ASHTON THOMAS
COLLEGE STUDENT, PROGRAMMER

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Profile

I'm a 19-year-old senior-level rising sophomore in Computer Science Engineering at the University of Michigan – Ann Arbor. I am on track to complete my Bachelor's degree by December 2024, at the age of 21, however, I have plans to pursue a Master's degree by December 2025. I am distinguished among other candidates because of my diverse background which encompasses not only computer science, but also geography. My primary interest lies in applying data structures and algorithms to geographic applications, and I envision combining these two fields in my future endeavors. Nevertheless, I am currently exploring various facets within Computer Science to gain a well-rounded understanding of software development since learning holistically is essential for my growth as a software engineer.

Education

University of Michigan - Ann Arbor, MI
Major, Bachelors in Computer Science CSE — **3.8 GPA**
Expected Graduation Date: December 2024

Northwestern Michigan College - Traverse City, MI
Major, Associates in Liberal Arts — **3.96 GPA**
Graduated: May 2022

CEA Capa - Prague, Czech Republic
Study Abroad, Engineering — **4.0 GPA**
Spring 2023

Skills

Web Design

Building websites in Javascript, CSS, and HTML with responsive design. Many of these projects can be found under my projects page on my resume website. Feel free to visit my website at aethom00.github.io

Coding & Algorithms

Proven ability to write algorithms in C++, Python, and in mathematical proofs to accomplish a variety of tasks. An example of a strenuous project being a full Euchre game simulator. Many of these projects can be found under my projects page on my website.

Geography

I've got an exceptional skill in geography, as I have extensive knowledge on different countries and have the ability to identify them at first glance. I'd love to use these skills in mapping and aspire to work at a digital mapping company someday.

Programming Skills

C/C++	Matlab	Git
HTML	Python	SQL
CSS	Javascript	Julia

Experience

MHackers
Software Engineer   2022-present

Worked with a large group of other Software Engineers using Git (version control), Python, HTML, Javascript, and CSS to develop websites and Machine Learning applications.

Madi Taylor Photo
Web Developer and Assistant Photographer   2021-present

Worked at MadiTaylorPhoto to develop the company website using HTML, CSS, and Javascript to make a seamless responsive design on the website. My other duties were involving photoshoot setups and taking advertisement photos.

Projects

Euchre Simulator - Using inheritance and polymorphism, I created a simulator of the famed Michigan card game Euchre which is customizable in the number of players vs the number of computers that can play against you

Image Resizer - Used a seam carving algorithm to resize any png photo, it works by calculating which pixels are the least important to the photo and deleting them and then outputting the final product.

Web Post Sorter - Used machine learning and binary search trees to accurately sort online web posts by topic

Office Hours API - Built an Office Hours queue supporting GET, POST, and DELETE requests for the UMich OH website

Personal Website - Used HTML, CSS, and Javascript to develop my own personal website, aethom00.github.io

3-D Puzzle Solver - Using stacks (dfs) or queues (bfs) with map and list output options I created a 3-D puzzle solver

Zombie Game Simulator - A zombie defense game made of priority queues and pseudorandom number generators

Mapping Alaskan Precipitation - I used databases to generate an accurate map describing average rainfall all across Alaska

Coursework

EECS 203 - Discrete Mathematics

EECS 281 - Data Structures and Algorithms

EECS 370 - Introduction to Computer Organization

EECS 376 - Foundations of Computer Science

EECS 475 - Introduction to Cryptography

EECS 496 - Major Design Experience-Professionalism

SI 339 - Web Design, Development, and Accessibility

IOE 373 - Data Analytics Tools and Techniques

Awards

UMich EV & Mobility Scholar, Riopelle/Dowden Technical Scholar, Robert Paul Dost Scholar, Ernest B. Isaacsen Scholar, Presidential Education Award Scholar, AP Scholar, National Honors Society Scholar, Guy M. Wilson Scholar