Hao Zhao

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EDUCATION

University of Pittsburgh   Pittsburgh, PA
School of Computing and Information GPA: 3.80/4.00   Aug 2018 – May 2020
Beihang University   Beijing, China
Master of Science in Mathematics GPA: 3.86/4.00   Sept 2015 - Mar 2018
Dalian University of Technology   Dalian, China
Bachelor of Science in Applied Mathematics; GPA: 3.60/4.00   Sept 2011 - Jun 2015

SKILLS

Programming Languages: Java, C/C++, Python, JavaScript, HTML, CSS, MATLAB
Frameworks: Spring Boot, React, Ember.js, Apache Camel
Tools: Apache ActiveMQ, MySQL, OpenCV, MPI, Amazon S3, Azure, Git, Jira

EXPERIENCE

Bosch (Cloud-based Services Team)   Pittsburgh, PA
Software Developer Intern   May 2019 – Aug 2019

- Developed the command-line wrapper pipeline to automatically execute utility binary tools by **Apache Camel**
- Implemented the web app component using **Spring Boot** and **Ember.js** to scan metadata gaps from **Amazon S3** buckets, send the gaps' messages to command-line wrapper component through **ActiveMQ** to recover missing metadata and upload recovered data back to S3 buckets
- Involved in an **Agile** software development route and handled technical troubleshooting with an enterprise environment, including system crashes, API cleanup and code refactoring
- Tested the Camel route and services with **Integrating Tests** and **Unit Tests**

School of Health and Rehabilitation Sciences, University of Pittsburgh   Pittsburgh, PA
Software Developer (Part-time)   Dec 2018 – Apr 2019

- Maintained a Smart House desktop application using **C#** with Z-Wave sensors and Bluetooth Low Energy to help the disabled to control their home functions
- Configurated sensors with different home appliances and customized the notification functions for them
- Implemented a web application back-end with **Spring Boot** to interact with Garmin Health API to collect the usage data and provide continuous data for the disabled

Metoak: an innovative startup providing visual sensing module for autonomous vehicles   Beijing, China
Computer Vision Algorithm Engineer Intern   May 2018 - Jul 2018

- Compared the corner detection and optimization algorithm between **OpenCV** and **MATLAB** Stereo Camera Calibration Toolboxes and found out their differences
- Implemented the automatics camera calibration algorithm in the **Linux** environment for stereo camera calibration using **C++** that reduced calibration time by 20%

Laboratory of Mathematics Informatics and Behavioral Semantics   Beijing, China
Research Assistant   Sept 2015 - Mar 2018

- Worked in the **High-Performance Computing** team to conduct parallelized optimization algorithm research and design sponsored by NSF
- Researched and designed a parallel algorithm using **C++** and **MPI** to increase performance of specific stochastic approximation algorithm on the supercomputer
- Published paper on the topic regarding parallelized optimization algorithm in the international conference

PROJECT

Electrical Devices E-Commerce Web Application   Pittsburgh, PA
Database management Course Project   Oct 2018 – Dec 2018

- Created and launched a web application selling the electrical devices including customer and salesperson portals
- Built **RESTful** API with **Spring Boot** to handle **Ajax** call from front-end and used the **MyBatis** for interaction with the **MySQL** database.
- Designed a user-friendly interface with **React**, and detailed **CSS** design
- Realized customer functions, including sign-up, log-in, searching products, adding to the cart and checking out
- Realized owner functions: including adding, revising, searching, deleting information of customers and products