Xiao Zeng

Department of Electrical & Computer Engineering
Michigan State University
1228 Engineering Building

Phone: (517) 940-0628
Email: zengxia6@msu.edu
East Lansing, MI 48824

Research Interests

Ubiquitous Computing, Machine Learning, Mobile Health

Education

Michigan State University, East Lansing, MI   Aug. 2015 - Present
Ph.D. Candidate, Electrical Engineering
GPA: 4.0/4.0
Advisor: Mi Zhang

South China University of Technology (SCUT), Guangzhou, China   Jun. 2015
M.Eng., Computer Systems Organization
GPA: 85/100
Advisor: Min Dong

South China University of Technology (SCUT), Guangzhou, China   Jun. 2012
B.Eng., Computer Science and Technology
GPA: 3.66/4.0

Publications

[6]   **Xiao Zeng**, Mobile Sensing Through Deep Learning, To appear in *Proceedings of on MobiSys 2017 PhD Forum, 2017*.

[5]   **Xiao Zeng**, Kai Cao, Mi Zhang, *MobileDeepPill*: A Small-Footprint Mobile Deep Learning System for Recognizing Unconstrained Pill Images, To appear in *Proceedings of International Conference on Mobile Systems, Applications, and Services (MobiSys), 2017*.

[4]   Sheng Bi, **Xiao Zeng**, Xin Tang, Shujia Qin, King Wai Chiu Lai, Compressive Video Recovery Using Block Match Multi-Frame Motion Estimation Based on Single Pixel Cameras, *Sensors, 2016*.

[3]   Min Dong, **Xiao Zeng**, Sheng Bi, Quanyong Huang, Xuwei Pan, Design and implementation of heterogeneous IoT gateway based on dynamic priority scheduling algorithm, *Transactions of the Institute of Measurement and Control, 2014*.

[2]   Quanyong Huang, **Xiao Zeng**, Sheng Bi, Min Dong, Xuwei Pan, Huaqing Min, Real-time structure-light-based 3D terrain sensing for mobile robot using CUDA, *IEEE International Conference on Cyber Technology in Automation, Control and Intelligent Systems (CYBER), 2013*.

[1]   Min Dong, **Xiao Zeng**, Sheng Bi, Shiya Guo, Design and implementation of the multi-channel RS485 IOT gateway, *IEEE International Conference on Cyber Technology in Automation, Control and Intelligent Systems(CYBER), 2012*.

Awards

First Prize in NIH Pill Image Recognition Challenge	2016
National Scholarship (Top %5, 2/40)	2014
SCUT Postgraduate First-Class Scholarship	2013
SCUT Postgraduate First-Class Scholarship	2012
SCUT Undergraduate First-Class Scholarship	2011
SCUT Undergraduate Third-Class Scholarship	2009

Media Coverage

- Pill Image Recognition Challenge Winners Annoucemen, NIH
- NIH Challenge Winner Helping Solve Pill Recognition Prblem, MSU Today
- Michigan State University professor working on mobile solution to identify pills, ABC

Research Experiences

Intelligent Sensing and Mobile Systems Lab, East Lansing, MI
Advisor: Mi Zhang   Feb. 2016 - Present
Project: *Mobile Deep Pill*
- Developed deep CNNs for pill image recognition
- Optimzed CNNs for mobile device running
- First Prize in 2016 NIH Pill Recongition Challenge

Project: *Deep Learning for Emotion Understanding*
- Developed deep CNNs to recognize human face emotion.

Robotics and Automation Laboratory, East Lansing, MI
Advisor: Ning Xi   Sep. 2015 - Dec. 2015
Project: *3D Point Cloud Object Extraction*
- Generated 3D point cloud of scene using Kinect in Linux.
- Recognized objects from the acquired point cloud using Point Cloud Library(PCL).

Computer Systems & Architecture Laboratory, Guangzhou, China
Advisor: Sheng Bi   Mar. 2013 - Jun.2015
Project: *Compressive Video Sensing*
- Analyzed and compared existing algorithms of compressive sensing.
- Proposed a block-match-based compressive video sensing algorithm to sample and recover video frames.

Computer Systems & Architecture Laboratory, Guangzhou, China
Advisor: Min Dong   Jan. 2014 - Mar. 2014
Project: *Elderly Health Monitor Platform*
- Developed Android App to collect data from wearable sensors via Bluetooth.
- Developed approaches to detect daily activities such as fall detection and pedometer.
- Awarded third prize in National Graduate Contest on Smart-City Technology and Creative Design.

Work Experiences

Guangzhou Hantele Communication, Guangzhou, China
Software Development Intern   Jul. 2013 - Oct. 2013
- Developed a database proxy tool to manage database queries.
- Implemented query control, error detection, task scheduling.
- Developed an operating maintenance system to monitor distributed severs.

Triple Joyfulness Information Technology, Guangzhou, China
Mobile Development Intern   Jun. 2012 - Sep. 2012
- Developed a toy car control App on Android.
- Developed a marketing App on iOS.