Paul A. Morrison

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Education

The College of William & Mary | Bachelor of Science   **Williamsburg, VA**
Major : Mathematics | Minor : Computer Science   Expected May 2020

<u>Computer Science Coursework</u>: Data Structures such as linked lists, stacks, queues, priority queues, binary trees, heaps, Huffman trees, and B-trees, taught with Python; Computer Organization concepts including Assembly programming and general computer architecture; Algorithms design and implementation; Principles of Programming Languages, their capability and syntax, including the basics of functional programming, Pascal, C, and C++.

<u>Mathematics Coursework</u>: Foundations of Mathematics, including most fundamental theorems leading to Abstract Algebra and Analysis; Linear Algebra leading to surveying Operations Research and Linear Programming; Multivariate Calculus; fundamentals of Probability Theory; applications of Ordinary Differential Equations.

Thomas Nelson Community College | Associate of Science   **Hampton, VA**
Specialization : Computer Science   May 2017

<u>Technical Coursework</u>: Two semesters with hardware, networking, binary encoding, logic gates, and Von Neumann architecture. Two semesters with Object-Oriented Design and Procedural Programming concepts, taught with C++. Highest level of Mathematics courses: Calculus II.

Skillset

Programming Languages, Creation Tools, Operating Systems, Collaboration Sites

C | C++ | Python | Assembly | HTML | CSS | LaTex | Word | Excel | Power Point | Shell | MacOS | Windows | GitHub | Slack | Google Apps | Agile Development

Communication, Leadership, Training, Volunteerism

- Creative team solutions, from coding with a group to training and teaching to managing a small workforce.
- Business–client relations; experience with and appreciation for front–end and back–end support in retail and technical environments.
- Training and education; extensive experience, from making a pizza to advanced mathematics and programming syntax.
- Volunteer work with the Salvation Army, Campus Kitchens at William & Mary, and various food bank programs.
- Organizing and event planning, including group project meetings, social events, and school hackathon trips.
- Smart, effective technical documentation; explaining and summarizing data trends and program functionality, as well as in-code specifications.

Technical Work Experience

Thomas Nelson Community College   **Williamsburg and Hampton, VA**
Senior Peer Tutor and private tutoring   2016 – 2018

- Tutored students both privately and through the tutoring program at TNCC in English, History, Mathematics, and Computer Science.
- Responsibilities of senior position at the off-main campus included delegation and proper documentation management and creation.

Pizza Hut Franchise   **Carrollton, TX**
Restaurant General Manager   2011 – 2013

- General restaurant management functions, including management and documentation of inventory; identifying product trends leading to effective truck ordering; making final hiring decisions, based on identifying the best candidates; maintaining employee and cleaning schedules; training employees to prepare and make new food products, introduced at least once a month.
- Helped develop a training system called B.L.A.S.T. ("Believe, Listen, Apologize, Satisfy, Thank") for resolving customer issues.

ThyssenKrupp Elevator America   **Irving, TX**
Support Specialist   2001

- Worked in a support center that provided debugged software solutions for offices nationwide providing technical support for elevator technicians.
- Responsibilities included database and inventory management, swift email communication and support, and creating custom software packages.

Stream Tech Support   **Carrollton, TX**
Technical Support Representative   1999 – 2000

- Worked in a technical support facility that had multiple teams providing front-end tech support for many companies.
- First contract: Earthlink ISP. Provided basic solutions to customers having problems getting online.
- Second contract: Dell Laptop Support. Provided in-depth solutions to customers having various issues with booting, file management, internet connectivity, and device drivers.

Projects and Other Experience

Custom Binary Encoding Program Wrote a program in Python, along with custom min-heap and Huffman Tree classes, to implement a working version of the standard binary encoding algorithm. The program takes string input and uses it to create an encoding for translating binary strings to alphanumeric strings.	**Erdős–Rényi Graph Generator** Wrote a C++ program that generates thousands of graphs, abstracted as 1-d arrays, and creates CSV files for spreadsheet input. The program tests the effect of modulating the probability of including an edge vis-à-vis the connected component size.	**Coin Catch** Wrote a program in C++ and currently working in Android Studio with a partner to create a budgeting app called "Coin Catch" with a full script and graphics to be published on Google Play. The mock-up in C++ is fully functional, and we are working on the port currently.	**Personal Website** Created a custom, personal website completely from scratch. Using self-taught techniques and online references only, I wrote the entirety of the HTML and CSS for the website at https://pamorrison.com.
Shift Lead, Campus Kitchens at W&M Leading volunteer shifts for food recovery and cooking for many food-insecure families in the Williamsburg area has been a very rewarding experience. A shift lead must be able to learn new names and interact with new people every shift and must submit inventory documentation at the end.	**Organizer & "Puzzlemaster"** Participated at the W&M hackathon Cypher V as both an organizer and an event character. Created a series of puzzles with a partner for the "puzzle challenge" that had never been organized at Cypher before. Pictures of me in a griffin costume provided upon request.	**Ray Caster Project** Wrote a program in C that creates PPM images based on center coordinates and RGB values of spheres. The implementation includes a light source, along with shadowing and a gradient effect for the background. This was part of a Ray Tracing assignment, and the final product was a substantial modification.	The entire project took about 4 days, and in that time, I learned about and incorporated certain elements of modern web design, including, among others, mobile-first and separating structure from style. The site is a work-in-progress but live and functioning well.