

# John Wesley Thompson

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Proactive Software Engineer and Computer Science graduate engaged in developing scalable and maintainable software. Skilled at learning new technologies and applying them to solve real-world problems, with experience building full-stack web applications, automation tools, and interactive applications. Seeking an opportunity to contribute technical expertise while continuing to grow as a developer.

## Education

**B.S. in Computer Science**, Middle Tennessee State University  
GPA: 3.60

2022 – 2026  
Murfreesboro, TN

## Technologies and Languages

### Languages:

C++, C, JavaScript, Python, HTML, CSS

### Tools:

Node.js, Git, Vim

## Project Work

### Falling Block Game | C++, C, Ncurses, Miniaudio

- Designed and implemented core gameplay systems including block rotation, collision detection, line clearing, score calculation, level progression, and randomized piece generation
- Implemented an audio system for background music and event-driven sound effects by utilizing the miniaudio library

### Pointillism Renderer | JavaScript, WebGL2, GLSL, HTML, CSS

- Developed a browser-based pointillism renderer that converts images into interactive particle-based artwork using custom WebGL2 and GLSL shader programs
- Implemented GPU-based particle simulation with GLSL shaders, transform feedback, and ping-pong buffers to achieve real-time mouse interaction

### Japanese Flashcard Creator | Python, OpenAI API, Google Text-to-Speech

- Streamlined the creation of Anki cards designed for language acquisition, resulting in over a 90% time reduction compared to manual entry
- Utilized the Google TTS API, the OpenAI API, and data gathering libraries to compile example sentences, audio, and accurate definitions

## Relevant Experience

### Computer Science Tutor

### Computer Science Department

Jan, 2025 – Aug, 2025

Middle Tennessee State University

Murfreesboro, TN

- Improved coding confidence and academic performance of over 10 students by reinforcing their understanding of core programming concepts
- Tutored topics including OOP, software architecture, data structures, and algorithms

### Vice President

### Competitive Coding Club

Aug, 2025 – May, 2026

Middle Tennessee State University

Murfreesboro, TN

- Co-founded and fostered a club of over 30 members by hosting community events
- Reinforced application of over 20 algorithms and data structures using resources like LeetCode

### AI Team Lead

### MTSU Hackathon 2025

Feb, 2025

Middle Tennessee State University

Murfreesboro, TN

- Collaborated with a team of 5 developers to design a unique AI model for a game opponent inspired by common AI implementations