

Tristan Ha

tristaqh@uci.edu | Los Angeles, CA | (818) 457-7877
github.com/TristanHaHa | TristanHaHa.github.io | linkedin.com/in/TristanHa

EDUCATION

University of California, Irvine

Oct 2020 - Jun 2023

Bachelor of Science, Computer Science

- Selected Coursework: Advanced Python Programming, Boolean Algebra & Discrete Structures

Granada Hills Charter High

Aug 2016 - Jun 2020

Valedictorian | GPA: **4.439** (*Gold Honor Roll*)

- AP Computer Science A (4), AP Calculus BC (5), AP Physics C (5), **Basic Data Structures & Algorithms**

WORK EXPERIENCE

US Forest Service - Remote Programming Intern

Sep 2020 - Present

- Will automate database entry using Python scripts and SQL queries with teammate under mentors

SKILLS

Programming Languages:

Python, Java, JavaScript, HTML/CSS, SQL

Technologies:

Git Bash, GitHub, Arduino, PyGame, Atom

PROJECTS (available at github.com/TristanHaHa)

Catan Statistics Tracker - [Python](#), [PyGame](#)

Aug 2020 - Sep 2020

- Designed a board game statistics tracker with auto scaling bar graphs utilizing PyGame framework
- Programmed an automatic dice roller and turn tracker, reducing average player turn time by **>40%**

Tetris Game - [Java](#), [Java Swing](#)

Mar 2020 - Jun 2020

- Implemented Tetris in Java utilizing Java Swing Graphics and object-oriented programming

Binary Communicator (Hackathon) - [Arduino](#)

Mar 2019

- Developed a microcontroller binary communication program with partner using sound sensors
- Won 1st place** in "Technical" category in Microsoft-sponsored eTexathon(); (**50+ competitors**)

Voter's Choice (App Competition) - [JavaScript](#), [AppLab](#)

Aug 2018 - Oct 2018

- Created an award-winning voting app with a quiz and a candidate-matching algorithm
- CA District winner** of nationwide Congressional App Challenge (**5,529 overall competitors**)

INVOLVEMENTS

Students for Success Club

- As **co-founder**, lead bi-weekly meetings and educated **15+** members about practical adult skills

High School Math Tutor

- Tutored math classes (up to Calculus) for **2** teachers; reviewed problems and taught concepts weekly

Vietnamese Eucharistic Youth Movement

- Teach weekly classes of **15+** children and lead leadership camps of **40+** people as assistant counselor

AWARDS

National AP Scholar (2020): averaged a score of **4.5** (out of 5) on **12** College Board AP Exams

Excellence in **Computer Science**, Math, Visual/Performing Arts (2020): nominated by **3** teachers

1. How were you first introduced to Computer Science? How have you continued to develop your technical skills and seek additional exposure to the field?

As a child, I discovered my fascination for Computer Science through a game. I unintentionally learned basic programming concepts by directing a robot through an obstacle course. This app introduced me to the world of CS, and I fell in love.

In high school, I developed my interest inside the classroom through AP CS courses. I challenged myself further in the form of coding competitions, participating in and winning the Congressional App Challenge and my school's first hackathon.

This past summer, I learned Git and the basics of version control. I employed these concepts by creating a board game companion app for personal use, coding in and learning Python along the way. I even stumbled upon a Google Foobar invite in the midst of Googling a question about Python pass by reference (I'm currently on Level 3-2 and having a blast). I also brushed up on my web development skills and created a personal website from scratch using HTML, CSS and JavaScript. Lastly, I applied for and landed a programming internship for the US Forest Service.

My passion for CS fuels me - I am constantly looking to challenge myself and continue learning. I hope to find this opportunity at Google.

2. What is your strongest programming language? How much experience do you have using the language? Go into detail about how you used this technical language. If talking about a group project, be specific about your role in the final product. (Examples can include projects, coursework, competitions, websites, previous internships, etc.)

I would say Java and Python tie for my strongest programming language. I have 2+ years of experience with Java, but I have immersed myself in Python this past summer, using it to create a personal project, solve coding problems, and get a headstart on school.

My best Python project is a board game companion app that my family uses. When playing Catan, I noticed that the games would drag on for a while, so I created an app to track player turns and dice rolls. I employed the PyGame library for the GUI and bar graph display.

However, the past 2 years, I mainly programmed in Java. I completed ~50 assignments in Java and have become quite familiar with the language along with object-oriented programming principles and data structures and algorithms. Besides small school projects such as creating a

deck of cards or tic-tac-toe, I developed two games with Java Swing GUIs - Snake and Tetris, the latter being my best Java project.

When programming Tetris, I had to consider design decisions and what classes to build. I utilized Java Swing for graphics and abstraction for defining Tetris blocks.

Both mentioned projects are available at github.com/TristanHaHa.

3. At Google, we believe that a diversity of perspectives, ideas, and cultures leads to the creation of better products and services. Tell us about your background and experiences and how they make you unique.

Nearly every year in the past decade, I've attended my local youth group's bi-annual leadership camps.

I first entered as a passive, timid child, but with each successive camp, I gradually transitioned from follower to leader. Workshops on emulating cultural leaders and lessons about leadership characteristics - respectful, decisive, humble - urged me to gradually step into a more active role.

For instance, if we played a game, I took charge by formulating a strategy; I delegated roles to members based on their strengths and included myself, leading by example to inspire my group. If we went hiking, I employed a buddy system, assigning a capable pair to watch the back while I physically led the way, motivating our group onwards. I also found myself in a parental role: supervising but also caring for the kids and their physical and emotional well-being.

Camping transformed me into an effective and compassionate leader. Counselors noticed, rewarding my efforts each year by consistently honoring me with the title and responsibilities of "Group Captain," which involved organizing the peers in my age section.

My extensive background in these leadership camps has cultivated unique management skills and a strong passion in all my endeavors.

4. List the technical courses you will be taking next semester, and please note which programming language(s) will be used, if applicable. If you have not registered for classes yet, please list the courses you plan on taking.

Advanced Python Programming, Boolean Algebra and Discrete Structures

4. List any clubs and/or organizations that you participate in.

UCI Association for Computing Machinery (ACM), Vietnamese Eucharistic Youth Movement