Hamza Kheldoun

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EDUCATION

George Mason University | Bachelor of Science in Computer Science May 2022

- GPA: 3.64/4.0
- Dean's List Fall 2020, Spring 2021, Fall 2021

Relevant Courses:

- **Computer Science:** Object-Oriented Programming, Data Structures, Formal Methods and Models, Computer Systems and Programming, Software Engineering, Analysis of Algorithms, Databases, Data Mining, Operating Systems, Web App Development, Software Testing/Maintenance

SKILLS

Programming Languages: Java, C, Python, HTML, CSS, SQL, Javascript

Operating Systems: Unix, Bash Shell

Software/Tools: VSCode, Github, Heroku, Tensorflow/Keras

PROJECT EXPERIENCE

Personal Portfolio

- Built a personal portfolio website using HTML, CSS, and JS.
- Site supports multiple screen sizes and devices.
- Deployed the site to the web using Netlify. Link: hamzakheldoun.netlify.app/

Bash Shell

- Built a fully functional Bash shell using C that allows users to use any bash commands.
- Fully supports advanced features such as background processes, foreground processes, running any number of jobs simultaneously, job control, file I/O and redirection, and control operators.
- Installed custom signal handlers for keyboard interrupts.
- Built-in commands not included with a basic bash shell.

JUNG Graph Class

- Implemented a directed graph class for the JUNG Framework in Java.
- JUNG is an open source framework utilized by thousands to visualize data represented as graphs.
- Demonstrates use of complex data structures like graphs using different techniques such as adjacency matrix.
- Demonstrates knowledge on working with a pre-existing code base and adding on to it.

Simple Compiler

- Coded a simple compiler with Java that takes an input from a .txt file which has numbers and operations such as +, -, *, /, =, and print.
- Using the input, the compiler compiles the input using a call stack and a binary search tree.
- Demonstrates knowledge of stacks/queues, linked lists, and tree structures such as binary search trees.

Stock Price Web App

- Collaborated with a team to build a Web App using HTML, CSS, and Javascript to display the price of a stock
- Utilized the open source stocks.js API to get stock market data on request.
- Designed and built the front end UI to be very simplistic and easy to use.
- Developed using agile development methods, with github as the continuous integration/delivery tool.
- Deployed the site to the web using Netlify. Link: stockpriceapp.netlify.app/

Sign Language Image Classifier

- Utilized Python with Tensorflow/Keras to build neural network models capable of classifying images of ASL.
- Utilized Sign Language MNIST dataset from Kaggle for the training and testing data
- Utilized both a three layer feedforward network and a convolutional neural network to compare accuracy of two different types of neural networks.
- Plotted results from both neural networks using heatmaps and bar plots for accuracy visualization