

# Joseph Hampton

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jobhampton.github.io/personal-portfolio/

## EDUCATION

**The University of Alabama** | Tuscaloosa, AL

Dec 2025

*Bachelor of Science in Computer Science*

3.98/4.0

*Minor in Math*

President's List: Fall 2022, Spring 2023, Fall 2023, Fall 2024, Spring 2025

## SKILLS

**Programming Languages:** C/C++, Python, Java, Javascript, GDscript

**Development Tools and Technologies:** Git, Unit Testing, Websockets, Godot, Unity, Technical Writing

## RELEVANT EXPERIENCE

### Full-Stack Developer Intern

**May 2025-Aug 2025**

*Motion Industries*

Birmingham, AL

- Constructed and enhanced user interface components using JavaScript and Java, contributing primarily to backend functionality within full-stack projects
- Created and executed unit tests to ensure code quality and reliability and successfully merged features into the main codebase following best practices
- Contributed to the strategic roadmap for upcoming development cycles during Program Increment (PI) Planning sessions and gained significant insight into Agile planning processes

### Student Researcher

**Aug 2023-Present**

*Human Technology Interface Lab, University of Alabama*

Tuscaloosa, AL

- Developing a research-driven Godot project to explore implicit control mechanisms, focusing on user interactions and decision-making patterns
- Implemented a system for random point selection within the project, laying the groundwork for analyzing user responses to dynamic stimuli
- Integrated WebSocket communication to establish a real-time connection between the Godot project and a server, enabling data collection and analysis for implicit control research

### IT Summer Intern

**May 2023 - July 2023**

*Christ Chapel Bible Church*

Fort Worth, TX

- Collaborated with the Help Desk team, diagnosing and resolving diverse IT issues, ensuring minimum downtime and optimal end-user satisfaction
- Securely wiped and decommissioned EOL devices, adhering to data privacy standards and best practices
- Assisted in the transition from traditional PCs to Raspberry Pi systems, enhancing efficiency and reducing operational costs

## ADDITIONAL EXPERIENCE

### Private Tutor

**Aug 2024 – May 2025**

*Applied Tutoring*

Tuscaloosa, AL

- Provided personalized tutoring sessions in advanced mathematics and computer science to college students
- Employed a tailored teaching approach, identifying individual learning styles and adapting lesson plans to ensure academic improvement

## PROJECTS

**Reinforcement Learning for Grid-Based Pathfinding Using Godot** | Godot, Python, Stable-Baseline3, WebSockets

- Developed a custom reinforcement learning environment in Python and Godot using WebSockets to train agents to navigate dynamic grid-based maps
- Designed and tuned reward functions using distance-based shaping, directional incentives, and exploration bonuses to improve generalization across varying grid sizes and goals
- Trained agents using Proximal Policy Optimization (PPO) and achieved consistent goal-reaching behavior across randomized environments with normalized observations

**IMDB TV Insights** | Python, Pandas, CSV Handling

- Constructed a Python script to identify the highest-rated TV episode using IMDb datasets
- Parsed and analyzed large TSV files to extract relevant episode, show, and rating data
- Utilized data cleaning techniques to normalize and join multiple datasets efficiently