Hamza Baig

www.hamzais.me
Electrical Engineering | University of Waterloo '22 | mhabaig@uwaterloo.ca

SKILLS

- C++
- C
- Python
- Assembly
- PowerShell
- Bash
- SQL
- Power Query
- LaTeX
- Markdown

TOOLS

- CLion
- Visual Studio
- Linux
- Git
- Amazon Web Services
- Microsoft Azure
- Virtual Environments
- PowerBI

SOCIAL

: in/mhabaig/
: HBaig30
: www.hamzais.me

EXPERIENCE

VIRTUAL RESEARCH STUDENT

Communications Research Centre • Ottawa, ON • Sep 2018-Dec 2018

- Used AWS and Azure to develop and automate a program that determined idle virtual machines from active ones alongside giving users their real-time CPU usage
- Designed and implemented the program in Python and PowerShell, with data being stored in Azure's virtual database along with Amazon S3 buckets and curated using Microsoft's Transact-SQL
- Designed the front-end in Power BI which served the researchers through a web interface
- Provided thorough documentation pertaining software design decisions and a troubleshooting guide using Markdown to efficiently debug issues related to the process of data collection and filtering of virtual machines

TEST ENGINEERING STUDENT

WindRiver Systems • Ottawa, ON • Jan 2018-Apr2018

- Developed and implemented an auditing tool in Python which parsed through over 600 JSON files and organized data into CSV format
- Resolved various bugs by debugging source code through disassembly files of various architectures such as PowerPC and ARM
- Performed coverage-gap analysis on branch gaps existing in both source and disassembly files

PROJECTS

ROBOTIC ARM Arduino,C

- Built and programmed a two-pronged robotic arm controlled by gyroscopic sensors with the use of an Arduino and C to establish a platform for the interactions between the hardware and software
- Developed a working knowledge of datasheets to make effective use of integrated circuits used in the project

WWW.HAMZAIS.ME AWS,HTML,CSS,JavaScript

- Developed and hosted a personal website using Amazon Web Services
- Utilized both HTML/CSS along with JavaScript to provide users comfortable and user-friendly experience

MAGIC SQUARE C++

- Utilized core concepts of number theory to develop a program in C++ to create any n-by-n grid where each row, column and diagonal add up to the same number

ONLINE COURSEWORK

INTRODUCTION TO MACHINE LEARNING

- Learning the end-to-end process of investigating data through machine learning, using sklearn Python modules
- Notes were written in Markdown, made available through GitHub