Tristan Ha

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Education

University of California, Irvine — Irvine, CA
Bachelor of Science in Computer Science | GPA: 3.73 — June 2023

- **Involvements**: UCI Association for Computing Machinery, UCI Chess Club President.
- **Awards**: Dean's Honor List, Northrop Grumman Bravo to Our Stars, 2019 Congressional App Challenge Winner, 2018 eTexathon Hackathon Winner, High School Valedictorian (GPA: 4.439).

Experience

Northrop Grumman — Woodland Hills, CA
Software Engineer Intern — June 2022 – Aug. 2022

- Developed inertial navigation software for aircraft system processors using C, MATLAB, and Simulink, complying with safety critical aviation standards and receiving the Bravo company award for exceptional work as an intern.
- Built internal dashboard that displays software progress by fetching Jenkins test results, merging data with requirements, and uploading results using Python (Pandas, Matplotlib), Jenkins API, and Confluence API, reducing the average time to search for software metrics by 33%.
- Completed JIRA user stories and reported status updates in daily scrum meetings during sprints in a fast-paced Agile working environment in order to meet customer deadlines.
- Led group of 10 interns to present completed projects to 50+ engineers, managers, and executives.

US Forest Service — Remote
Software Engineer Intern — Sep. 2020 – Apr. 2021

- Developed survey application for onsite data collection of 100+ groundwater dependent springs.
- Implemented drop down menus, text input fields, file uploading, and more using ArcGIS Survey123 to facilitate land management decisions with collected ecological data.
- Presented ideas for automating data importation onto Springs Online database to improve workflow.

Projects

Web Search Engine | Python, Flask, BeautifulSoup, NLTK, Git — Mar. 2022 – June 2022

- Developed search engine from scratch capable of producing ranked results within 300 ms from a corpus of over 40,000 documents under harsh memory constraints.
- Produced a polite web crawler to index web pages under a specific domain while avoiding infinite crawler traps.
- Received highest score for the 10 week course project in class of 150 students due to extensive extra credit features, including near duplicate document detection, bigram indexing, and a web GUI.

Portfolio Website | HTML, CSS, JavaScript, Git — Sep. 2020 – Oct. 2020

- Built a portfolio website from scratch with embedded links and images to feature my coding creations.

Catan Statistics Tracker | Python, PyGame, Git — Aug. 2020 – Sep. 2020

- Designed a board game statistics tracker to collect and display game data on auto scaling bar graphs.
- Programmed a GUI, dice roller, and turn tracker, reducing average player turn time by 40% through repetitive task automation and including a time leaderboard to encourage shorter turns.

Morse Communicator (Hackathon) | C++, Arduino — Mar. 2019

- Developed a microcontroller program to communicate Morse code with partner by sending high and low frequencies using sound sensors.
- Won 1st place in "Technical" category of Microsoft sponsored hackathon with 50+ competitors.

Voter's Choice (App Competition) | JavaScript, App Lab — Aug. 2018 – Oct. 2018

- Created an award-winning voting app with a quiz and algorithm to match voters with midterm election candidate.
- California district winner of nationwide Congressional App Challenge with 5,529 overall competitors.

Technical Skills

Languages: Python, C, C++, Java, JavaScript, SQL, HTML, CSS, MATLAB, Assembly
Developer Tools: Git, Docker, VS Code, Visual Studio, PyCharm, IntelliJ, Eclipse
Other Technologies: MySQL, Flask, pandas, NumPy, Matplotlib, BeautifulSoup, NLTK