Redwood City, CA

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Objective

My goal is to be in an engineering position where I can network with fellow programmers, accumulate new skills and gain a real world perspective on my future profession. I hope to establish relationships with fellow peers and explore future career opportunities in a productive community.

Work Experience

Full-Stack Software Engineering Intern

5/2017 – 9/2017 Paxata - Enterprise Analytics Software Company Redwood City, CA

- Used Agile to develop a landing page that expedites common workflows and minimizes data inconsistencies
- Designed Scala APIs and AngularJS interfaces that query MongoDB for metadata on prioritized data/projects
- Implemented JUnit integration tests using Selenium to define expected system behavior for the new landing page

Skills

- Java – four+ years of independent programming experience working on multiple game, AI, and general projects
- Experience with full stack development
- Experience with JavaScript, Scala, Python, C, C++, x86 Assembly (NASM), and Linux/Unix
- Experience with Spring, Maven, Selenium, AngularJS, and JQuery
- Graphics APIs: OpenGL, Swing, JavaFX
- Good grasp of the Windows OS architecture, Windows API, and Portable Executable file structure
- Good understanding of processor design, computer architecture, operating systems and JVM function
- Windows, Word, Excel, PowerPoint
- Excellent oral and written communication skills

Programming Projects

- Checkers AI – Minimax algorithm, piece table and move value heuristic, "look ahead" strategy, alpha-beta pruning
- Connect Four AI – Minimax algorithm, combo calculating heuristic, alpha-beta pruning
- Handwritten digit classifier using feedforward neural network – backpropagation, supervised learning, MNIST
- OpenGL with C++ (model loading, shader programming, work with graphics pipeline, texture blending, lighting)
- Java Breakout game using the JavaFX API (bloom, blur and glow effects, animations, screen shake, level system)
- Java game programming using the Swing API (Tetris, Pong, Pacman, Asteroids, Breakout, Flappy Bird)
- Music visualizers in Java/Processing – fast Fourier transform, beat detection algorithm
- Music visualizing LED strip with Arduino – asynchronous serial communication, assembly script to send RGB values
- X86 Assembly Computer Virus – low-level code optimization, directory crawling, dynamic Windows API linking

Education

CMPS 101: Abstract Data Types

4/2017 – 6/2017 University of California – Santa Cruz Santa Cruz, CA

Asymptotic big "O" notation, depth-first search, breadth-first search, Dijkstra's SPT algorithm, Prim's MST algorithm, Kruskal's MST algorithm, topological sort, hashing algorithms, heaps, priority queues, adjacency matrix and adjacency list representations for graphs. Focus on C.

CMPS 104A: Fundamentals of Compiler Design

9/2017 – 12/2017 University of California – Santa Cruz Santa Cruz, CA

Compiler structure, symbol tables, regular expressions and languages, finite automata, lexical analysis, context-free languages, LL(1), recursive descent, LALR(1), and LR(1) parsing. Focus on C++.

Bachelor of Science in Computer Science

9/2016 – Present University of California – Santa Cruz Santa Cruz, CA

Currently pursuing a Bachelor of Science in computer science at UCSC and will graduate in 2019.

Volunteering Experience

Peer Tutor for Math

6/2016 – 9/2016 College of San Mateo San Mateo, CA

Assisted students at the College of San Mateo with math homework and problem solving ranging from algebra to geometry to calculus. Developed teaching and communication skills. Gained experience in a leadership position.