

# Zachary Sally

[zszech23@gmail.com](mailto:zszech23@gmail.com) | [zszech23.wixsite.com/zachary-sally](https://zszech23.wixsite.com/zachary-sally) | [www.linkedin.com/in/zachary-sally/](https://www.linkedin.com/in/zachary-sally/)

## EDUCATION

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**University of Central Florida | B.S. in Computer Science**

**August 2021 - May 2025**

- **GPA:** 4.0
- **Related Coursework:** Data Structures and Algorithms (C, Java), Object-Oriented Programming (Java), AI for Game Programming (Unity, C#), Artificial Intelligence and Machine Learning (Python), Technical Writing, Systems Software (C)

## EXPERIENCE

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**A Square Games and Simulation, LLC | Unity Developer Intern**

**August 2023 – December 2023**

- Lead the design and development of systems and gameplay elements using Unity and C# alongside a multi-disciplinary team of artists, programmers, and producers in an agile environment.

**NASA – Kennedy Space Center | Software Engineer Intern**

**June 2023 – August 2023**

- Automated testing of a Class A, safety-critical system monitor application, accelerating pre-launch verification processes by 50%.
- Researched and developed system call mocks and supplied templates for these mocks to assist engineers in testing software functionality.

**NASA – Kennedy Space Center | Software Engineer Intern**

**June 2022 – August 2022**

- Produced centralized documentation for telemetry monitoring software that is used by engineers across 5+ CSCIs throughout Kennedy Space Center to verify, debug, and troubleshoot software leading up to launch operations.

## PROJECTS

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**Knightrodx | Lead API Developer**

**September 2023 – December 2023**

*A QR-based badge hunting app for UCF students*

- Scripted 10+ REST API endpoints using Express.js that interact with a MongoDB database containing user and badge collections.
- Led the build and deployment process of the application to a remote server using Heroku.
- Created over 50 unit tests using the JEST testing framework to validate that the API endpoints were functional.
- Integrated JWTs, password hashing, and email verification to secure user information while interacting with the app.

**Grove Escape 1985 | Armed Forces Jam**

**September 2023**

*A single-player puzzle game designed to get people familiar with the Central Florida Tech Grove by making it an escape room.*

- Won 2<sup>nd</sup> place and the Best Escape Room Challenge and earned \$1250.
- Created in Unity within 48 hours alongside a team consisting of 3 programmers and 3 artists.
- Tasked with designing and coding the final puzzles where players must find fuses to power on the circuit breaker and adjust the power levels to escape.

**Cards & Castles | Lead AI Programmer**

**January 2023 – May 2023**

*A VR strategy game where players can summon magical creatures and spells with cards to attack and defend against enemy forces.*

- Awarded Best Technical Game out of 15 games presented in the Spring 2023 semester.
- Developed autonomous character systems including finite state machines, trajectory calculations, and detection systems using C# scripts and Unity's NavMesh system to exhibit realistic behaviors.
- Constructed a wave and time-based spawning system via C# scripts and Scriptable Objects which are used across all 4 levels.

## SKILLS

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- **Languages:** Java, C#, C/C++, Python, SQL (MySQL), JavaScript
- **Developer Tools:** Linux (Ubuntu CLI), Source Control (Git, GitHub)
- **Other:** Project Management, Agile (Scrum), Technical Writing, Interdisciplinary Team Collaboration