

XU ZHANG

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EDUCATION

Carnegie Mellon University, Pittsburgh, US

M.S, Electrical and Computer Engineering (**EXPECTED MAY 2012**)

***GPA: 3.8/4.0**

Concentrating on computer system, distributed system, cloud computing.

Beijing University of Posts and Telecommunications (BUPT), Beijing

B.S, Major in Telecommunication

***GPA: 86.5/100 Major: 89/100**

Honors: Outstanding Graduates Awards (20/500), First Class Graduates

RESEARCH PROJECTS

Shingled Magnetic Recording (SMR), Parallel Data Lab, CMU

May.2011 – PRESENT

Research assistant, advised by Prof. **Garth Gibson** & Prof. **Greg Ganger**

Technologies: File System, Cloud Computing, Distributed System, Performance evaluation

- Researching the usage pattern of SMR with current workloads at data centers.
- Designed and implemented the emulator for the Shingled Disk, in C
- Designed the clean algorithm, and built user-space File System by using Fuse, in C
- Measured the performance of SMR on Open Cloud Cluster, using HDFS as workload.

Drone-RK, Cylab, CMU (<http://www.drone-rk.org/>)

Mar.2011 – JULY.2011

Research assistant, advised by Assistant Prof. **Anthony Rowe**

Technologies: Linux Kernel scheduler, resource Linux kernel

- Built Resource Kernel extensions on standard Linux kernel providing real-time scheduling.
- Developed system infrastructure required for self-contained autonomous UAV application.
- Built real-time system usage monitor in embedded system.

SELECTED PROJECTS

Advanced Operating System & Distributed System, Course Project

SPRING 2012

Technologies: Operating System, Distributed System

- File system measurement study on smart phones, trying to demonstrate reasons causing performance differences between Android and iOS platform.
- Designing Methodologies to collect trace data and system resource usage data.
- Implemented Markov Sentence Generator by using Hadoop MapReduce, in Java

Advanced Storage Systems, Course Project

SPRING 2012

Technologies: Cloud Computing, File System

- Implementing FSCK for ext2 file system
- Developing "Cloud File System" by using Fuse, which leverages the properties of SSDs, HDDs, and Cloud storage (AmazonS3) for data placement and a metadata-specific optimization for efficient storage management queries

Distributed System, Course Project

FALL 2011

Technologies: Distributed System, Parallel Computing

- Implemented a fault-tolerant Bit-Torrent like P2P file sharing system, with cache and concurrent download features, by using Chord Distributed Hash Table.

Intro to Computer System, Course Project

Spring 2011

Technologies: Computer System, Concurrent Programming

- Designing a simple web proxy with multithread mechanism and webpage
- Designing a simple UNIX shell program that supports job control and I/O redirection.
- Implementing a dynamic storage allocator in the C standard library, including malloc, free, realloc and calloc. Optimizing the performance and memory utilization
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Streaming Media System, Networking and Switching Lab and HUAWEI, China Internship

SPRING 2010

- Participated in building fast, scalable, and secure streaming media system that provided adaptive streaming service, by using IIS servers from Microsoft.
- Protocol analysis and modification.
- Built plugin platform for client software.

COMPUTER SKILLS

Languages: C/C++, Java, C#, Perl, Shell Script, x86(_64), MATLAB, SQL, Latex

Parallel Computing: Hadoop Map-Reduce, MPI

Operating System: Linux/Unix, MacOS, Windows

Database: MySQL, NoSQL