Zhuo Jia

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Education

Duke University North Carolina, USA
Master of Science, Computer Engineering, GPA: 3.72/4.00 Aug.2014 - May.2016
Coursework: C++, Algorithm, Distributed System, Operating System, Network Architecture, Computer Vision.

Chongqing University Chongqing, China
Bachelor of Science, Electrical Engineering, GPA: 3.56/4.00 Sept.2010 - July.2014
Selected Awards: National Academic Scholarship (Top 2%), Meritorious Winner Award in 2013 MCM/ICM of USA.

Technical Skills

- **Programming languages:** C++, Go, C, Python, JavaScript, bash.
- **Web development:** HTML, CSS, React.js, MeteorJs, NodeJS, Bootstrap.
- **Database:** MySQL, SAP HANA, MongoDB, Redis, M3.
- **System/tools:** Linux, Git, AWS, Docker, Grafana, Jaeger, Heroku, Nginx, gdb, Valgrind, gRPC, Thrift, Google Test.

Working Experience

Software Engineer II, Eats Infrastructure, Uber, San Francisco, USA Apr.2019 – Present
- Tech lead of observability area (monitoring/logging) of Uber Eats and owner of Eats Core Flow Blackbox tests.
- Built OMG Muttley, a command-line tool for Uber engineers to route Uber network traffic of micro-services to different data centers with only 1 command line. Saving time and millions during outage and migration.
- Improved traffic balance with research of subset optimization, and helped CPU usage more evenly across servers.
- Lead architecture, design and development of Reliability Engine to generate and manage Service Level Agreement (SLA) for hundreds of Uber services across Eats, Uber Freight, NeMo(Scooter/Jump), Map, etc.
- Integrated a 3rd-party software into Uber infrastructure to serve as the new US tax calculation engine for Uber Eats and designed an automated flow to update reference tax data.
- KTLO: Eats Core Infra oncall, incident reviewer, productionization proposal reviewer.

Software Developer, SAP Labs, CA, USA Jun.2016 – Apr.2019
Native Disk Storage Team, San Ramon, CA
- Working for next generation of HANA database core storage by reducing memory footprint for big volume data.
- Designed efficient search algorithm in page-loadable data vector and implemented table load unit conversion.
- Extended paged capability for compressed attributes with different compression algorithms, and improved optimized compression with in-place writer, to avoid unnecessary copying of some storage components.

Smart Data Quality Team, La Crosse, WI
- Contributed defensive and testable code to extend ability of back-end parallel task framework of HANA database.
- Submitted bug fixes, feature enhancements and unit/E2E tests for HANA with **C++11, Python** and **SQL**.
- Improved around 45% time efficiency for a multithread scenario of SDQ by finding hotspots to optimize lock.

Projects

Tensor News Feb.2017 – Apr.2017
- Built a news scrapper and a message pipeline individually based on **micro web services**, which are implemented in **Python** and **RPC**, and also used **Redis** as cache, **Rabbit MQ** as message broker queue, and **MongoDB** as database.
- Designed a time-decay user preference model and log processors to update user preference based on user behaviors.
- Implemented a 2-layer CNN news classifier with **Tensor Flow** and NLP techniques, reaching about 81% accuracy.
- Designed a news recommend system based on above preference model and trained news classifier, using front end skills like **React.js**, **Node.js**, **Express**, and also enabled features including user sign up/sign in, lazy-load news, etc.
- Deployed the app to **AWS** with **Nginx** as caching reverse proxy, and kept the app alive with PM2 process manager.

Duke Flea Market, https://dukemarket.herokuapp.com Apr.2016 – May.2016
- Designed an eCommerce web app individually for school flea market based on MeteorJS stack.
- Enabled multiple features mainly including user credential, post/edit/delete of information, comments, like button, collection button, and social media integration with **JavaScript** and **MongoDB**.

Hola Chat, https://holachat.herokuapp.com Feb.2016
- Implemented a real-time chat app for code interview based on **Node.js**, **Express**, **Socket.io**, and **Redis**.
- On right side, built a collaborative code editor showing different user cursors and their real-time typing actions, and applied **Redis** to restore snapshot of editing contents so that new users in the room can catch up editor context.

Raft, Distributed System Course Project Apr.2015
- Implemented Raft distributed consensus protocol, including leader election and log maintenance process**.**
- Minimized and resolved split-votes issue by using randomized election timeout in leader election.
- Maintained consistency between logs on different servers through 2-phase commit process in master-slave system.