

Andrew Preston

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EDUCATION

Master of Science in Computer Science	<i>Middle Tennessee State University</i>	Expected May 2023
Master of Science in Exercise Science	<i>Middle Tennessee State University</i>	May 2019
Bachelor of Science in Computer Science	<i>Middle Tennessee State University</i>	May 2018

SKILLS

Languages: C, C++, JavaScript, Python

Frameworks & Libraries: Matplotlib, Pandas, NumPy, SymPy, React.js, Node.js, SCSS

Tools: CLion, WebStorm, Unix, Git, Github, Jupyter Notebook

PROJECTS

Algorithm Visualizer | Personal Project

- Implemented multiple pathfinding algorithms
 - A-star, breath-first search, depth-first search, Dijkstra, greedy best-first
 - Based on a class project to implement Dijkstra in C++
- Added maze generation
 - Prim's algorithm and recursive backtracking
- Developed a minimum spanning tree visualizer using Prim's algorithm
- Learned Kahn's algorithm to develop a topological sorting visualizer

Geoguessr Neural Network | Class Project

- Coordinated with 4 teammates to develop and build the project
- Responsible for developing the network architecture
- Worked with a teammate to train the model
- Co-developed the code to properly output the model's best guess
- Developed most of the demo file meant to be a step-by-step guide for users

Sorting Visualizer | Personal Project

- Implemented multiple sorting algorithms
 - Bubble sort, Merge sort, Insertion sort, Heap sort, Quick sort, Selection sort
- Designed to showcase how algorithms differ in function and complexity
- Developed with the goal of being mobile-friendly

Portfolio Website | Personal Project

- Developed a website to display projects
- Learned to use GSAP ScrollTrigger and Lottie animations to enhance the website
- Ensured responsiveness of the site by using mobile-first design
- Enhanced the site further using media queries to enable automatic light/dark mode functionality based on user preference

ACTIVITIES & INTERESTS

Certifications: CompTIA Security+, CompTIA A+

Honors/Clubs: Eagle Scout, Order of the Arrow, Cum Laude, Association for Computing Machinery

Interests: In my free time I enjoy hiking, swimming, and baking breads for family and friends.