Leiyu Zhao

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EDUCATION

Carnegie Mellon University, School of Computer Science   *Aug. 2016 to Dec. 2017*

Systems Track, Master of Computational Data Science (MCDS, formerly VLIS); Advisor: Garth Gibson

Core Courses: Operating Systems, Cloud Computing, Distributed Systems, Storage Systems, Parallel Programming, Advanced Cloud Computing, Database Systems; GPA: 4.07 /4.33

Tsinghua University, School of Software   *Aug. 2012 to July 2016*

Bachelor of Engineering (B.Eng.), Computer Software Engineering; GPA: 3.94/4.00

EXPERIENCE

Facebook, Storage Group, Archival Team   *Mar. 2018 to Present*

Software Engineer, C++14/Asynchronous large-scale storage

Participate building a super large-scale service managing the backup & restore for entire Facebook data with low expense!

Facebook, Core Systems Group, Shard Manager Team   *May. 2017 to Aug. 2017*

Software Engineer Intern, C++14/Sharding-as-a-Service/Zookeeper/Thrift/Python

Design & implement *Storm Policy* for *Shard Manager*, provide better semantics and availability when handling massive server failure. Applied in prod tier and benefits services at Facebook across all datacenter regions, feeling proud of it

Microsoft, Operating Systems Group China (OSGC, ARD)   *Mar. 2015 to July 2015*

Software Developer Intern, C#/WPF/.NET/UWP

Develop built-in universal apps for Windows 10 Chinese Market Release, like *Nearby Numbers* and *Microsoft Couplet*

Tsinghua, Cloud Computing Group, Institute of Trustworthy Networks and Systems   *June 2015 to July 2016*

Research Assistant, Golang/Python/OpenStack/HDFS/Ceph

Deploy OpenStack to back up THU Cloud Computing Platform; Design & implemented H2Cloud, a cloud storage service

SELECTED PROJECTS

CloudFS (Hybrid Storage System)   *Oct. 2016 to Dec. 2016*

FUSE-based filesystem on Linux to store files in hybrid mode & utilize the speed of SSD and high capacity of cloud storage

Hidden complexity for applications; Full support for deduplication, local caching, snapshot & instant recovery

Accel.js   *Mar. 2017 to Present*

A package helping developer using simple primitives to run Node.js programs on multicores and multi-nodes

Win 2nd prize (out of 110 projects) in CMU 15-418 Parallelism Competition (by judges from Intel and NVIDIA)

H2Cloud   *Sept. 2015 to Apr. 2016*

Cloud storage system supporting full-fledged filesystem based on a single object storage cloud

Faster than OpenStack Swift in filesystem operations, while more reliable than Dropbox in filesystem storage

LevyOS (Mini OS Kernel)   *Oct. 2017 to Dec. 2017*

Full-fledged OS Kernel with support for preemptive process scheduling, multi-threading, multi-console, VM hosting, etc.

Built on my own from zero with 11k+ lines of C. Feeling very proud of it.

Zijing Zhi Sheng (the Sound of Tsinghua)   *Oct. 2014 to Jan. 2015*

Web app offering ticket booking service to all staff at Tsinghua, 3K+ concurrent user requests, 21,000+ users. (Oct. 2015)

Graphical User Interface for UNIX   *Oct. 2014 to Feb. 2015*

In-kernel support to graphic driver, USB-mouse driver and a Windows-like GUI for UNIX kernel (Unix v6)

Js2Jv (ANTLR-based Javascript Interpreter)   *May 2015 to July 2015*

Full-featured Javascript runtime in JVM supporting asynchronous functions, closure, etc. with ECMAScript 3 analyzer

SKILLS

Programming Languages: *Proficient in* C/Golang/C++14/Javascript, *Familiar with* Java/Python/C#/Haskell/Asm-x86;

Algorithms & Data Structures; **Cloud Computing:** AWS/OpenStack; **Distributed/Parallel:** MapReduce/Spark/CUDA;

Web Development: HTML/CSS/Nginx/ExpressJS/Django; **Database:** MySQL/MongoDB/Apache HBase;

SELECTED AWARDS

Bronze Medal in National Olympiad in Informatics   *Aug. 2011*

Top competition in algorithms & data structure in China

Gold Medal in 5th Asia-Pacific Informatics Olympiad   *May 2011*

International competition in algorithms & data structure