Jiangchuan He

CONTACT
INFORMATION

382 Joe McCarthy Dr
Amherst, NY 14228

Tel: (716) 604-7268
Email: jiangchu@buffalo.edu

EDUCATION

M.S., Computer Science, University at Buffalo   **Sep.2013-Dec.2014(expected)**
GPA:3.29/4.0
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

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

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.
- Developed a two-axis machine tool **control software** 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**
- Designed a Windows MFC 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 creating **application structure** as well as
  implementing the features mentioned above.

Concurrent Programming in Java and SML   **Sep.2013**
- Designed and implemented several granularity locks and improved their performance.
- Implemented Fibonacci servers, events and mailboxes using Concurrent ML(CML).

Harvard OS/161 Kernel Implementation   **Feb.2014**
- Developed a **multicore** operating system kernel which runs on MIPS r2000 simulator.
- The work included implementing Synchronization Primitives, System Calls and Process
  Support, Virtual Memory which **supports swapping**.
- Used Git to manage source code and shell scripts to improve efficiency.
- Built everything from the beginning 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 implemented prediction algorithm also using Dynamic Time Warping and Viterbi
  decoding.

Amazon Dynamo(Distributed Key-Value Storage)   **May.2014**
- Created a Dynamo-style key-value storage using five Android Emulators.
- Implemented the functionality of partition, replication and **failure handling**.
- Provided both availability 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