

EXPERIENCE

- Facebook Inc.** *Mar. 2018 to Present*
Storage Group, Archival: Senior Software Engineer (*Jan. 2021 to Present*), Software Engineer (*Mar. 2018 to Dec. 2020*)
C++14/Thrift/Asynchronous large-scale storage
Build a super large-scale service managing the archive & restore for tens of exabytes of critical Facebook data with low expense and extreme security features like media diversity and airgap
Core Systems Group, Shard Manager Team: Software Engineer Intern (*May. 2017 to Aug. 2017*)
C++14/Sharding-as-a-Service/Zookeeper/Thrift/Python
Design & implement *Storm Policy* for *Shard Manager* for better semantics and availability under massive server failure
- 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

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

SELECTED PROJECTS

- CloudFS (Hybrid Storage System)** *Oct. 2016 to Dec. 2016*
FUSE-based filesystem on Linux to store files in hybrid mode, utilize both 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)
- 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++14/C/Golang/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