

# Stone Tao - Resume

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## Highlights

- 2x MIT Battlecode **Finalist** (best placing: 1st out of solo competitors, 5th overall)
- Developed a **generalized Artificial Intelligence competition framework** that handles infrastructure for competitions and bots in any programming language, allowing the user to run a fully **scalable** AI competition with any design they want and with no hassle.
- Independently developed & designed a commercial website for the tech company TAOS Data, with traffic up to **18k+ daily users**

## Skills

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

## Experience

**Incoming Software Engineering Intern at LaunchDarkly - June 2020 to Sept. 2020 | Oakland, USA**

**Founding President of ACM AI at UCSD - May 2020 to Now | San Diego, USA**

- Founded ACM AI at UCSD under the goals of cultivating a community of AI enthusiasts and making AI more accessible and fun
- Spearheading the development of UCSD's **first ever AI Competition**, and leading the development of workshops for students on AI. Working towards creating outreach programs to inspire a next generation of AI enthusiasts.

**Software Engineer at ProtoLab / Design Lab at UCSD - Oct. 2019 to Now | San Diego, USA**

- Developing the Design for San Diego platform with Typescript, Firebase, React, Redux, Webpack under Dr. Steven Dow
- Developing our own React component library as an extension of ant-design

**Computer Science Tutor at UCSD - Mar. 2020 to Now | San Diego, USA**

- Working under Dr. Paul Cao to tutor CSE 12: Intro to Basic Data Structures and OO Design
- Interview students weekly, grade programming assignments, help students during lab hours, write 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, an open source big data platform with over 11,000+ stars on GitHub. Created a **C interface**, promise based, multi-level API, and used buffers for high speed, effortless interaction with TDengine.
- Independently developed and designed the company website <https://www.taosdata.com>. Integrated Wordpress as a headless CMS

## Selected Projects

**Dimensions - Generalized AI Competition Framework (43+ stars) - Apr. 2020** (Repository Link: [github.com/stonet2000/dimensions](https://github.com/stonet2000/dimensions))

- Developed a open sourced **generalized AI competition framework** in **Typescript**. The framework handles all the infrastructure, enabling users unlimited freedom in designing any kind of AI competition in any language. The framework allows for **language agnostic** bots to compete in any design and may help facilitate research into general AI and reinforcement learning.
- Provides **Google Cloud** and **MongoDB** integrations to **scale** up a competition in a few lines of code

**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 consisting of high school, undergrad, and graduate students
- **IEEE at UCSD Quarterly Projects++ 1st Place:** Collaborated on an IoT themed based farm that auto-irrigates and collects time-series data to present improved user feedback on plant growth, built over one quarter at UCSD - Sep. 2019 to Nov. 2019

## Education

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

- B.S. Computer Science and Engineering, Intend to double major with Cognitive Science; Major GPA: 4.0/4.0
- Past Courses: Honors Linear Algebra, Honors Multivar. Calculus, Discrete Math, Neurobiology of Cognition
- Selected current courses: Honors Vector Calculus, Advanced Data Structs., Research Methods (Cog Sci)
- Activities: ACM at UCSD - Develop software to run the club such as website and membership portal for over 1000+ students

## **Other**

- **Sports:** Competitive fencer. Assistant coach at the La Jolla Fencing Academy. Founded the fencing club at the International School of Beijing.
- **Languages:** Fluent English and Chinese
- **Interests:** Web Development, Artificial Intelligence, Physics, Mathematics (Primarily combinatorics)

## **References**

Available upon request