

Carson W. Tillery

Software Engineer

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Experience

ICAMS

Auburn, AL · May 2022 - Present

Software Engineer (Research)

- Developed immersive training software solutions in **Unity (C#)** for mixed reality environments
- Programmed user-friendly applications to streamline the management of intricate weld inspection systems within a robotic **3D** scanning system for large ground vehicles
- Engineered innovative **C#** software for Auburn's Lean (LEGO) Lab, enabling users to construct LEGO vehicles while embracing **lean** manufacturing principles
- Leveraged advanced **Vuforia** area tracking and model recognition techniques to enhance spatial orientation within the training experience
- Created a system to track foot traffic within the facility and display it on a sleek, user-friendly **3D interface**.
- Built a robust database system with **PostgreSQL** and **Budibase** to manage the company's data and inventory.

Publications

- *Manufacturing Floor Mapping and Presence Tracking with a Physics-Based Game Engine, NAMRC, Exp. June 2024*

Education

Auburn University

Auburn, AL · May 2024

Master of Science in Computer Science and Software Engineering

- GPA: 4.0

Auburn University

Auburn, AL · May 2023

Bachelor of Science in Computer Science (Business Minor)

- GPA: 3.8, Summa Cum Laude

Projects

Simulated Cloud Network

Spring 2023

- Crafted a robust simulated cloud infrastructure with **OpenStack**, ensuring resilience and scalability
- Seamlessly integrated a diverse range of **Ubuntu** and other **virtual machines**, each precisely configured to serve specific functions within the network ecosystem
- Employed **Docker** technology in tandem with advanced **networking** protocols to enhance performance and streamline data transmission

Rubik's Cube Solver

Fall 2022

- Engineered a **Python** microservice adept at solving Rubik's cubes of any configuration, delivering precise rotation instructions for each step
- Implemented comprehensive error handling for unsolvable and invalid cubes
- Secured end-to-end data integrity using **SHA256 encryption**
- Employed Test-Driven Development (**TDD**) methodology and **Git** version control throughout the development process

Technical Strengths

Languages

C#, Python, C++, Java, C, JavaScript, HTML/CSS

Technologies

Git, Plastic SCM, SQLite, MQTT, OpenStack, Docker, SQL, Node.js, React, Next.js

Methodologies

Unit Testing, CRC Cards, UML, Agile/Scrum, OOP

Software

Unity, Unreal Engine 5, Blender, Vuforia, Google Colab