

Chenlai Zhang

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EDUCATION

Rice University, Houston, TX *expected December 2017*
Master in Computer Science
Shanghai Jiao Tong University (SJTU), Shanghai, China *August 2016*
University of Michigan - Shanghai Jiao Tong University Joint Institute (UM-SJTU JI)
B.S. in Electrical and Computer Engineering

SKILLS

Platforms: Windows, Linux, Minix, Mac OS
Programming Languages: C/C++, Java, Python, HTML, Javascript, CSS, Verilog HDL, MIPS Assembly, MFC, MATLAB
Software: Eclipse, Visual Studio, VC++, VMware, MATLAB, Mathematica, L^AT_EX, Xilinx, PCSpim

WORK EXPERIENCE

Huawei Technologies Co., Ltd. (Shenzhen) *Jan. 2015 to May 2015*
Position: 2012 Laboratories Intern

- Integrated HTTP protocol analysis functions into an online protocol analysis system
- Designed and implemented an effective algorithm to parse certain *.xml files
- Modified functions in an engine library, and added APIs to the library
- Set up different runtime environments for the online protocol analysis system
- Assisted with regular maintenance of the online protocol analysis system

SELECTED COURSE PROJECTS

Pedestrian Detection Using Deep Convolutional Neural Networks (CNN) *Fall 2015*
Sponsored by Intel Corporation (Integrated Electronics Corporation)

- Built a CNN model inspired by CIFAR-10 on Caffe, and refined Caltech Pedestrian Dataset for training
- Designed and implemented an enhanced sliding window algorithm to detect and label pedestrian
- Achieved an accuracy of 96% in every single detection

Microprocessor Based System Design *Summer 2015*

- Designed and implemented a calculator with multiple functions using PIC32 Ethernet Starter Kit
- Designed handwriting recognition algorithm and polynomial model fitting algorithm for the system
- Interacted with MATLAB and controlled brightness of system screen via serial communications

Peer-to-Peer Communications for File Sharing *Summer 2015*

- Designed and programmed BitTorrent clients (uploaders and downloaders), web server, and BitTorrent tracker
- Implemented a BitTorrent protocol for file sharing in different network topologies using socket programming

Simulation and Implementation of 32-bit Central Processing Unit *Fall 2014*

- Designed diagrams for both single-cycle and pipelined implementation of MIPS-Architecture CPU, modeled it in Verilog, and implemented it on FPGA
- Realized functions for forwarding and hazard detection in pipelined implementation

RESEARCH EXPERIENCE

3D Comfort Analysis, School of Electrical Engineering, SJTU *Feb. 2014 to May 2014*
Position: Undergraduate Research Assistant

- Searched for and arranged articles related to explanation and application of SIFT algorithm
- Searched for and realized matlab implementation for SIFT algorithm

HONORS & AWARDS

Academic Excellence Scholarship (Second Class), SJTU, 2014-2015

- Awarded to students who achieve top 10% academic standing each year of their undergraduate studies

Dean's List, UM-SJTU JI, 2013-2014, 2014-2015

- Awarded to students who demonstrate outstanding academic performance

National Third Prize, Chinese Mathematical Olympiad, 2011