Stone Tao - Resume

Nationality: U.S.A | Email: stonezt2019@gmail.com | Website: stonet2000.github.io | GitHub: github.com/StoneT2000

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

Work Experience

Software Engineering Intern 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

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 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

Selected Projects

Dimensions - Generalized AI Competition Framework – 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. The framework allows for language agnostic bots to compete in any design. Furthermore, the framework may support and help facilitate research into general AI.

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
- 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; 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