Zeyuan Hu

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EDUCATION

University of Texas

Austin, TX

Sept 2017 – May 2019

• M.S. in Computer Science. (GPA: 3.81/4.00)

University of Wisconsin

Madison, WI

Sept 2010 - Dec 2014

- B.A. in Computer Science. (GPA: 3.74/4.00)
- B.A. in Economics with Honors. (GPA: 3.85/4.00)
- B.A. in Mathematics. (GPA: 3.81/4.00)

WORK EXPERIENCE

Omnia storage team

Cloud Architect Engineer

State Street Financial Service

June 2019 - Current

- Developing auto-deployment system of IBM Cloud Object Storage in multi-site clusters using Ansible, Docker
- Leading development of a distributed workload generator and performance benchmark toolkit written in Go

Software Engineer Internship

Schlumberger

May 2018 – August 2018

HPC infrastructure team

- Implemented a monitoring component of the in-house High-Performance Computing (HPC) engine in $\underline{\mathtt{C++}}$ to provide the fault tolerance and handle the "straggler" problem
- Employed SGD algorithm to dynamically learn the best timing for backup executions of the in-progress tasks based on the computation task characteristics
- Built a C++ code generator that automatically generates the application layer code based on the engine API

Software Engineer

IBM

August 2015 - August 2017

Db2 LUW federation team

- \bullet Constructed <u>Hive</u> and <u>Impala</u> wrappers with <u>C++</u> and <u>Java</u> to support federation database between traditional RDBMS and Hadoop-based data warehouse solution
- Created automated setup tools with <u>Shell</u> that reduce product configuration time by 75%
- Enhanced server option optimization tools using $\underline{\mathbb{C}}$ to reduce federation database performance tuning time by 90 % and enable the capability of tuning the product against Hive, Impala, and Spark
- Resolved over 20 defects, including a severe memory leak issue that impacted a \$1.6 million deal. Awarded IBM Manager's Choice Award 2016

SELECTED PROJECTS

- RustFS (2018). Building a user-space file system that leverages NVMe SSD. Rust, SPDK
- Strata with Lease (2018). Extended Strata file system with Lease mechanism to support concurrent file access across processes. <u>C</u>.
- **HyperPebblesDB** (2018). Constructed a key-value store that is part of LevelDB family with focus on reducing write amplification. <u>C++</u>, <u>CMake</u>, <u>Autotools</u>
- Distributed Key-Value Store (2018). Built a distributed key-value store with Python that uses eventually consistency model with two session guarantees: Read Your Writes and Monotonic Reads.

LANGUAGES AND TECHNOLOGIES

- Languages: C++, C, Python, Go, Rust, Shell, SQL, Java, Elisp, MATLAB
- Software: CMake, Autotools, Git, Docker, Ansible, QEMU, Tensorflow, Keras, ClearCase, Hive, Impala, Maven, Hadoop