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

Computer Science Coursework: 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++.

Mathematics Coursework: 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

Technical Coursework: 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, Presentation Software, Operating Systems, and Collaboration Tools

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.

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.

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.