JASON ZENG

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OBJECTIVE

To obtain a software engineer utilizing knowledge of a variety of programming skills and a solid math background

EDUCATION

Bachelor of Science, Combined Major in Computer Science and Mathematics *May 2017*
University of British Columbia, Vancouver, BC

- Computer Science Average: 87.1%
- Academic Recognition: Graduation Standing - With Distinction

EXPERIENCE

Undergraduate Teaching Assistant *May – June, September – December 2016*
University of British Columbia, Vancouver, BC

- Courses: CPSC 221 – Basic Algorithms and Data Structures (Two Times)
- Guided 3 weekly lab sections by presenting short lectures introducing data structures, algorithms and C++ knowledge, and marking their lab assignments
- Held weekly office hours to help individual students with their assignments and projects
- Marked written assignments, projects and exams, and provided feedback

Software Developer Intern June 2016
Bitontop Technologies Inc., Vancouver, BC

- Developed a prototype of a property management app, which consisted of home screen, information screen, service screens of various categories, which later iterated into the final product

PROJECTS

Sudoku - (React, Redux)

- A React-Redux app to play randomly generated Sudoku game
- Implemented puzzle generation algorithm that ensures each puzzle is equally likely to be generated
- Implemented backtracking solving algorithm that solves any solvable game board

VanPark – (Node.js, Express, MongoDB)

- A MEAN stack app for Vancouver parks lookup developed in a four-member team
- Applied Scrum development method for task management
- Implemented the RESTful API for database access and user authentication
- Utilized Google Maps API for data display

Chip-8 Emulator – (C++, OpenGL)

- An emulator for Chip-8 virtual machine to play classic Chip-8 games, such as Space Invader and Brix
- Implemented Fetch, Decode and Execute stage of the CPU stage, and graphic display with OpenGL

Genetic Algorithm Drawer – (Python)

- Applied Genetic Algorithm to approximate images with randomly placed polygons
- Implemented the selection, mutation and crossover process to make the image converge to the goal

Universal Puzzle Solver – (C++)

- A C++ program to brute-force solve any pre-defined puzzles, such as Maze, Sudoku and Slider Puzzle
- Implemented various data structures for storing game states to achieve BFS and DFS

TECHNOLOGY

Programming Languages: C/C++, **JavaScript(ES6)**, Java, Python, HTML5, CSS3, Matlab, Racket
Frameworks and Tools: jQuery, Node.js/Express, MongoDB, AngularJs, React, Bootstrap, Git, SHH