SHAN MALIK www.linkedin.com/in/shan-malik-

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Education

Rutgers University-New Brunswick. Pursuing a double major in Computer Science and Human Resource Management. Expected Date of Graduation - May 2024

Projects

Kindergarten (Class Simulation)

- Created a kindergarten simulation in java, that has students in an initial linked list, and has the options to seat them in a 2D array based on seating availability, put them into a musical chairs circular linked list, play a game of musical chairs, and put them back into their proper seats based on who won the game. Options to delete/add students from any data structure used.

Conway Game of Life

- Created John Conway's Game of Life using Java. Receives text input from the user to create the 2D array board. Write methods that identify alive cells and their neighbors, compute the grid's new generations by following the game's rules, and count the number of communities using union functions.

Text File Compression (Huffman's Algorithm)

- Implemented a text file compression program using Huffman's algorithm. Created and edited a binary search tree resembling all the characters that appear in an input file in order of their frequency of appearance. Created and manipulated queues to create the Huffman Tree. Traverse our binary search tree to create an array of "encodings" representing characters used in the text file to encode and decode the file.

Warehouse Simulator

- Have a warehouse made up of an array of sector objects. Each sector is represented by a min binary priority queue based on the last day the products were purchased. Implemented a method that adds products into its proper sector dependent on their id, a restock/purchase method that increases/decreases the number of items a particular product has in its sector while ensuring we keep our min binary heap structure.

Infinity War (Directed and Undirected Graphs)

- Create and manipulate undirected and directed graphs, and implement Dijasata's algorithm to find the shortest path from our first vertex to the last. Have a method that deletes half of the vertex in a graph and tells if the graph is still connected or not. Find the number of possible paths in a graph from the first to the last vertex.

Work Experience

Staples of South Plainfield, NJ, **Retail Sales Technology Associate**, July 2022 - Aug 2022

- Offer customers basic tech assistance and suggestions for their personal computers, printers, and other devices. Advise customers on which computers, printers, and accessories would meet their needs if they needed any help, as well as inform them of in-store warranties and other paid services offered by us.

Accurate Diagnostics Labs in South Plainfield, NJ, **Specimen Processor**, Dec 2021 - Jan 2022

- Process COVID-19 tests into company systems during the peak of the pandemic. Collaborate with other employees to efficiently manage and safely store COVID-19 test samples while keeping up with the rapid influx of tests and positive cases in the tri-state area. Introduce patient data into company systems and update current patient data in our company systems as necessary.

Skills and Interests

Programming Languages: Java, Python, SQL, JavaScript, Learning HTML/CSS, VScode, Eclipse IDE

Software + Skills: Microsoft Word, Excel, PowerPoint, Google Docs, Sheets, Slides, Adobe Photoshop, PC Building experience

Interests: Artificial intelligence, machine learning, internet privacy, VR and AR technologies, basketball, gaming, and investing