

Stone Tao - Resume

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Highlights

- 2x MIT Battlecode **Finalist** (best placing: 5th overall, 1st out of solo competitors)
- 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:** (Advanced) Javascript, Typescript; (Proficient) Java, Python; (Basic) PHP, C, C++
- **Frameworks/Engines/Libraries:** (Advanced) Node.js, Google Cloud (Proficient) MongoDB, GraphQL, React, MERN, Matplotlib, Seaborn, Pandas, Numpy; (Basic) Keras+TensorFlow, MySQL, LAMP
- **Software:** Adobe Photoshop, Jupyter Notebook, Git

Experience

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 workshops on AI.

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

- Developing 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 some assignment test cases

Full Stack Developer Intern at TAOS Data – Jun. 2019 to Sep. 2019 | Beijing, China

- Independent 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. Implemented subscription, sync and async, and stream functionality.
- 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)

- Developed a **generalized AI competition framework** in Typescript. The framework handles the infrastructure, enabling users **unlimited freedom** in the design of any kind of AI competition in any language. The framework allows for **language agnostic** bots to compete in any design. Furthermore, the framework may support and 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)

- 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, Repository Link: 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:** 5th overall and 1st out of solo competitors in 2020, 9th overall in 2019, competing against over 600 teams consisting of high school, undergrads, 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

- Current Major: Computer Science and Engineering. Intend to double major with Cognitive Science with Specialization in Machine Learning and Neural Computation ; 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, help run campus events

Other

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

References

Available upon request