Stone Tao - Resume

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

Highlights

- Full Stack Developer, and a MIT Battlecode Finalist
- Primarily program with JS and Java
- Developed the first Java version of the IgushArray, which works like ArrayLists but with improved $O(n^{1/2})$ removal and insertion

Skills

- **Programming Languages:** Java, Python, Javascript, PHP, HTML, CSS.
- **Frameworks/Engines/Libraries:** MySQL, Node.js, Express.js, React.js, GraphQL, SASS, Gulp, WordPress, Matplotlib, Seaborn, Keras+TensorFlow
- **Software:** Adobe Photoshop, Adobe Brackets, Jupyter Notebook, IntelliJ IDEA, Atom (Code Editor)

Work Experience

Full Stack Developer Intern and Designer at TAOS Data – June. 10, 2019 to Sept. 21 | Beijing, China

Developed and Designed the company website: https://www.taosdata.com.

- Developed to support English and Chinese, whilst also implementing WordPress and semantic HTML and meta tags.
- Setup an email server and forms to auto send emails to users who subscribe or download software.
- Web Tech Stack: Aliyun, Apache, PHP, MySQL, Node.js, Express.js, WordPress, Google Analytics
- Production Pipeline/Workflow: XAMPP, Git, Brackets, Autoprefixer, UglifyJS 3, SASS

Developed a Node.js Connector for the company's product, TDengine, an open source big data platform designed and optimized for IoT. GitHub repository at github.com/taosdata/TDengine/, gaining 10000+ stars and 2600+ forks within 2 months after the initial open source release. Connector code at github.com/taosdata/tdengine/tree/master/src/connector/nodejs

- Developed and continue to manage the Node.js connector that allows Node.js applications to connect to TDengine.
- Created a C interface and used buffers to allow for high speed interaction with TDengine, creating sync and async functions with promises as well as implementing subscription and stream functionality.
- Wrote documentation for the connector and compiled with JsDocs, published to http://docs.taosdata.com/node

Improved workflow and quality of documentation for TDengine

- Developed Node.js parsers that sync the documentation on the website and the local documentation posted on the GitHub repo with the markdown docs, easily allowing the community to edit our documentation.
- Wrote, reviewed, and edited documentation and tech blogs, whilst working closely with the other employees.
- Introduced Typora as a markdown editor with the company website's CSS theme to display markdown the same exact way it would display on the website. Introduced a set of standards for documentation formatting.

Designed backdrops and posters

- Designed for the company for the Shenzhen Arch Summit, the Shenzhen IOTE conference, and the company's meetups, working closely with the CEO on making final design decisions.

Selected Projects

IgushArray Java/JS – Sept. 2019 to Present (Repository Link: https://github.com/StoneT2000/IgushArray-Java)

- Developed the first Java implementation of the IgushArray, which provides the time complexities on operations as the ArrayList, including $O(1)$ access time, but with improved insert and removal times of $O(n^{1/2})$. Works as a one for one replacement for ArrayLists in code. Created JS version at https://github.com/StoneT2000/IgushArray-JS, which implements many of the same methods the built in JS array has according to the ECMA 262 specifications.

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

- A personal project where I use raw Javascript and TensorFlow.js to create visualizers of the machine learning process. So far, I have implemented a simple polynomial fitter and K-means.

Online English Learning Platform – Sept. 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. Created in collaboration with the Empowerment Through Self Esteem Education (ESEE) service club.
- Developed the front and back-end of the platform. Primary contributions are the overall design, book procession and integrating text-recognition for digitizing library books, live translation, and anti-cheat system for recording reading times.

Polytomizator – June 2018 (Link: stonet2000.github.io/Polytomizator, Repository Link: github.com/StoneT2000/Polytomizator/)

- Developed a user-friendly web app that allows users to create low-poly art in seconds compared to the hours it takes to create with Adobe Photoshop or Illustrator. Users can fine-tune the low-poly art or have the site auto-generate the art.
- A mix of image filtering, computer vision techniques, and Poisson disk sampling help auto-generate better low-poly art.

Awards

- **MIT Battlecode 2019 (AI Competition)**: Finalist, 9th overall, 4th out of high school teams (Competed in JS) – Jan. 2019
- **Halite 3 (AI Competition)**: Placed 66th out of 4000+ students and professionals globally. Achieved admiral status by placing above Two Sigma's base bot. 5th placed high school student out of 500+ HS students. 1st place JavaScript bot. – Nov. 2018 to Jan. 2019
- **USA Mathematical Talent Search 2018**: Silver Medal – May 2018
- **School (ISB) Math Award**: May 2016, May 2019

Education

Undergraduate: University of California San Diego, San Diego, California, Expected Graduate Date: June 2023
- Current Major: Cognitive Science with Specialization in Machine Learning and Neural Computation
- Current GPA: 4.0/4.0
- Selected Courses Taken: CSE 11 (Intro. to CS and Object-Oriented Programming: Java)
- Intend to double major with Computer Science and Engineering

High school: International School of Beijing (ISB), Beijing, China, Graduation Date: May 2019
- 4.20/4.30 GPA, Class Rank: N/A, IB Grades – Math HL: 7/7, Physics HL: 7/7, Chemistry HL: 7/7, Economics HL: 7/7, English A Language and Literature SL: 6/7, Spanish AB Initio SL: 6/7, TOK and EE: 3/3; IB Total 43/45

Community Engagement

Collaborated with an American/Chinese non-profit organization to present my experiences on AI competitions, June. 29 2019
Presented an one hour presentation on AI and my experiences with Halite and Battlecode through the QianLiao platform, gaining nearly 600 views. Posted script and resources to my GitHub: github.com/StoneT2000/AI-Seminar-Script-and-Resources/

ESEE, Co-executive of multi-media department, 2018 to 2019
Collaborated on the online English learning platform for the Empowerment Through Self Esteem Education service club.

Sports

Fencing: Competitive fencer. Currently an assistant coach at the La Jolla Fencing Academy. Founded the fencing club at my high school, ISB.

Languages/Interests

Languages: Fluent English and Chinese, Basic Spanish. | **Interests:** Web Development, Artificial Intelligence, Physics, Mathematics (Primarily combinatorics)