Sidra Hussain

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EDUCATION

The George Washington University, School of Engineering and Applied Science — Washington, DC
Bachelor of Science in Computer Science — August 2020 – May 2024
Cumulative GPA: 4.0/4.0 (Dean's Honors List)

Relevant Coursework: Software Engineering, Algorithms and Data Structures, Computer Architecture, Discrete Structures, Calculus, General Chemistry, Calculus Based Physics, Statistics for Engineers

Operating Systems: Linux, MacOS
Languages and Utilities: Java, Python, C, Github, Vim, Visual Studio Code, Final Cut Pro

TECHNICAL PROJECTS

Boggle Solver
Software Engineering — Spring 2021

- Implemented Java and C software to design linked list and hash map data structures that dynamically allocated memory for 6000+ elements
- Developed a Boggle solver algorithm that utilized the recursive method depth-first search to solve a 5 x 5 Boggle board in under 5 seconds

Enigma Machine
Software Engineering — Spring 2021

- Designed an Enigma Machine algorithm in Java that implemented 5 interchangeable rotors that could be placed in different orientations to obtain 60 septillion distinct encryption combinations
- Constructed an Enigma Machine using object oriented programming principles to encode and decode an infinite amount of messages based on parameters entered by the user
- Built a guided user interface that allowed the user to interact with the Enigma Machine through a combination of a textboxes, dropdown menus, and buttons

WORK EXPERIENCE

George Washington University Department of Computer Science — Washington, DC
Undergraduate Teaching Fellow (Learning Assistant) — August 2021 – Present

- Debugged 40+ students Java programs across 15 different assignments that implemented key concepts, such as sorting algorithms, recursion, objects, and abstract data types
- Engaged one-on-one with 40+ students to reinforce and discuss conceptual topics covered in lecture, such as unidimensional arrays, sets, lists, stacks, queues, abstract data types, trees, hash tables, and analyzing algorithm performance
- Provided immediate technical support for 40+ students installing vim and JDK 11 on Linux, Unix, and MacOS operating systems

Tezos TQ Group — New York, NY
Summer Intern — July 2019 – August 2019

- Independently learned how to develop simple programs on 11 different blockchains, such as Ethereum, ThunderCore and EOS in programming languages, solidity, vyper, and C++ to develop a competitive analysis of competing blockchains' developer portals that highlighted areas of improvement in Tezos developer portal
- Built a betting program in ligo and Michaelson to report the ease of learning to code in ligo and highlight areas for improvement

LEADERSHIP

George Washington University Parliamentary Debate Society — Washington, DC
Vice President of Operations — May 2020 – Present

- Organized the George Washington University American Parliamentary Debate Tournament that hosted 300+ students from over 20+ major universities
- Responsible for registration and travel arrangements for debate tournaments across the United States that
- Developed and facilitated weekly team practices for 30+ students that involved lectures, practice debates, and public speaking drills for varsity and novice debaters