BufanWang

COMPUTER ENGINEER
3350 Blackleaf Dr, Ottawa ON, Canada, K2J 0E9
bfwang@edu.uwaterloo.ca | 1-613-716-9070 | git.io/vM0TD | bufan-wang.com

SUMMARY OF QUALIFICATIONS

LANGUAGES

C, C++, Java, Python, HTML, CSS, Javascript (ReactJS, NodeJS), Assembly, VHDL, LaTeX

TOOLS

Windows, Linux, Git, Subversion, CMD, Bash, Android Studio, Adobe CS, MS Office, Excellent Googler ;)

EXPERIENCE

UW'S SOLAR RACING TEAM (MIDNIGHT SUN)

- Wrote software for MSP430 and STM32 microcontrollers in C within a Linux environment
- Implemented an UART Hardware Abstraction Layer to facillitate device communications
- Developed a deep understanding in embedded systems concepts and lower-level programming concepts

IEEE OTTAWA ROBOTICS COMPETITION

- Used C++ to program a motor-controlled Arduino robot equiped with Ultrasound and Infared sensors
- Integrated the sensor inputs so that the robot can autonomously run through a maze with obstacles
- Used a state-based approach to complete the mazes in the fewest amount of turns possible

PROJECTS

MRSUDOKUBOT (REDDIT, PYTHON)

- Utilized the PRAW API with Python to create an automated program that scanned user comments on Reddit
- The bot takes Sudoku puzzles extracted from the comments, and returns its solutions as a comment reply
- Solved the puzzle recursively and took advantage of Python's powerful object-oriented capabilities

PERSONAL WEBSITE (REACTJS)

- Deployed a static website that can be used as a personal portfolio and blog
- Used ReactJS as the front-end, so that the site's components can be developed and implemented modularly
- Took advantage of ReactJS' VirtualDOM, leading to efficient rendering of the website

HEXXER (C++)

- Developed a virtual boardgame in C++, using an object oriented approach
- Rendered the display and 2D graphical components using the SDL2 helper library

TWENTYFORTYSHAKE (ANDROID, JAVA)

- Created a variation of the popular 2048 game, taking in the phone's motion gestures as user input
- Developed a finite state machine, which processes the raw sensor inputs as directional outputs

PETER'S LOST WORLD (JAVA)

- Developed a multi-level, top-down, maze game at the request of elementary school students

EDUCATION

UNIVERSITY OF WATERLOO

Candidate for Honours Computer Engineering — 2016 - 2021

COLONEL BY SECONDARY SCHOOL

Recipiant of the International Baccalaureate Diploma — 2012 - 2016

ACTIVITIES AND INTERESTS

- Class Engineering Society Representative, former Class Academic Representative
- Former cashier at Ross' Your Independent Grocer
- Longtime member of the high school Quizbowl team
- Former competitive swimmer on both local and high school teams