

# TYLER SEMEL

Fuquay-Varina, North Carolina

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## Education

### North Carolina State University

*Bachelor of Science in Computer Science*

**Aug. 2021 – Dec. 2023**

*Raleigh, NC*

## Technical Skills

**Languages:** C/C++, C#, Java, JavaScript, HTML/CSS, Python

**Developer Tools/Engines:** Unreal Engine 5, Unity, VS Code, Eclipse, Docker

**Technologies/Frameworks:** GitHub, JUnit, Jenkins, REST API, Hibernate, Spring Boot

## Projects

### “Dream Files” - Puzzle-Platformer Video Game

**Feb. 2023 – May 2023**

- Collaborated with two developers to implement a 20 minute first-person puzzle-platformer game in Unreal Engine 5.
- Developed an immersive level, integrating a custom jump mechanic for navigation through a woodland environment.
- Programmed in Blueprints using sphere tracing to allow the player to interact with objects in a puzzle-solving system.
- Utilized Quixel Bridge assets for visuals and integrated sounds for an engaging puzzle-solving experience.

### “Random Forests” - Senior Design Project

**Aug. 2023 – Dec. 2023**

- Developed children’s educational game with Unity and C# for Non-Profit organization Katabasis.
- Led efforts to attain 70% line and method coverage using Unity’s built-in testing framework, emphasizing a commitment to code reliability and efficient development practices.
- Enhanced player interaction by implementing intricate in-game mechanics, allowing the player to select and highlight specific paths using A\* search algorithm.
- Held weekly product reviews to address concerns and keep deliverables aligned with brand objectives.

### “CoffeeMaker” - Software Engineering Group Project

**Feb. 2023 – Apr. 2023**

- Co-led a team of five software engineers in a semester project tasked with planning, implementing, and documenting a drink purchasing system.
- Outlined requirements and use cases for customer and manager functionality.
- Designed and implemented REST API endpoints to communicate between models in Java with Spring Boot, Hibernate, and a database through MySQL.

### “Recipe Social” - Progressive Web App for Recipe Sharing

**Jan. 2023 – Apr. 2023**

- Teamed with two other members to create a social media Progressive Web App for recipes.
- Designed HTML and CSS for user-saved recipes, account management, and user-to-user interaction such as following.
- Implemented user authentication and authorization with Node.js’s “jsonwebtoken” for JWT generation and verification.
- Utilized Docker to create images of the PWA to build and test functionality.

## Work Experience

### DataAnnotation

**June 2024 – Present**

*Software Validation - AI Trainer (Freelance)*

*Remote*

- Tested and validated AI chat bot responses for code correctness in languages such as Python, C++, and JavaScript.

### The Hickory Tavern

**July 2023 – June 2024**

*Server*

*Holly Springs, NC*

- Developed strong communication skills by effectively interacting with customers, kitchen staff, and management.

## Relevant Courses

- |                                  |                           |                                   |
|----------------------------------|---------------------------|-----------------------------------|
| • C and Software Tools           | • Software Engineering    | • Applied Web-Based Client-Server |
| • Operating Systems              | • Artificial Intelligence | Computing                         |
| • Data Structures and Algorithms | • Interactive Game Design | • Computer Graphics               |

## Interests

- Game development and video games (Fortnite, Skyrim, Minecraft, Portal).
- Music production.
- Art projects.