

Thomas Scott

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EDUCATION

University of California, Irvine

Irvine, CA

BS, Computer Science; GPA: 3.8

June 2022

Relevant Coursework: Intermediate Python, Programming in C/C++, Introductory Computer Organization / Programming in Assembly, Data Structure Implementation and Analysis

SKILLS

Programming/Scripting Languages: Python, C++, Java, C, MIPS Assembly, HTML, CSS

Tools: Flask, MySQL, Jupyter Notebook, Visual Studio Code, Git & Github, Adobe Photoshop, Illustrator

EXPERIENCE

UCI Physics and Astronomy

Irvine, CA

Machine Learning Researcher

April 2021 - Present

- Built and trained random forest machine learning models using Python libraries such as sklearn, numpy, and astropy.
- Generated predicted far-infrared fluxes using ultraviolet to mid-infrared flux data from over 800,000 observations collected by the Herschel Space Observatory.
- Made predictions on infrared fluxes with 96%+ accuracy.

UCI School of Information and Computer Science

Irvine, CA

Computer Science Lab Tutor

September 2020 - December 2020

- Worked with teaching assistants for UCI's *Intro to Python* course to explain Python language concepts to students.
- Debugged lab assignments, projects, and homework for 10 students a day on average.

Southern California Linux Expo (SCALE)

Pasadena, CA

Check-in Volunteer

March 2018 & 2019

- Coordinated the check-in process for the event, as part of a team of volunteers.
- Interviewed the head of the volunteers for a research paper on Computer Science in high school education.

California Institute of Technology

Pasadena, CA

Summer Biochemistry Intern

July 2018 - August 2018

- Worked with a lab partner for part of 4 weeks in the Division of Chemistry and Chemical Engineering as an Intern for the Shapiro Lab Team.
- Grew and harvested various bacteria to research "gas vesicles" for the improvement of ultrasound technology.
- Delivered a final presentation with a lab partner to supervisors and other interns.

PROJECTS

Search Engine

Spring 2022

- Wrote a search engine in Python that crawls web pages and presents results with query times under 300 milliseconds.
- Developed a front end user interface with Flask, HTML, and CSS to accept user input and display search results.

Gravity Simulation

Summer 2021

- Created an accurate simulation of gravity between multiple free-floating objects, featuring the ability to place objects within the simulation and immediately observe their gravitational pull on other bodies in the simulation.
- Learned how to use bash scripts and CMake to set up the programming environment, and how to use additional C++ libraries.

Columns Video Game

Summer 2020

- Created a tetris-like video game using the third-party Python library Pygame with a custom GUI and images created in Illustrator and Photoshop.
- Reads input from the keyboard and plays sound effects that correspond to moves.