Hao CHEN

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EDUCATION

THE UNIVERSITY OF TEXAS AT AUSTIN

MS in Computer Science
Expected Dec 2017
Major GPA: 3.67 / 4.0

SHANGHAI JIAO TONG UNIVERSITY

BEng in Computer Science
June 2016
ACM Honored Class, Zhiyuan College
Major GPA: 88 / 100

EXPERIENCE

VMWARE, INC

Intern (VMKernel Team)
May 2017 - Aug 2017
Designing and Implementing Redis database on non-volatile memory.

MICROSOFT RESEARCH ASIA

Research Intern (SysAlgo)
Aug 2015 - Feb 2016
Designed and implemented new functionality on Microsoft Azure by using our new primitive 'lock-with-intent'. Have a paper published on OSDI '16.

CORNELL UNIVERSITY

Summer Workshop Student
July 2015
Building systems on the top of NoSQL database system and distributed graph store.

SJTU LAB OF ADVANCED COMPUTER ARCHITECTURE

Undergraduate Researcher
July 2014 – June 2015
Working with embedded GPU devices; designing a repairing algorithm for Carbon Nanotube SRAM.

TEACHING ASSISTANCE

UT Austin

- CS380C Graduate Compilers
- CS375 Compilers
- CS327E Elements of Databases

SJTU

- CS122 Computer Programming

SELECTED PROJECTS

REDIS ON NON-VOLATILE MEMORY Sum. 2016

In-memory database Redis running on non-volatile memory. Similar to using Redis as a cache, but it is on non-volatile memory and keep all the cold data in backed storage (SSD or cloud storage) instead of deleting. Written in **C**.

TAI: THREADED ASYNCHRONOUS IO Win. 2016 -

A **C++** library to replace the POSIX **Asynchronous IO** interfaces and implementations. It has better performance and stronger properties than the existing async IO libraries. Worked with Tongliang Liao.

LOCK WITH INTENT Fall 2015 - Spr. 2016

A toolkit handling **failure recovery** on top of Microsoft Azure Table. It also includes some useful samples like snapshot and transaction which are implemented by the primitives of the toolkit. Published on **OSDI '16**. Working with the team in Microsoft **Headquarters**. Written in **C#**.

N-GRAM AND AUTHORSHIP SEARCH Sum. 2015

A paper search engine built on a **NoSQL database** and **distributed Graph Store**. Similar to Google Ngram. Worked with Ted Yin. Written in **Python**.

NACHOS OPERATING SYSTEM 2014 Fall

A toy operating system written in **Java**, including **thread management, multi-programming, virtual memory and file system**. Originated from NACHOS in UC Berkeley.

C COMPILER 2014 Spring

A C language compiler, which is written in **Java**. It compiles C source code into MIPS assembly code. A lot of **optimizations** are also implemented. Perform perfectly on **all** the tests includes many complicated codes like 8 queens problem , hash maps, network flows and etc.

SCHEME INTERPRETER 2013 Summer

An interpreter for Scheme (R5RS), written in **C++**.

SKILLS

Programming Languages:
Skilled in: C, C++, Java, C# **Very Familiar with:** SQL, Ruby, Python, CUDA, OpenCL
Familiar with: PHP, OCaml, Scheme, Mathematica, Pascal
Operating Systems:
Linux, Windows

PUBLICATIONS

Srinath Setty, Chunzhi Su, Jacob R. Lorch, Lidong Zhou, **Hao Chen**, Parveen Patel, and Jinglei Ren. "Realizing the Fault-tolerance Promise of Cloud Storage Using Locks with Intent". *The 12th Symposium on Operating Systems Design and Implementation (OSDI)*, Nov 2016.

Tianjian Li, **Hao Chen**, Weikang Qian, Xiaoyao Liang, Li Jiang. "On microarchitectural modeling for CNFET-based circuits". *The 28th IEEE International System-on-Chip Conference (SOCC)*, Sep 2015.