Thomas Scott

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EDUCATION

University of California, Los Angeles (UCLA) | **Los Angeles, CA**
MS, Computer Science | *Expected June 2024*
Relevant Coursework: Health Analytics, Reinforcement Learning, Quantum Programming

University of California, Irvine (UCI) | **Irvine, CA**
BS, Computer Science; GPA: 3.8 | *June 2022*
Relevant Coursework: Deep Learning for Medical Imaging, Programming in C/C++, Implementation and Analysis of Data Structures and Algorithms, Operating Systems Principles, Project in Natural Language Processing, Machine Learning and Data Mining

SKILLS

Programming/Scripting Languages: Python, C++, Java, C, MIPS Assembly, HTML, CSS, JavaScript, R
Tools/Libraries: Flask, Bootstrap, MySQL, Jupyter Notebook, Git & Github, Numpy, PyTorch

EXPERIENCE

UCI Physics and Astronomy | **Irvine, CA**
Machine Learning Researcher | *April 2021 - September 2022*
- 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
- Built predictions on far-infrared fluxes with 96%+ accuracy using log-scale values and presented findings to advisors

UCI School of Information and Computer Science | **Irvine, CA**
Computer Science Lab Tutor | *September 2020 - December 2020*
- Collaborated 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 check-in process for expo event, as part of a team of 5 volunteers
- Interviewed the head of the volunteers for a research paper on Computer Science in high school education

PROJECTS

Self-Driving AI | *Fall 2022*
Machine Learning Engineer
- Worked with a partner to train a PPO (Proximal Policy Optimization) network using PyTorch and OpenAI Gym to navigate custom street layouts in a simulated environment with MetaDrive, achieving 94%+ accuracy in steering and throttle values
- Utilized machine learning techniques such as data preprocessing and model fine-tuning to optimize network performance, increasing reward by 3x

Portfolio Website | *Summer 2022*
Web Developer
- Designed and developed a portfolio website using HTML, CSS, JavaScript, and Bootstrap to showcase personal projects and skills
- Utilized responsive web design techniques with Bootstrap to ensure that the website was functional and aesthetically pleasing on a variety of devices and screen sizes

Search Engine | *Spring 2022*
Full Stack Developer
- Collaborated with 3 other students to write a web-crawling Python search engine to present 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*
Software Engineer
- Designed an accurate simulation of gravity between 100+ free-floating objects, featuring ability to place objects within simulation and immediately observe gravitational effects on other simulation bodies
- Learned how to use bash scripts and CMake to set up the programming environment in linux, and how to use additional C++ libraries