

# Aaron Hadley

Experienced engineer with experience in cryptography, systems programming, digital assets, and quantum information.

Seeking to make Earth a nicer place to live.

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## WORK

### Applied Cryptographer, Devops Developer : zEncryption IBM

2022 –

Charlotte, NC

- Implementing and providing hardware acceleration support for new cryptographic algorithms
- Providing IBM Z support for fully homomorphic encryption software
- Applying knowledge of quantum information to aid in the development of quantum-safe cryptography
- Managing master key information for internal business data on zOS Mainframes

### Junior Software Engineer : TransformIT

#### Arxan Technologies

2020 – 2021

Lafayette, IN

- Developed whitebox cryptography software for key and data protection
- Extended platform support and test coverage to support WatchOS and MacOS-arm
- Developed new whitebox techniques to harden against new attacks and penetration tests

### Member of Technical Staff : Cryptoassets, HSM

#### Anchorage Digital

2021 – 2022

Remote

- Developing asset support software for hardware security modules
- Continually integrating new digital assets into the Anchorage banking platform
- Securing private keys for all of our customers, safeguarding billions of dollars worth of assets

## RESEARCH

### Quantum Information Group

#### UCF Physics Department

2018 – 2019

- Participated in weekly journal clubs discussing advanced topics in Simulation of quantum systems, condensed matter physics, quantum cryptography, quantum key distribution, and linear optical quantum computing (LOQC)

### Theorem Proving with Deep Reinforcement Learning

#### UCF Computer Science Department

January 2019 – December 2019

- Investigated deep learning techniques for automated theorem proving software.
- Used Microsoft's Lean prover to interact with a deep learning interface.
- Extended Google's Deepmath theorem prover to be configurable via Jupyter notebook.

## SKILLS

C C++ Python Java

Cryptography zOS IBM Mainframe

Blockchain Systems Software

Application Security Agile Qiskit

bash numpy matplotlib

## EDUCATION

### B.S. Computer Science

Mathematics Minor

#### University of Central Florida

2019

Orlando, FL

#### With graduate Coursework in:

- Quantum Computing
- Quantum Information Theory
- Advanced Engineering Mathematics

## VOLUNTEER

### Instructor

#### Junior Knights

2018 – 2019

Orlando, FL

- Led weekly classes in C and Python for middle and high school students
- Developed Python Curriculum for students of varying experience levels

### Volunteer

#### Richard Tapia Celebration of Diversity in Computing Conference

2018

Orlando, FL

Worked with guests, speakers, and staff to keep the event running smoothly