Nicholas Wong

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EDUCATION

University of California Riverside September 2021 - June 2025
B.S. in Computer Science with Business Applications *Riverside, CA*
GPA – 3.5
Relevant Coursework: Data Structures and Algorithms, Discrete Mathematics, Software Construction, Logic and Circuit Design, Probability and Statistics, Data Analysis Methods, Technical Communications, Decision Analysis and Management Science, Operating Systems, Big-Data Management, Artificial Intelligence, Data Mining, Information Retrieval

SKILLS

Programming Languages	Python, JavaScript, TypeScript, Java, C/C++, SQL, Bash, JSON, HTML, CSS, Git, Node.js, MongoDB, AWS, Vue.js
Frameworks	React, Flask, FastAPI, Vue.js, Qt, Object-Oriented Programming
Software Tools	Excel, Git/GitHub, Postman, Jupyter Notebook, LaTeX, macOS, Qt, Asana(Workflow Specialist Certified)

PROJECTS

MangaReact Link Sept 2024

- Developed a responsive manga reader application with **HTML**, **CSS**, **JavaScript**, **React**, and **Material UI**, allowing users to read manga, browse top titles, discover recent additions, and save favorites.
- Deployed on **AWS EC2** with custom **REST API** for seamless asynchronous fetching of manga content (chapters, covers, pages) using **JSON** and `localStorage` for data handling and session management.
- Load tested with **Artillery** to handle **1000 requests/sec** at $<$ **23ms p95 latency**.

Trip Creator Link March 2025

- Collaborated in a small team to develop a full-stack itinerary planning web application using **React** and **TailwindCSS**, enabling users to create trips, schedule events, and manage budgets.
- Built and maintained key frontend features such as event removal and error handling using **TypeScript**, ensuring a smooth and responsive user experience.
- Designed and implemented end-to-end regression tests with **Cypress**, validating core user flows and maintaining application stability.

Skytrack Link Oct 2023

- A **C++** desktop application with **Qt** framework to provide real-time weather data, productivity tools, and personalized features based on user location and conditions.
- Integrated the **OpenWeather API** to fetch and display real-time location-based weather data, and built interactive UI components using Qt modules to enhance user experience.
- Collaborated in an **Agile team environment**, using **GitHub Issues** for task tracking and conducting **code reviews** to maintain code quality and ensure continuous integration.

8-puzzle Solver Link Feb 2025

- Developed an AI-driven 8-puzzle solver in **Python** implementing **Uniform Cost Search** and **A* Search** with **Misplaced Tile** and **Manhattan Distance** heuristics.
- Analyzed algorithm performance across 20+ puzzle depths using node expansion count, queue size, and CPU time, revealing **A* Manhattan** reduced node expansions up to **90%** compared to **Uniform Cost**.