

Projects

Decentralized Gaming Platform - Full Stack Developer

July '22 - present

- Currently developing an Ethereum-based gaming platform, aimed at allowing users to challenge friends to a variety of turn-based online games.
- Back-end is a fully decentralized system of solidity smart contracts which manage all data, creation, deletion of challenges and games.
- All games available on this platform are implemented as solidity smart contracts and exist entirely on the blockchain.
- Using React.js to develop an interface for users to manage outgoing and incoming challenges, as well as to interface with each game's smart contract implementation.

Compound Finance Liquidation Bot - Solidity Developer

Dec '21 – Mar '22

- Developed solidity contracts which use flash loans to liquidate eligible users of the compound protocol.
- Created JavaScript program to build a database of balances for all users of the Compound protocol and to watch for and predict liquidation opportunities.
- Successfully performed liquidations of users on the Polygon network.

Tezos User Verification System - Full Stack Developer

Nov '21 – Dec '21

- Built a digital identity system on the Tezos network, aimed at allowing web developers to easily integrate blockchain based storage of user data into apps and games.
- Developed back-end using LIGO smart contracts to manage storage user data.
- Designed front end interface for the creation of digital ID cards using React.js.
- Implemented web-based game TezSnake using React.js as an example of a use case for this project.

Reno Decentralized Autonomous Organization (DAO) - Solidity Developer

May '21 – May '22

- Participated in early development of the Reno DAO: a revenue sharing system for residents of Reno, Nevada.
- Worked on a deployment system for Reno Coin, the governance token for the proposed Reno DAO.
- Engaged in design and early implementation of an NFT marketplace to serve as a platform for local artists and an initial use case for the Reno DAO.

Employment

Firmware Engineer - Intel / Solidigm

June 2021 - present

- Contributed to the implementation of SSD firmware features including wear leveling, background data refresh, and defragmentation.
- Designed unit tests and performed validation processes to measure firmware performance, diagnose firmware failures, and identify performance bottlenecks.
- Led the development of a software tool used to fully automate the analysis of 48,000 performance data files using pattern recognition and anaconda cloud computing.
- Used bash scripting to automate testing of engineering team's virtual machines. Identified optimal configurations, resulting in 50% reduction in build times.

Researcher - UNR Evolutionary Computing Systems Laboratory

Jan 2019 - June 2021

- Developed a training program to simulate the control of UAVs for bridge inspection. Implemented complex physics to simulate bridge traversal by teams of magnetic robots and aerial drones.
- Led development of an educational video game intended to teach the core concepts of cybersecurity to children. Identified methods for representing core concepts to a non-technical audience. Presented work to elementary school teachers to gather feedback and insight.

Education

B.S. in Computer Science and Engineering - University of Nevada, Reno

Aug 2017 - May 2022

- 3.75 GPA, Dean's List recognition for 8 consecutive semesters.
- Coursework highlights: Software Engineering, Machine Learning, Artificial Intelligence, Computer Communication Networks, Data Structures, Principles of Operating Systems, Analysis of Algorithms.