ZHENG MA

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Objective

Self-trained software engineer/web developer and PhD (expected to graduate 2017) in computational chemistry seeking for software engineer position to leverage my knowledge and experiences on designing, implementing and testing software and web applications.

Skill Set

C, Bash, Python, Scala, JavaScript/ES 2015, Java, MATLAB/Octave, Markdown;
Machine Learning/Deep Learning, Hadoop/YARN, Apache Spark, TensorFlow, SLURM, MongoDB;
Node.js, AngularJS, Express.js, socket.io, React/JSX, Django, Twitter Bootstrap, HTML5, CSS3, SASS/SCSS;
Linux, Git, LaTex, Github Electron, Quantum Chemistry Simulation;

Education

PhD in Computational Chemistry, March 2017 (expected), DUKE UNIVERSITY – DURHAM, NC

Bachelor of Science in Chemical Physics, July 2010, UNIVERSITY OF SCIENCE AND TECHNOLOGY OF CHINA (USTC)

Projects & Experiences

Scientific Computing & Software Engineering

- Developed NEqMD-ToolKit (http://bit.ly/2c8uX47), a C/Fortran-based comprehensive Unix/Linux command-line tool set, to facilitate scientific research and data analysis in computational chemistry;
- Prepared lib-NEqMD, a C style library/API to assist further NEqMD-ToolKit development as well as an MPI wrapper to enable parallel computing features for NEqMD-ToolKit;

Front/Back-End Web Development for ApolloBox (www.theapollobox.com)

- Created responsive and interactive front-end UI as well as administrative tools for marketing team;
- Implementing a back-end inventory managing system for automatic order/inventory processing with Node.js and Express.js;
- Building next generation of ApolloBox website using python Django and React;

Other Web Development

- Developed an interactive drawing board (http://bit.ly/2ctPS0g) web/desktop application using MEAN stack, Twitter Bootstrap and Github Electron;
- Developed a remote control plugin for reveal.js presentation framework and provided API;

Data Analysis & Management

- Managing cloud-based SQL database for ApolloBox inventory and order system;
- Implementing a product recommendation system for ApolloBox using Spark and MLlib;
- Set up and managed a sharded NoSQL database to store, query and backup TB scale of data from research;
- Performed data analysis/mining using distributed computing platform such as SLURM and Hadoop/YARN;
- Facilitated data analysis by integrating different simulation steps into an automated workflow;