Chenlai Zhang

2410 Shakespeare St. Houston, Texas, 77030   Chenlai.Zhang@rice.edu   713-380-8638

EDUCATION

Shanghai Jiao Tong University (SJTU), Shanghai, China   *Sept. 2012 to Aug. 2016*
University of Michigan - Shanghai Jiao Tong University Joint Institute (UM-SJTU JI)
B.S. in Electrical and Computer Engineering
Rice University, Texas, the United States   *Aug. 2016 to Dec. 2017 (expected)*
Master in Computer Science

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

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

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*

SKILLS

Platforms: Windows, Linux, Minix, Mac OS
Programming Languages: C/C++, Java, Python, MFC, Verilog HDL, MIPS Assembly, MATLAB
Software: LaTeX, MATLAB, VC++, Eclipse, Mathematica, Xilinx, PCSpim, VMware, AutoCAD, EndNote X7

EXTRACURRICULAR ACTIVITIES

Volunteer, UM-SJTU JI Supporting Education in Yuxi, Yunnan   *Dec. 2012 to Jan. 2013*