

Tristin Xie

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Education

University of California San Diego

GPA: 3.7 / 4.0

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

Sep. 2019 - Jun. 2023

- **Provost Honors:** Honor given to students with high academic performance during the academic quarter
- **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

Amazon Web Services

Seattle, WA

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 **100,000+ AWS partners**
- Defined cloud infrastructure using **AWS Cloud Development Kit** with **TypeScript** and deployed **CloudFormation** stacks for my application
- Created and modified **React** components styled with **Sass** and called my API using **Axios** for create, read, update, and delete functionalities

UC San Diego Computer Science and Engineering

San Diego, CA

INSTRUCTIONAL ASSISTANT

Sep. 2021 - Present

- Tested 6 programming assignments, 2 projects, and 20+ reading quizzes regarding advanced data structures such as **self-balancing binary search trees, tries, hash maps, bloom filters, and more**
- Tutored **dozens** of students on assigned **C++** programming assignments and conceptual problems for a combined total of **50+ hours**

PROJECT MENTOR

Jul. 2021 - Sep. 2021

- Tutored **10+ hours** on topics such as **algorithms, recursion, state machines, Pygame, Python, and image manipulation**

BrilliantBiome

San Diego, CA

RESEARCH INTERN

Mar. 2021 - Present

- Wrote a **Bash script and Jupyter notebook** that timed a bioinformatics package's (QIIME2) commands compared to its Python API on **Amazon Web Services Sagemaker Studio** which resulted in up to **7 times speedup** of certain computations

Leadership

Association for Computing Machinery at UC San Diego

San Diego, CA

VICE PRESIDENT PROJECTS

May 2022 - Present

- 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
- Uploaded data to **Firebase** database which can be retrieved and displayed by the **Android app**

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 · \LaTeX
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
Foreign Languages	Fluent in Mandarin Chinese