Jiangchuan He

CONTACT INFORMATION
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EDUCATION

M.S., Computer Science, University at Buffalo **Sep.2013-Dec.2014**
GPA:3.3/4.0
Coursework: Algorithm Analysis and Design, Machine Learning, Pattern Recognition, Operating System, Distributed System, Fundamental of Programming Language

B.E., Software Engineering, Sichuan University **Sep.2009-Jun.2013**
GPA:3.3/4.0
Coursework: Discrete Mathematics, Data Structure, Database Systems, Computer Architecture, System Programming, Computer Network

HONORS AND AWARDS

Oracle ThinkQuest Competition(Global Top 10% teams) **Jun.2012**
Chinese Sciences Cup(National Top 13 teams) **Sep.2011**

WORKING EXPERIENCE

GSK CNC Equipment Co., Ltd. **Jun.2010-Aug.2010**
Software Engineer Intern
- Learned to use ARM Cortex-M3 processor and STM32 development board.
- Successfully porting x86 μC/OS kernel to ARM Platform.
- Implemented a two-axis machine tool control program based on STM32F103 development board, which was awarded in my Undergraduate Final Project.

Sichuan Hwadee Information and Technology Co., Ltd. **Jun.2012-Aug.2012**
Web Developer Intern
- Designed and Implemented a House-Selling Website.
- Wrote and maintained project documents.
- Implemented and tested front end code.

PROJECTS

Mouse and Keyboard Sharing Application **Feb.2011**
- Implemented a Windows Application which allows user to control multiple computers in a group using one mouse and keyboard device.
- The features included directly dragging files among screens and clipboard data sharing.
- I was the major designer responsible for implementing application structure as well as the features mentioned above.

Concurrent Programming in Java and SML **Sep.2013**
- Implemented Coarse-grained and Fine-grained locking and improved their performance.
- Given test on Doubly linked list with intensively frequent insert and delete operations.
- Implemented message passing using Standard ML(SML/CML) language.

OS161 Kernel Implementation **Feb.2014**
- Designed Synchronization Primitives, System Calls and Process Support, Virtual Memory which supports swapping.
- Used Git to manage source code and shell scrpits to improve efficiency.
- Built everything from startup and completed all the test cases.

Pen-gesture Recognition with Hidden Markov Models **Apr.2014**
- Designed spatial clustering algorithm to extract observation sequences.
- Implemented Hidden Markov Model and used it to give prediction with almost 90% correct rate.
- Designed and implmented prediction algorithm also using Dynamic Time Warping and Viterbi decoding.

Amazon Dynamo(Distributed Key-Value Storage) **May.2014**
- Implemented a Dynamo-style key-value storage using 5 Android emulators.
- Supported the functionality of partition, replication and failure handling.
- Provided both availabiliy and linearizability at the same time using Quorum replication.

COMPUTER SKILLS

Language: x86 and Thumb Assembly, C/C++, Java, Shell Script, Python, Javascript, HTML, CSS
Tools: Vim, Eclipse, Visual Studio, μVision, LaTeX
Operating System: Mac OS X, Linux, Windows, μC/OS