     October 2023 - September 2024
- Implemented Ethereum JSON RPC interface
- Upgraded our EVM compatible embedded database to support alternate VMs & chains
- Wrote python SDK using Rust
- Deployed & maintained production, staging, and backup Kubernetes clusters on bare-metal servers

## Projects

Ultra Anon  -  Noir, Solidity  -  Won Eth Denver + Celebrity Judge Award                        April 2025
- Privacy token with public and private state
- Extremely viral anonymity set and full plausible deniability

Warp Toad  -  Noir, Solidity  -  Won Noir Hack 3rd place + Grant Recipient                        June 2025
- Cross chain privacy mixer: deposit and withdraw anonymously across chains
- Bridging Merkle roots to and from Aztec L2 and EVM chains

Cafe Justo  -  Solidity, theGraph  -  Won Best Overall Lehigh CS Capstone Fair       January 2022 - December 2022
- Tracking wages of coffee laborers in El Salvador
- Designed, developed, tested, and deployed Solidity smart contract on an Ethereum Goerli testnet and a subgraph on theGraph network

Semi Swap  -  Solidity                                                          September 2022 - December 2022
- Tasked with designing a Solidity project for the Blockchain Algorithms and Systems I TA'd for
- Designed, wrote, and tested a simple Uniswap V1 style AMM to assign to my students

## Research

Framework for Compliant Privacy                                                        June 2025 - May 2026
- Masters thesis on proving regulatory compliance while maintaining privacy

## Leadership

Grader, Course Designer, Lecturer - Blockchain Algorithms and Systems          August 2022 - December 2022
- Graded assignments of 60+ students
- Designed, wrote, tested, and assigned class Solidity project (see projects: SemiSwap)
- Gave a lecture on comparison of smart contract DSLs

President - Lehigh Blockchain Club                                              October 2021 - May 2022
- Led educational discussions with students about blockchain and cryptocurrency topics
- Recruited 100+ members