

Paul A. Morrison

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Education

The College of William & Mary | Bachelor of Science

Major : Mathematics | Minor : Computer Science

Williamsburg, VA

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

Specialization : Computer Science

Hampton, VA

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

Back End and Operating Systems

C | C++ | Python | Assembly | OSX | Windows
Linux/Windows/OSX CLI | Powershell | Docker CLI/Dockerfile

Front End, Presentation Software, and Collaboration Tools

HTML | CSS | LaTeX | Word | Excel | Power Point | GitHub | GitLab | BitBucket | Slack
Agile Development | Jira/Confluence | Jenkins | Google Apps (Docs, Sheets, Drive, etc.)

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

Science Applications International Corporation

Langley Research Center,
Hampton/Newport News, VA
2019 – Present

- Worked on the STI (Scientific and Technical Information) project under an SAIC contract for NASA.
- Created software to test a machine learning library's usefulness to a PDF document analysis team.
- Instructed about and used many modern collaboration tools to communicate with and assist career software developers.

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

- Management and documentation of inventory; identifying product trends leading to effective truck ordering; making final hiring decisions; 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 Support Specialist

Irving, TX
2001

- Worked in a support center providing 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.

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 issues with booting, file management, internet connectivity, and device drivers.

Projects and Other Experience

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 accepts string input and creates an encoding for translating binary strings into alphanumeric strings.

Erdős–Rényi Graphs

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.

Shift Lead, Campus Kitchens

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.

MetadataExtractionUsingGrobid

Created a program (MEUG) that runs inside a Docker container to assist STI document analysis. It sends PDFs to a machine-learning library called GROBID, which returns TEI-compliant XML files with bibliographic data. The program then parses the XML to extract and analyze metadata such as authors, abstracts, and titles.

Personal Website

Created a custom, professional 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 first phase of the project took only about 4 days, and in that time I learned and incorporated elements of modern web design, including "mobile-first" and the separation of structure from style. The site is a live, functioning work-in-progress, and it has been through 3 overhauls so far, with more planned, so please visit and tell me your thoughts!

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.