Andrew Tsui

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Education

University of California, Irvine – Irvine, CA Expected June 2021
B.S. in Computer Science Cumulative GPA: 3.72/4.0
Minor in Statistics

Experience

LogicMonitor – Software Engineer Intern June 2019 – Aug 2019

- Designed a microservice to deliver product and feature information to ~1,000 companies worldwide.
- Improved the data model to be more efficient by applying the relational database model.
- Implemented a RESTful API to make HTTP requests to the MySQL database within milliseconds.

Innovart Design Inc. – Unpaid Intern July 2018 – Sept 2018

- Customized an interactive website for their new product, CarWink.
- Collaborated with employer to develop marketing and user interface strategies for Innovart to increase web traffic by 35%.
- Revitalized the page dynamics with Bootstrap and responsive web design.

Private Tutor Sept 2017 – Present

- Tutor students in prealgebra, algebra, geometry, and trigonometry.
- Guide students through problems and trouble areas to reach a solution without revealing the answer directly.

Projects

Web Search Engine and Crawler Project (Python) Mar 2020

- Developed a crawler that scrapes ~50,000 webpages to gather URLs and tokenize textual information.
- Simhash algorithm reduced pages crawled by 30%. Multithreading reduced crawl time by 75%.
- Implemented a web search engine from the ground up that is capable of handling ~50,000 webpages under harsh operational and memory constraints with a query response time under 300ms.

Checkers AI Project (Python) Sept 2019

- Developed an AI that placed in the top 30% when matched against the rest of the class.
- Implemented a heuristic search function using minimax algorithm to find the best potential move.
- Added alpha beta pruning to allow for deeper searches without exceeding long run times.
- Constructed an effective evaluation function that assigns weighted scores to each board configuration.

Data Structures Implementation Project (C++) Dec 2018

- Implemented AVL tree and Hash table data structures to efficiently store the contents of large text files.
- Worked with other students to visualize AVL balancing and Hash table growth to solidify a deeper understanding of data structure functionalities.

Technical Skills

Programming Languages:	Java, Python, C, C++, HTML, CSS
Database:	MySQL
Operating Systems:	MacOS, Linux, Windows
Tools/Frameworks:	Git, Docker, Gradle, Mockito, PowerMockito, BeautifulSoup, Jira, Confluence
Languages:	Fluent in English, Working proficient in Mandarin