

# ANDREW RATZ

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## EDUCATION

### University of Florida

Master of Science - Computer Science

Gainesville, FL

Aug '19 - Dec '20

### University of Florida

Bachelor of Science - Computer Science, Minor Mathematics

Gainesville, FL

Aug '15 - May '19

## EXPERIENCE

### Lockheed Martin

Senior Software Engineer

Orlando, FL

Aug '23 - Present

- Led operations of the program's on-premise GitLab CI/CD as an owner/maintainer
- Established build, execute, test, and deploy phases using YAML to automate code testing
- Pioneered an automation tool in Bash and Python that performs regression analysis of the simulation in parallel on a high performance computing cluster and posts results to GitLab

### Lockheed Martin

Software Engineer

Orlando, FL

Mar '21 - Aug '23

- Spearheaded migration from Linux Makefile and Windows Visual Studio solutions to a cross-platform build system using CMake, significantly reducing the overhead of supporting two ecosystems.
- Proposed and implemented simulation framework classes in C++ that are now used company-wide.
- Implemented new datalink message formats and protocols in accordance with MIL-STD-1553. Utilized bit encoding/decoding, serialization, endianness, bit shifts, and masking.
- Optimized sim bottleneck by converting CSV files to binary format, cutting sim load time down by 90%.

### Modernizing Medicine

Mobile Software Engineer Intern

Boca Raton, FL

May '19 - Aug '19

- Lead the development of an internal UI automation test suite framework written in Swift
- Migrated all of the company's medical iOS apps to use the automated testing framework, drastically reducing the need for manual QA testing and saving tens of man-hours daily.

## PROJECTS

### Game Deals Curator

Full Stack Developer

Orlando, FL

Jan '24 - Present

- Created a web app which scrapes sales content every night and displays it to users.
- Wrote the frontend using JavaScript, React, Vite, HTML, and CSS.
- Wrote the backend using Node.js for both the scraper and the REST API
- Hosted using AWS S3, EC2 instances running Docker containers, and PostgreSQL RDS.

### Route My Run

Mobile Software Engineer

Gainesville, FL

Nov '19 - Apr '20

- Developed frontend for an iOS app that can dynamically generate routes. Makes REST API calls display paths the runner can take that meet their search criteria (distance, number of crossings).
- The app actively monitors the user during a run and provides GPS and Voice guidance. Included a social network feed using Facebook login and NoSQL data storage using Firebase.
- Created mockups/wireframes and held user testing to iterate the UI/UX to deliver the best experience.

## SKILLS

Programming & Scripting Languages:	C, C++, Objective-C, C#, Java, Swift, JavaScript, React, MATLAB, Python, Bash, YAML
Software Deployment:	Git, GitHub, GitLab, Bitbucket, AWS, Nexus Package Manager, Kubernetes, Docker
Database:	SQL, NoSQL, PostgreSQL, Google Firebase
IDEs:	Visual Studio, VS Code, Eclipse, Unity, Xcode, Android Studio
Misc:	Selenium, Tomcat, Apache, DIS, JSON, Slurm, Jira, Confluence, Agile, Scrum
Systems:	Windows, Linux, VxWorks, iOS, Android, Internet of Things (IoT)