Tristin Xie

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Education

University of California San Diego

GPA: N/A

M.S. IN COMPUTER SCIENCE Sep. 2023 - Jun. 2025

University of California San Diego

CS GPA: 3.722 / 4.0

DOUBLE MAJOR: B.S. IN COMPUTER SCIENCE AND APPLIED MATHEMATICS · MINOR IN BUSINESS

Sep. 2019 - Sep. 2023

• Tau Beta Pi: Oldest engineering honor society with invitations only sent to the top 1/8th of the Junior class and top 1/5th of the Senior class

• Relevant Coursework: Advanced Data Structures · Design and Analysis of Algorithms · Systems Programming · Software Engineering · Machine Learning · Computer Vision · Operating Systems · Computer Architecture · Programming Languages · Recommender Systems · Deep Learning

Work Experience

Advanced Robotics and Controls Lab (ARClab) at UC San Diego

San Diego, CA

RESEARCH ASSISTANT

Mar. 2023 - Present

• Experimented with statistical filtering techniques such as z-score, Kalman, and softmax confidence to reduce erratic predictions

Amazon Web Services Seattle, WA

SOFTWARE DEVELOPMENT ENGINEER INTERN

Jun. 2023 - Sep. 2023

- Overhauled autocomplete from a static frontend approach to a dynamic backend approach reflecting real data in Elasticsearch
- Tested implementation by writing new unit, integration, and canary tests and created AWS CloudWatch alarms, metrics, and dashboards
- Improved search results by 28% for exact keyword match queries of a major category, diagnosed by writing a multithreaded Python script

SOFTWARE DEVELOPMENT ENGINEER INTERN

Jun. 2022 - Sep. 2022

- Implemented and tested an AWS DynamoDB schema and AWS Lambda API using Go to support Word-like notes for 10,000+ AWS partners
- Defined cloud infrastructure using AWS Cloud Development Kit with TypeScript and deployed CloudFormation stacks for my application

UC San Diego Computer Science and Engineering

San Diego, CA

INSTRUCTIONAL ASSISTANT

Jul. 2021 - Mar. 2023

- Tutored preparatory and lower division courses on algorithms, recursion, state machines, Pygame, Python, and image manipulation
- Tutored upper division course with assigned C++ programming assignments and conceptual problems for a combined total of 100+ hours
- Tested 30+ advanced data structures assignments including self-balancing binary search trees, tries, hash maps, bloom filters, and more

Leadership

Association for Computing Machinery at UC San Diego

San Diego, CA

VICE PRESIDENT PROJECTS

May 2022 - May 2023

Oversaw the processing of 250+ applicants and hosted a project showcase event with 90+ attendance for the quarterly ACM Projects program

VICE PRESIDENT FINANCE

May 2021 - May 2022

- Directed the finance team to create financial documents to obtain funding for 200+ events from school departments and student government
- Managed and budgeted thousands of dollars of department funds, sponsorship money, and other miscellaneous University allocated funds

Projects

ACM Teammate Finder: Web App To Find Teammates Easily | GitHub

Oct. 2020 - Jan. 2021

- Implemented Material Design webpages with React, HTML/CSS, and React Material Web Components
- Developed CRUD functions for back-end using Express to fetch and post updates to the Firestore database

EnviroSense: Internet of Things Pollution Sensor | Devpost | • GitHub

Oct. 2019

- SDHacks WINNER (3rd): Best IoT that Incorporates Multiple Nodes (team of 4)
- · Built a sensor node prototype which measures pollutant and environmental data from the ambient environment

PictureTranslate: Real-time Computer Vision Object Translator | 🔾 GitHub

Aug. 2019

- · Pair programmed and trained Haar Cascades on 4 different smartphones, 4 denominations of money, and more
- Displayed video feed and paused with translation of the detected object to 100+ supported languages using the Google Translate API

Skills

Languages Python · C/C++ · Go · JavaScript/TypeScript · Haskell · HTML/CSS · Sass · ARM Assembly · Bash · Java · धर्म्×

Frameworks and Tools AWS · Git · React · Node. js · Express. js · NumPy · Tailwind CSS · Firebase · OpenCV · Jest · GDB · Netlify · PyTorch

Software Vim · Visual Studio Code · Visual Studio · IntelliJ IDEA Ultimate · Adobe Illustrator