

# Zach Cowan

SOFTWARE ENGINEER · COMPUTER SCIENCE MAJOR · UNIVERSITY OF FLORIDA

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## Education

### University of Florida

B.S. IN COMPUTER SCIENCE (MAJOR, COLLEGE OF ENGINEERING)

- GPA: 3.91

[Gainesville, FL](#)

Aug. 2018 - Dec. 2022

## Skills

JavaScript · TypeScript · C/C++ · Python · Java · Linux · React · React Native · NodeJS · Express · Google Cloud · Flask

## Work Experience

### American Express

[Remote](#)

SOFTWARE ENGINEER (INTERN)

Jun. 2022 - Aug. 2022

- Led development of theme builder web application for the AMEX design language system, impacting 1000's of projects across the enterprise using React and JavaScript.
- Improved developer experience of consumers of the AMEX React component library by adding TypeScript declaration files in order to support TypeScript and autocompletion in IDEs.

### American Express

[Remote](#)

SITE RELIABILITY ENGINEER (INTERN)

Jun. 2021 - Aug. 2021

- Led team in combination of 6 Prometheus servers monitoring 1000's of different Kubernetes pods into 1 scalable Thanos server with 1 universal Grafana dashboard using Ansible.
- Increased metric retention from 14 days to 365 days and reduced computations needed for long-range queries by up to 98% using Thanos Compact.

### American Express

[Remote](#)

SOFTWARE ENGINEER (INTERN)

Jul. 2020 - Aug. 2020

- Created a React web application using Redux state management and a Java REST API to create a secure, searchable "journey" database for customer care professionals.
- Developed over 100 unit tests with 100% code coverage and extensive documentation for a seamless hand-off.

### Lockheed Martin

[Orlando, FL](#)

SOFTWARE ENGINEER (INTERN)

May. 2019 - Aug. 2019

- Developed temperature regulation system using embedded C++ based on IMU data to prevent critical system shutdowns, saving \$1,000's in recurring maintenance costs.

## Extracurricular Activities & Projects

### Mobile Computing

[University of Florida](#)

PROJECT LEAD

Apr. 2022

- Designed and developed fullstack smart space dashboard and IoT app manager using React, TypeScript, Express, and Redis.
- Integrated Raspberry Pis as IoT things running Atlas middleware to multicast available services to build IoT apps with.
- Developed automated code generation backend for the deterministic creation of IoT apps from JSON app descriptions provided by frontend.

### Computer Networking Fundamentals

[University of Florida](#)

PROJECT LEAD

Dec. 2021

- Utilized TCP sockets with a well-defined networking protocol to create a peer-to-peer file sharing program in Java.
- Led group in determining architecture, defining tasks, and establishing code collaboration sessions.

### SwampHacks Leadership

[University of Florida](#)

TECHNICAL DIRECTOR

Aug. 2019 - May. 2020

- Developed and tested robust frontend and backend systems to run hackathon using React, JavaScript, and Firebase.
- Implemented event statistic tracking using NFC tags to uniquely identify hackers at check-in and throughout the event.
- Cooperated closely with organizers and art team to turn user stories into technical features.