JONNY K. TRAN

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EDUCATION

University of California, San Diego Jun. 2023

B.S. in Computer Science with minor in Cognitive Science *San Diego, CA*

- GPA: 3.9/4.0
- UCSD Regents Scholar (awarded to top 1% of incoming students)

EXPERIENCE

Amazon.com, Inc. Jun. 2022 – Sep. 2022

Software Development Engineer Intern *Seattle, WA*

- Engineered an API to streamline metadata retrieval from a complex DynamoDB database, consolidating 10+ APIs in the process and eliminating the need to create a separate API for new access patterns
- Designed API with an emphasis on scalablity and extensibility to accommodate the team's rapidly growing database, ensuring seamless integration with future access patterns and metadata fields
- Implemented a dynamic retrieval mechanism using Java reflection, configuration files, and generic response structures to prevent API updates from disrupting hundreds of existing client applications
- Successfully deployed code to production for internal use by 30+ Amazon teams after comprehensive JUnit, Mockito, integration, load, and manual tests

UCSD Computer Science and Engineering Department Jan. 2021 – Jun. 2022

Computer Science Tutor & Summer Program Mentor *San Diego, CA*

- Provided 1-on-1 tutoring for over 600 students in Java, C++, and Python programming
- Conducted weekly office hours focusing on data structures, algorithms, and object-oriented design
- Monitored a group of 20 students, providing personalized support for individuals experiencing high stress
- Mentored 50+ incoming freshmen and prepared them to succeed both academically and socially at UCSD

PROJECTS

Photo Pixelator | *Flask, Python, HTML/CSS, NumPy, PIL, cProfile, Numba* Project Link

- Deployed a full-stack Flask webapp for converting user-provided images into pixel art using NumPy/PIL
- Optimized pixelation process by 350% using cProfile/Numba to identify and address performance bottlenecks
- Utilized responsive and mobile-friendly design practices to ensure cross-device compatibility
- Incorporated robust error checking to detect and display error messages for invalid image files and pixel sizes

Devil Dishes | *Agile, HTML/CSS, JavaScript, MongoDB, Netlify, CI/CD* Project Link

- Developed a RESTful recipe manager webapp that allows users to create, view, and share recipes online
- Managed front-end team in designing key pages such as the landing, login, explore, and edit recipe pages
- Implemented a MongoDB and Spoonacular API backend to store thousands of recipes and users
- Built a CI/CD pipeline with GitHub Actions to facilitate automated E2E, unit, and style testing on pull requests

Zulip Open-Source Contributor | *JavaScript/TypeScript, Python, Node.js, Vagrant, VirtualBox* Project Link

- Contributed bug fixes and features to Zulip, an open-source chat application with threaded conversations
- Enhanced Zulip's autocomplete by combining redundant commands and simplifying the suggestions menu
- Engaged in constructive discussions with fellow contributors through code reviews and the Zulip developer community forum

TECHNICAL SKILLS

Languages: Python, Java, JavaScript, HTML/CSS, C, C++, C#, SQL
Tools and Frameworks: Agile, AWS, DynamoDB, Flask, Git, NumPy, Pandas, JUnit, Mockito