Joss Duff

jduff360@gmail.com — jossduff.com

EDUCATION

Lehigh University – *M.S. Computer Science* June 2025 – May 2026
Courses: Parallel Computing, Distributed Systems, Advanced Algorithms

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

SKILLS

Languages: Rust, C/C++, Solidity, Noir
Systems: Ethereum, Docker, Kubernetes, OP Stack, SP1, theGraph
Domains: Zero-Knowledge Proofs, Blockchain Infrastructure, Distributed Systems

EXPERIENCE

Sigil L2, *Founding Engineer* September 2024 – September 2025
- Built open-source SP1 prover network for <10% of the price of using Succinct's prover network
- Maintained OP Stack rollup with ZK execution proving via op-succinct
- Developed easy-to-use docker-compose setup to allow users to run an RPC or Sequencer node

Envio Indexer, *Software Engineer* October 2023 – September 2024
- Implemented Ethereum JSON RPC read interface on custom database
- Extended EVM-compatible custom database to support alternate VMs and chains
- Deployed and maintained production, staging, and backup Kubernetes clusters on bare-metal servers

OPEN-SOURCE PROJECTS

Ultra Anon – *Won ETH Denver + Celebrity Judge Award* April 2025
- Privacy token with public and private state featuring extremely viral anonymity set and full plausible deniability

Warp Toad – *Won Noir Hack 3rd Place + Grant Recipient* June 2025
- Cross-chain privacy mixer enabling anonymous deposits and withdrawals across chains
- Bridged Merkle roots to and from Aztec L2 and EVM chains

Cafe Justo – *Won Best Overall Lehigh CS Capstone Fair* January 2022 – December 2022
- Developed blockchain solution for tracking wages of coffee laborers in El Salvador
- Deployed Solidity smart contract on Ethereum Goerli testnet and subgraph on theGraph network

RESEARCH

Framework for Compliant Privacy June 2025 – May 2026
- Master's thesis on proving regulatory compliance while maintaining privacy
- Submitted U.S. Department of Treasury RFC

Merkle Tree CPU-GPU Parallelization November 2025 – May 2026
- Exploring merkle tree parallel construction across CPU and GPU architectures

LEADERSHIP

Lehigh University – Blockchain Algorithms and Systems – *TA* August 2022 – December 2022
- Responsible for 60+ students. Grading, course assignment design, and guest lecturing

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