

Michael Henry Blair

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Summary –

- Currently a third-year student attending Virginia Tech as an engineering student with an intention of graduating in May 2023. Pursuing a bachelor's degree in computer science with a minor in mathematics. Strong working knowledge of object-oriented design. Strong experience coding individually, within a group, and teaching.

Education –

Virginia Tech, College of Engineering; Blacksburg, VA

8/19 – 5/23 (*expected graduation*)

- GPA: **3.35/4.00**
- Bachelor of Science in Computer Science, Mathematics Minor
- Honors College Acceptance

Wellesley High School; Wellesley, MA

8/15 – 6/19

- Weighted GPA: 4.12/5.00 – Honor Roll 2015-2018

Work Experience –

iCode of Wellesley, June – August 2020

Robotics and Code-Oriented Lead Camp Counselor

- Created and taught Lua projects/video game design to young kids.
- Taught block coding concepts to elementary-age kids.
- Taught EV3 Robotics and created challenges for teams of kids to work on consisting of coding their robots for goals.

Closets by Design, May 2021 – August 2021

Biesse Rover A Machine and Computer Operator

- Attain six files to run on heavy machinery to cut plywood to specifications of each individual project.
- Check over blueprints to mark off each piece and report back missing pieces to recut.

Projects –

- C Group Project – Created a framework for a fork/join multi-threaded work pool to allow parallel execution of divide and conquer algorithms. Tested for accuracy and proficiency in Linux.
- C Group Project – Created a job control shell in a Unix environment using the `posix_spawn` API for process management.
- HTML5/CSS Personal Project – Wrote HTML and CSS to create my own website hosted in AWS S3 (link up top).
- Java Solo Project – Created an implementation of a PR-Quadtree to hold GIS location records, from a GIS file, in a space-oriented structure. data structures such as PR-Quadtrees or Hash tables with linked lists.
- Java Solo Project – Implemented my own Hash Table to hold GIS records from a parsed file and executed commands from a script file
- C Solo Project – Wrote code to take input of MIPS32 machine instructions with `.data` and `.text` sections and output the bits a computer would read from said instruction set. Tested through GDB and Valgrind in Linux.
- Python Solo Project – Implemented the Fork-Fulkerson algorithm to find maximum flow of a directional/weighted graph.
- Java Personal Project – Code takes a desired weight on a barbell in a gym and outputs the most optimal plates to use.

Extracurricular Activities –

- Scholarship Chair of Beta Theta Pi Fraternity – Involved in many committees working on the betterment of our chapter.
- Member of the Artificial Intelligence and Machine Learning Club at Virginia Tech.
- Head Basketball Coach, 2018 – Volunteered as head coach for Wellesley Hoops, taught young high schoolers new basketball skills and teamwork, won the 14-team league.

Skills –

- **Proficiencies:** Java, C, Linux, Python, Git, GDB, HTML5, Valgrind/Helgrind, CSS
- **Strong Working Knowledge:** MatLab, Lua, Scratch