

Ricky Xiang

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SKILLS

- Languages: C++, Java, Javascript, R, CSS, HTML, Python, SQL, etc.
- Frameworks: OpenGL, NodeJS, Express, Swing, TypeScript, SQLite, MongoDB, React, etc.
- Knowledge: Computer Graphics, Computer Networks, System Design, Parallel computing, etc.
- Tools: Webpack, Github, Docker, PACS, Angular, Chrome DevTools, AWS, etc.

EXPERIENCE

Translational MRI, LLC

Los Angeles

Junior Software Engineer

September. 2018 – Now

- Developed Arterial Spin Labeled (ASL) Perfusion MRI image processing software GUI utilizing **Java Swing** and **AWT** and established database with **SQLite**.
- Implemented DICOM series processing, skull stripping and perfusion analysis with **ITK** python.
- Upgraded ASL software to a medical imaging send and receive server directly to MRI machine and PACS server using **DCMTK**, **dcm4chee**.

Alibaba Group

Beijing

Software Developer Intern

June. 2016 – September. 2016

- Worked with agile team to develop Bayesian Network WebApp and **REST API** client as part for Machine Learning platform with **Docker**
- Improved Bayesian Network database with string support, deletion data clean up, name checking with **SQLite**
- Implemented model deletion, evidence query and string display on User Interface with **React.js**.
- Improved **49%** speed with **multiprocessing** on Network Structure Discovery for Bayesian structure learning.

PROJECTS

LivePost

Website: <http://zhihai-mean-angular-node.s3-website.us-east-2.amazonaws.com/>

- Implemented a Instagram-Like Post-sharing website single-page web application with functions of image upload, data pagination, user authentication, authorization and error handling.
- Developed the Ajax based frontend with **Angular**, backend with **NodeJS** and **Express**, handling Data with **MongoDB** (MEAN Stack), and hosted website using **AWS S3** and **EC2**.

ARBIMON Bio-acoustic analysis platform

- Build interactive web service app with **R shiny** that enables users to store, manage, transfer, browse, visualize and annotate acoustic monitoring data.
- Implemented ordination analysis using **vegan** package and **glmulti** model and visualized result with ggplot and plotly 3d surface plot.

4DdMRA Volume Rendering Application *Example: <https://www.youtube.com/watch?v=V3pZjMUBdNg>*

- Developed the program by using **OpenGL**, **GLSL** and enhanced the performance with **OpenMPI** message passing by **70%** and improved existing denoising algorithm on market.

Http Caching Proxy

- Developed a proxy server functioning with **Http request** like **GET**, **POST**, **CONNECT**. Used **LRU cache** to store responses by parsing tags in Http header. Revalidated and expired response if needed. Properly dealt with different error codes, created understandable log files
- Used **thread pool** to scientifically dispatch tasks to protect proxy from malicious attack.

EDUCATION

University of California, Davis

Davis

Bachelor of Computer Science

September 2014 – September 2018