

Stone Tao

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Highlights

- 2x MIT Battlecode **Finalist**, best result: 1st out of solo competitors, 5th overall out of 600+ graduate to HS students around the world
- Developed a **generalized Artificial Intelligence competition framework** that handles infrastructure for competitions and bots in any programming language, allowing users to run a **scalable and distributed** AI competition with any design they want easily.
- Self driven, persistent, full stack engineer and **researching AI and HCI**

Work Experience

Incoming Software Engineering Intern at Quantco

Jun. 2021 to Sep. 2021 | Berlin, Germany

Computer Vision Research Intern at SU Lab

Jan. 2021 to Now | San Diego, USA

- Researching 3D Computer Vision under Professor Hao Su and under the mentorship of Xiaoshuai Zhang. Working on the 3D relighting project

Software Engineering Intern at LaunchDarkly

Jun. 2020 to Sep. 2020 | Oakland, USA

- Worked full stack on **feature workflows**, **semantic patches**, and **conflict handling** to enable state independent scheduling of feature flagging, allowing users to release complex features with confidence. Developed a REST API to enable an approval review system for feature flagging, a feature requested by LaunchDarkly's largest business customers. Used Go, React, and Typescript

Undergraduate Researcher at ProtoLab / Design Lab at UCSD

Oct. 2019 to Now | San Diego, USA

- Researching at the intersection of **AI and HCI**. Currently researching how to achieve more positive results from data, increase trust in data and predictions, through embedding people in ML, crowdwork, and more. Also researching novel approaches to data discussion.
- Worked on technology that facilitates research at the **intersection of social computing and design**, developing tools and techniques that change the way people solve complex problems creatively and collaboratively

Computer Science Tutor at UCSD

Mar. 2020 to June. 2020 | San Diego, USA

- Worked under Dr. Paul Cao to tutor 700+ students in CSE 12: Intro to Basic Data Structures and OO Design
- Interviewed students weekly, wrote auto-grader code and graded programming assignments, helped students during lab hours

Full Stack Developer Intern at TAOS Data

Jun. 2019 to Sep. 2019 | Beijing, China

- Developed a Node.js connector for the company's product, TDengine, a big data platform. Created a **C interface** to enable high speed interaction with TDengine with **subscription**, **async**, and **stream** functionality.

Projects

Fast Neural Style Transfer with Modern TensorFlow 2.0 - Dec. 2020: github.com/StoneT2000/modern-tensorflow-fast-style-transfer

- Improves past work that used old tensorflow v1 with tf v2 for **more efficient** training, data loading, and **cleaner** syntax

Dimensions - Generalized AI Competition Framework - Apr. 2020: github.com/stonet2000/dimensions

- Allows users to easily create their own AI competition that allows for **language agnostic** bots to compete. Can facilitate research into general AI and RL. Provides **Google Cloud** and **MongoDB** integrations to **scale** up a competition in 3 lines of code
- Was used to run UCSD's first ever AI Programming competition. Ran 50,000+ matches per day for just \$2

Polytomizator - Jun. 2018: stonet2000.github.io/Polytomizator/; Code: github.com/StoneT2000/Polytomizator/

- Developed a web app that allows users to create low-poly art in **seconds** compared to the hours it takes with Photoshop. Used image filtering, computer vision techniques, and Poisson disk sampling to auto-generate better low-poly art.

Awards

- **MIT Battlecode (AI Competition) Finalist**: 1st out of solo competitors and 5th overall in 2020, 9th overall in 2019, competing against over 600 teams of high school, undergrad, and graduate students

Education

Undergraduate: University of California San Diego, San Diego, California, Expected graduation date: Jun. 2023

- B.S. double major in Computer Science and Cognitive Science with specialization in Machine Learning and Neural Computation; Major GPA: 4.0/4.0 - Provost Honors List
- Courses: Honors Linear Algebra & Honors Calculus sequence, Graduate Computer Vision (ML meets Geometry), Neurobiology of Cognition, Research Methods (Cog Sci), Advanced Data Structures, Design and Analysis of Algos, Data Science in Practice
- Activities: Founding president of ACM AI at UCSD. Member of Tau Beta Pi Honors Engineering Society at UCSD

Skills

- **Programming Languages**: Typescript, Python, Go, C, C++, Java, PHP, Javascript
- **Frameworks/Engines/Libraries**: TensorFlow, Pandas, Numpy, Matplotlib, Seaborn, Node.js, React, MongoDB, GraphQL, Express.js, MySQL, LAMP
- **Tools**: Docker, Google Cloud, Jupyter Notebook, Git, Adobe Photoshop

Other

- **Sports:** Competitive fencer. Assistant coach at the La Jolla Fencing Academy.
- **Languages:** Fluent English and Chinese
- **Interests:** Artificial Intelligence, Design, Physics, Mathematics (Primarily combinatorics)

References

Available upon request