JIYUAN SHEN

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Shanghai JiaoTong University, Minhang District, Shanghai 200240, PR China

EDUCATION

Shanghai JiaoTong University Sep.2013 - Jun.2017
Pilot Class - thirty students selected from top 5% admitted students in SEIEE School
Bachelor of Engineering in Computer Science and Technology
Overall GPA: 3.7/4.0, Averaged Math GPA: 93.4/100

PUBLICATIONS

[1] L. Chen, J. Li, **J. Shen** and L. Jiang, "Learning Variations and Defects: a Neural-network Retraining Method for Fault Tolerance in the RRAM Crossbar", 2017 *Design Automation and Test in Europe* (DATE), Switzerland, Europe (submitted)
[2] **J. Shen**, X. Yang and Z. Fan, "3D Reconstruction of Plant Leaves from Rough Multi-Photos", 2017 *IEEE Winter Conference on Applications of Computer Vision* (submitted)

WORKING EXPERIENCES

Mircosoft Research Asia Sep.2016 - Present
Research Intern, Advisor: Principal Researcher Lin-tao Zhang, System Group

University of California Los Angeles Jul.2016 - Sep.2016
Research Intern, Advisor: Prof. Song-chun Zhu, Department of Computer Science

Visual Media and Data Management Center Sep.2015 - Jan.2016
Research Assistant, Advisor: Prof. Bin Sheng, Department of Computer Science

Institute of Computer Architecture Jun.2015 - Sep.2016
Research Assistant, Advisor: Prof. Li Jiang, Department of Computer Science

China Mobile - Hunan Headquarter Jun.2014 - Aug.2014
Intern, Advisor: Chief Wanzheng Bao, Department of Internet

RESEARCH EXPERIENCES

Medical Body Three-dimensional Scanning and Fusion Aug.2016 - Present
Research Assistant, Advisor: Prof. Li Jiang, Institute of Computer Architecture

- Funded by Shanghai Sixth People's Hospital. Aim at implementing a real-time Fusion of Human Body applied to pathological diagnosis including Skin Prints
- Implemented real-time reconstruction of medical body (skin standard) alpha version based on Kinect

Tracking the US Presidential Elections Jul.2016 - Sep.2016
Research Intern, Advisor: Prof. Song-chun Zhu, Vision,Cognition,Learning and Autonomy Center

- Implemented Tracking on News datasets for year 2008 and 2012 including CNN, FOX, MSNBC etc
- Analyzed top week-topics with mention time(sentences-oriented) after conference resolution
- Displayed the week-topic and topic trajectory in graphs on website

Neural-network Retraining for Fault Tolerance Feb.2016 - Sep.2016
Research Assistant, Advised by Prof. Li Jiang, Institute of Computer Architecture

- Designed redundancy combined with "Kuhn-Munkres" mapping method applied to the model of variation on memristors given by Vortex(DAC15) where features include normal distribution, random presence and weight-error relations instead of hardware RRAM Crossbar computings

- Implemented Redundancy-Mapping on the standard 784×10 Mnist Data Set ($20 - 30\%$ advanced)
- Analyzed the relationship of topology and mapping and improvements of Redundancy-Mapping

Leaf Three-dimensional Reconstruction with Multi-Photos Sep.2015 - Jan.2016

Research Assistant, Advised by Prof. Bin Sheng, Visual Media and Data Management Center

- Designed the Filtering Feature Sequence as KNN ratio test, symmetry test and RANSAC after SURF
- Designed Surface-Stereo Lookup Table that stores current frame plane coordinates with its accordingly triangle three-dimensional coordinates for tracking processing iterations
- Implemented the three-dimensional reconstruction on random reddish-green Epipremnum aureum

Quadrotor Tracking and Identifying Control System Sep.2014 - Nov.2014

- Co-developed a quadrotor control system based on A.R.Drone platform
- Designed line-tracking and color-identifying algorithms
- Realized video streaming process and benchmarked image pattern recognition problem based on quadrotor built-in camera

Advanced MIPS CPU Simulator with Multi-Cycle/Pipeline Apr.2014 - Jun.2014

- Devised the simulator of each CPU component (including Memory, ALU, etc.) in C++ and connected them into advanced MIPS CPU simulators with multi-cycle and pipeline
- Designed line-tracking and color-identifying algorithms

Patent Classification Modeling Based on Machine Learning Apr.2016 - Jun.2016

- Devised a classification algorithm mainly in learning kernel for patent classification by incorporating LIBNEAR, MINMAX, and finally a base classifier (SVM polynomial kernel)
- Evaluated with Japanese patents samples from Center for Brain-like Computing and Machine Intelligence and achieved results with high accuracy (94.9% in 37786 testing patent samples)

LEADERSHIPS AND ACTIVITIES

Athlete in the 45th Sports Meeting of SJTU	2014
Volunteer in Campus Run	2015
Volunteer in Shanghai International Marathon	2014 - 2015
Group Leader in SEIEE Class Mission	2015
Vice Group Leader in Summer Social Practice	2014
Network Leader in Freshman Welcome Dinner	2014

HONORS AND AWARDS

Academic Excellence Scholarship (Top 5%)	2014
The Fourth Computer CCF Software Capacity Certification (C++)	2015
Class Commissary in charge of SEIEE Class Organization	2013 - 2017
Secretary in Network Department of SEIEE Student Union	2013 - 2015
Simplified C Language Compiler (Class Award, 2/74)	2015
Patent Classification Modeling Based on Machine Learning (Class Award, 3/65)	2016
Secure TCP UDP Protocol (Class Award, 1/74)	2016
Highest Grade in Hulusi	

STRENGTHS AND INTERESTS

Programming	C/C++, Python, Java, Android, HTML, Assembly Language, Verilog HDL
Professional Tools	MATLAB, Octave, CMake, LaTeX, OpenMP, PThread
Interests	Hulusi(Chinese Musical Instrument), Jogging, Tennis