

Stone Tao - Resume

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Highlights

- 2x MIT Battlecode Finalist (best placing: 5th overall, 1st overall out of solo competitors), finished 66th in Halite 3 out of 4000+ professionals and students.
- Independently developed & designed a commercial website for the tech company TAOS Data, with traffic up to 18k+ daily users.
- Developed the first Java version of the IgushArray, which works like ArrayLists but with improved $O(\sqrt{n})$ removal and insertion

Skills

- **Programming Languages:** (Advanced) Javascript, HTML/CSS; (Proficient) Java, Python, Typescript; (Basic) PHP, C, C++
- **Frameworks/Engines/Libraries:** (Advanced) Node.js, node-ffi, jQuery; (Proficient) React.js, MERN, GraphQL, WordPress, Matplotlib, Seaborn, Pandas, Numpy; (Basic) Keras+TensorFlow, MongoDB, MySQL, LAMP
- **Software:** Adobe Photoshop, IntelliJ, Jupyter Notebook, Git, Google Analytics

Work Experience

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

- Currently developing our team's own design system and component library that is an extension of the Ant Design library
- Developing Design for San Diego platform with Typescript, Firebase, React, Redux, Webpack, moving to MongoDB, Express later

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

- Independent developed Node.js connector to company's product, TDengine, an open source big data platform with over 10,000+ 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, optimized SEO, used Aliyun, Apache, PHP, MySQL, Node.js, Express.js and Google Analytics as well.
- Developed parsers to parse and sync markdown docs on GitHub with those on the company website to allow community to edit our documentation as well. Additionally edited and reviewed tech blog.

Selected Projects

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 $O(\sqrt{n})$.

AI Visuals – Jan. 2019 to Present (Link: stonet2000.github.io/AIVisuals, Repository Link: github.com/StoneT2000/AIVisuals/)

- Using raw Javascript and TensorFlow.js to create visualizers of machine learning algorithms and concepts such as K-means.

Online English Learning Platform – Sep. 2018 to May. 2019 (Link: esee.isb.bj.edu.cn, Repository Link: It is a private repository)

- Collaborated on developing a platform for local Chinese students to easily read English books from my school's library anywhere and anytime. Contributed to overall design, book procession and integrating text-recognition for digitizing library books.

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
- A mix of image filtering, computer vision techniques, and Poisson disk sampling help auto-generate better low-poly art.

Awards

- **MIT Battlecode (AI Competition):** Finalist, 9th overall in 2019, 5th overall and 1st overall out of solo competitors in 2020, 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
- **Halite 3 (AI Competition):** Placed 66th out of 4000+ students and professionals globally. Placed above Two Sigma's base bot. 5th placed high school student out of 500+ HS students. 1st place JavaScript bot - Jan. 2019
- **USA Mathematical Talent Search 2018:** Silver Medal – May 2018
- **High School (International School of Beijing) Math Award:** May 2016, May 2019

Education

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

- Current Major: Cognitive Science with Specialization in Machine Learning and Neural Computation, Intend to double major with Computer Science and Engineering; GPA: 4.0/4.0
- Past Courses: Data Struct. and OO Design, Honors Linear Algebra, Discrete Math, Neurobiology of Cognition
- Selected current courses: Honors Multivariable Calculus, Computer Organization and Systems, Math for Algos. and Systems
- 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