**Brian Harnish**
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**Objective**: Seeking a Computer Science/Information Technology opportunity to use my problem solving and technical skills to advance the company's mission

**Education:** University of Mary Washington, Fredericksburg, VA
B.S. in Computer Science, Spring 2021
Minor in Business Administration, Spring 2021
Overall GPA: 3.45
Major GPA: 3.85

**Work Experience**:

May 2020 to March 2021 - Software Engineering Intern at Perigean

- Developed admin web application that manages users and displays analytics using AngularJS and CouchDB.
- Deployed multiple websites using Amazon Web Services EC2 and Lambda.
- Developed an application that converted incoming data from JSON files to context maps, consisting of nodes, links, and triples.
- Developed application that converts oncoming pictures into PNG files using Python.
- Researched and developed machine learning models that aid in the construction of context maps.
- Collaborated with the head software developer on a daily basis to complete tasks assigned by the CTO of the company.

September 2019 to December 2019 - Research Assistant, Computer Science Labs – UMW

- Instructed a class of 20 people on C programming and core computer science concepts such as systems, compilers, and algorithms.
- Researched and developed machine learning models for professors to be used for instruction of university level students.
- Researched college level instructional material for professors to use with their college level courses.
- Developed and maintained the computer science department website using WordPress, HTML, and CSS.
- Instructor for high schoolers on the fundamentals of machine learning in Python.
- Led a team that instructed six high-school level students on the fundamentals of machine learning that culminated into a final project.

**Technical Skills:**

- Programming languages: Java, Python, Rust, C, JavaScript, Typescript, AngularJS, HTML, CSS
- Unix/Linux
- Amazon Web Services
- Environments: Vim, Visual Studios, IntelliJ, and Sublime
- PostgreSQL, Node.js/npm. Next.js, CouchDB
- Cloud computing services AWS EC2, Lambda, and Amplify
- IBM cloud

**Projects:**

- Created a probability based, logic driven vacuum cleaner in Python
- Developed an A* search program in Python
- Developed an operating system, scheduler algorithms, and virtualization of memory in C
- Created a Derivative Calculator in Java
- Recreated Zork I, II, and III in Java
- Created personal Website: https://main.d2wj8khghvtsmt.amplifyapp.com/#/

**Honors and Activities:**

- Dean's List, graduated top 4 in my major
- University of Mary Washington Varsity Swim Team
- Two-time Junior Nationals Qualifier for swimming
- Computer Science Club

**Related Coursework**:

- CPSC 405: Operating Systems
- CPSC 340: Data Structures and Algorithms (C++)
- CPSC 326: Theory of Computation
- CPSC 415: Artificial Intelligence (Python)
- CPSC 419: Machine Learning (Python)
- CPSC 305: Comp. Systems and Architecture (C, ARM Assembly, Python)
- CPSC 350: Applications of Data Bases (PostgreSQL, JavaScript, frontend/backend developing)
- CPSC 240: Object Oriented Design & Analysis (Java)
- CPSC 225: Software Development Tools
- Math 151: Calculus 1