Jason Nguyen

Riverside, CA | US Citizen
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Education

Bachelor of Science in Computer Science Sept. 2021 – Dec. 2024
University of California, Riverside *Riverside, CA*

- **GPA:** 3.90/4.00
- **Awards/Scholarships:** Dean's Honors List for 7 quarters, Chancellor's Honors List for 2 quarters, Regents Scholarship
- **Relevant Coursework:** Database Management Systems, Data Structures and Algorithms, Machine Learning, Embedded Systems, Natural Language Processing, Computer Graphics, Computer Security

Experience

Grader for CS150 Automata and Formal Languages Sept. 2023 – Dec. 2023
University of California, Riverside *Riverside, CA*

- Contributed to maintaining a strict grading workflow for a class of nearly 150 students to guarantee certain grading deadlines are met
- Demonstrated a strong attention to detail by providing valuable feedback on submissions to clarify difficult course concepts

Projects

Social Media App | *React, HTML, CSS, JS, Express, MySQL* Feb. 2025 – Present

- Implemented login functionality along with JWT access and refresh tokens for quick authentication allowing for a better user experience whilst preserving security
- Developed a private messaging system with **Socket.io** establishing a real-time communication across clients and utilized **MySQL** to store past messages resulting in no lost messages even after the connection is severed

Scientific Text Classification | *Python, Matplotlib, Pandas, NumPy* Oct. 2024 – Dec. 2024

- Evaluated and compared multiple machine learning models to determine the most effective vectorization techniques, similarity measures, and hyperparameter values that maximized F1-score for scientific text classification
- Optimized code performance achieving **10x improvement** by using batch multiprocessing and leveraging data structures which allowed for quick computation and lookup
- Visualized model performances and conducted in-depth analyses using **Matplotlib** and **Pandas** to assess model accuracy and communicate results clearly

Medical Search Engine | *HTML, CSS, JS, Python, Flask, React* Jun. 2024 – Sept. 2024

- Led the development of a responsive front-end interface using **React** and **CSS**, allowing for a seamless user experience across all devices with various screen sizes
- Engineered a relevance scoring algorithm that accurately ranks search results and URL relevance based on users' medical inquiry
- Built a **Flask-based API** in **Python** permitting fetching from the front-end and processing medical data from multiple sources with caching which provides high-speed data retrieval and accurate search results

Asteroids | *C++* May 2024 – Jun. 2024

- Developed an embedded system using ST7735 LCD display, joystick module, shift register (74HC595), 7-segment display, and a button using the Elegoo UNO R3 microcontroller with ergonomic controls for intuitive interactivity
- Acquired indispensable knowledge in reading datasheets, leading to the understanding of the SPI protocol to communicate effectively with both the shift register and ST7735 display
- Programmed the game logic using synchronous state machines and a clock system to manage concurrency, resulting in smooth gameplay and minimal delay in I/O processing

Technical Skills

Languages: Python, JavaScript, TypeScript, HTML, CSS, SQL
Frameworks & Libs: React.js, Express.js, Next.js
Architecture: REST
Tools: Git, VS Code, Jest, Node.js, Docker, Nginx