Aaron Wang

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EDUCATION

University of California, Riverside

Bachelor of Science in Computer Science

Awards: Dean's Honors List, Chancellor's Honors List September 2022 - January 2026

Projects

Portfolio Website TypeScr	ipt, Next.js, Tailwind CSS	
• Developed and deployed	a full stack portfolio website using TypeScript and Tailwin	id to

- Implemented interactive and downloadable resume using TypeScript
- Developed reusable components (navBar, header) in Tailwind to style multiple site pages

CLI-Lock (Password Management Tool) | C++

- Developed password management tool that stores account information for multiple domains
- Implements Crypto++ library to encrypt user information
- Constructed the password quality handler and password generation functions
- Implemented password generation that meets the quality standards of an acceptable strong password and derives words from a dictionary file.
- Increased speed of user generation of strong passwords by up to $\sim 90\%$ from creating a function to instantaneously generate passwords using a dictionary of 200+ words

TV Character Database Visualizer | React.js

- Built a visual database using React of characters appearing in Better Call Saul
- Fetched data via Axios from a dedicated API (https://breakingbadapi.com/) and developed a character list only pertaining to the Better Call Saul category
- Implemented and enhanced a card-based data visualisation generating character images, names, nicknames, and real actors
- Improved accuracy of the API by 9% by re-configuring the API to fetch correct character data in database

Clipboard (Chrome Extension) | JavaScript, HTML

- Developed a chrome extension responsible for storing notes on a Google Chrome tab
- Designed for saving information onto browser cache and has the ability to be cleared completely off it
- Implemented re-expandable text pad in order to scale the quantity of user's text

Parallelized Sudoku Solver | Python

- Developed and implemented both a parallelized and non-parallelized application of solving 9x9 Sudoku grids
- Integrated multi-threading to parallelize the pre-computation of valid moves to enhance scalability and computational efficiency
- Implemented caching to compute and store valid candidates for each cell, significantly reducing computational redundancy and improving runtime performance
- Conducted performance testing and benchmarking, achieving a measurable speedup of 51.9% in comparison to the non-parallelized application

Involvement

Association for Computing Machinery (ACM) \mid Member

- Member of UCR's ACM club, focused on learning computing and expanding interest in computer science
- Participated in Cutie Hack 2022 and led a group of 4 in the creation of Optimal Oranges Calculator

TECHNICAL SKILLS

Languages: C/C++, JavaScript, Java, Python, Tailwind CSS, TypeScript Developer Tools & Frameworks: Next.js, Unix, Git, Powershell Libraries: React.js, Node.js, Axios, Crypto++

Relevant Coursework: Intermediate Data Structures and Algorithms, Logic Design, Discrete Structures, Software Construction, Operating Systems, Concurrent Programming and Parallel Systems, Linear Algebra, Introduction to Artificial Intelligence

 $\underline{\rm GitHub}$

GitHub

GitHub

September 2022 – Present

GitHub

UC Riverside