McKenzie Young

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EDUCATION

George Mason University, Fairfax, Virginia

Bachelor of Science in Computer Science, Expected May 2025

- Related Coursework: Data Structures and Algorithms, Full Stack Web Development, Computer Systems and Programming, Object Oriented Programming, and Low -Level Programming.

RELATED EXPERIENCE

CodeAdvantage STEM/Coding After-School Instructor, January 2024 - current

- Engage students in interactive STEM learning for Python, Scratch, and Minecraft classes (ages 1st-8th grade).
- Execute lesson plans, ensuring alignment with curriculum objectives and fostering a comprehensive understanding.
- Demonstrate excellent communication skills in addressing parent inquiries and concerns with courtesy and a solution-oriented approach

Computer Science Undergraduate Teaching Assistant, January 2023 – current

George Mason University, Fairfax, Virginia

- Assist instructors weekly by guiding 120 students through lab assignments and projects in Python.
- Create project solutions in Python for instructors and facilitate review sessions for students before exams.
- Contribute to Piazza, an online forum by answering students' questions on Python. Assist students with debugging and concepts on a daily basis.

ADDITIONAL EXPERIENCE

Cashier February 2021 - July 2023

Foodlion, Chesapeake, Virginia

- Registered sales on a cash register by scanning items, itemizing and totaling customers' purchases.
- Resolved customer issues and answered questions promptly.
- Provided a positive customer experience with fair, friendly, and courteous service.

LEADERSHIP AND DEVELOPMENT

- George Mason University Catalyst Program 2023
- Grace Hopper Conference Scholar 2023
- Virginia Aerospace Science and Technology Scholar 2020
- Hampton University Young Diplomats Program Scholar 2019

SKILLS

TECHNICAL : Programming Languages: Python, Java, C, HTML,CSS, Javascript | Operating Systems: MacOS, Unix

PROJECTS

Kruskal's Algorithm Simulator | Java Project October 2023 - November 2023

- Developed a Java-based simulator for Kruskal's Algorithm, integrating Map and Set classes using WeissBST for efficient graph representation.
- Implemented an Undirected Graph class supporting graph editing and information retrieval, and completed the Kruskal's MST Algorithm for step-by-step visualization.
- Utilized established libraries such as Java Collections Framework and JUNG for graph visualization in the simulator.

Order Management System | C Project October 2023 - November 2023

- In this project I designed and implemented a C program to create an Order Management System enabling efficient tracking and management orders.
- Demonstrated a strong proficiency in working with linked lists by developing functions for adding, deleting, displaying, modifying, and merging orders.
- Ensured program reliability by implementing memory leak-free code verified with Valgrind, highlighting attention to detail and commitment to code quality.

Trailblazer Chatbot Project | PatriotHacks: https://lnkd.in/gyRFmg4f October 2023 - October 2023

- My team and I created a chatbot that leverages the AWS Lex Chat Bot and AWS Lambda Services to query a MySQL database hosted on RDS to recommend nearby trails to hike.
- I was responsible for the backend development, where I integrated the chatbot with the lambda function.
- I configured the utterances, slots, and formulated chatbot responses.

Minesweeper Game Implementation | Java Project August 2023 - September 2023

- Minesweeper is a game with a 2-D grid where a subset of the cells of the grid have "mines" hidden underneath them.To play the game, the user needs to decide which cells do not contain a mine and click to expose them.
- I created a dynamic array list to implement the internal storage of the grid and support the gameplay operations.
- I implemented this using generic dynamic array, 2-dimensional dynamic array, and graphic user interface.

Grayscale Image Processing | Java Project September 2023 - October 2023

- In this project I created a two dimensional doubly linked list data structure that stores and manages image pixel values that I extracted from a PGM text file for image manipulation.
- Each pixel value is stored as a node in my doubly-linked list containing four pointers - left, right, up, and down enabling two-dimensional navigation within the pixel matrix.
- Implemented image processing operations, including compression, border addition, border removal, and a max filter, with specified time complexities, to manipulate and enhance images in the project.

EXTRA-CURRICULAR ACTIVITIES

- National Society of Black Engineers, Academic Excellence Chair May 2023 - current
- Alpha Kappa Alpha Sorority Incorporated, Omicron Iota Chapter, Programming Committee November 2023- current