

# Stone Tao

Email: stonezt2019@gmail.com | Website: stonet2000.github.io | GitHub: github.com/StoneT2000

## 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

### 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
- 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

- Working under Dr. Paul Cao to tutor 700+ students in CSE 12: Intro to Basic Data Structures and OO Design
- Interviewed students weekly, graded programming assignments, helped students during lab hours, wrote Java assignment test cases

### 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.
- Developed the company website <https://www.taosdata.com>. Integrated Wordpress as a **headless CMS**, serving up to 18k+ daily users

## Projects

### Dimensions - Generalized AI Competition Framework – Apr. 2020 (Repository Link: [github.com/stonet2000/dimensions](https://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 reinforcement learning. 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

### IgushArray Java/JS – Sep. 2019 (Repository Link: [github.com/StoneT2000/IgushArray-Java](https://github.com/StoneT2000/IgushArray-Java))

- Developed the first Java and JS implementation of the IgushArray, which has the same time complexities on operations as the ArrayList, including  $O(1)$  access time, but with improved insert and removal times of  $O(\sqrt{n})$ .

### Polytomizator – Jun. 2018 (Link: [stonet2000.github.io/Polytomizator](https://stonet2000.github.io/Polytomizator), Repository Link: [github.com/StoneT2000/Polytomizator/](https://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 help 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
- Courses: Honors Linear Algebra & Honors Calculus sequence, Neurobiology of Cognition, Research Methods (Cog Sci), Advanced Data Structures, Design and Analysis of Algos, Computer Vision, Data Science in Practice
- Activities: ACM at UCSD - Founding President of the AI suborg, working towards fostering an AI community at UCSD through workshops, AI competitions, and out reach. Developed a membership portal for over 1000+ students.

## Skills

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