Ting-Hsuan Chao (Joel)

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Research Interests

- Computer Vision: Scalable Object Detection, Large Scale Image Classification
- Machine Learing: Convolutional Neural Network Compression, Siamese Network Learning

Education

National Taiwan University *Sep. 2013 - Jul. 2015*
M.S. in Computer Science & Information Engineering
Communications and Multimedia Laboratory (CMLAB), MiRA Group
Advisor: Winston H. Hsu

National Taiwan University *Sep. 2009 - Jul. 2013*
B.S. in Electrical Engineering

National Taichung First Senior High School *Sep. 2006 - Jul. 2009*
High Scope Physics Program

Experience

OpenHCI - The 6^{th} Student Organized Workshop on HCI *Apr. 2015 - Jul. 2015*
Web Service
Webpage design & maintain
Registration system development
Network infrastructure construction

National Taiwan University *Sep. 2013 - Feb. 2014*
Teaching Assistant
Department of CSIE - Seminar

Hewlett-Packard, Inc *Jul. 2012 - Jun. 2013*
Software Engineer
Wireless Diagnose Tool Development
Softpaq Checking Tool Development

Publications

- Ting-Hsuan Chao, Yen-Liang Lin, Yin-Hsi Kuo and Winston H. Hsu, "Scalable Object Detection by Filter Compression with Regularized Sparse Coding," Proceedings of the IEEE Conference on Computer Vision and Pattern Recognition, 2015. (Full paper)
- Yu-Hsiu Chen, Ting-Hsuan Chao, Yen-Liang Lin and Winston H. Hsu, "Filter-Invariant Image Classification on Social Media Photos," ACM Multimedia, 2015. (Short paper)
- Wen-Yu Lee, Yin-Hsi Kuo, Peng-Ju Hsieh, Wen-Feng Cheng, Ting-Hsuan Chao, Hui-Lan Hsieh, Chieh-En Tsai, Hsiao-Ching Chang, Jia-Shin Lan, Winston Hsu, "Unsupervised Latent Sub-events Discovery based on Multi-content and Human Activities Analysis for Diverse Event Summarization," ACM Multimedia, 2015. (Grand Challenge)

Projects

WhosDrive - HackNTU *Aug. 2015 - Aug. 2015*

Car Camera Recorder Application

A mobile/web application devoted to solve traffic problem by automatically detecting car plate number and reporting dangerous drivers to our database. Also, it can perform real-time notification of dangerous car's approaching.

Kaggle - National Data Science Bowl *Dec. 2014 - Mar. 2015*

Machine Learning algorithm development

Learn to recognize plankton by training convolutional neural networks. Rank $51^{th}(4.9\%)$ in competition.

Flora *Jul. 2013 - Jun. 2014*

Android App core development

A mobile application able to automatically recognize breed of any flowers.

National Taiwan University Hosipital - Swallowing Analysis *Oct. 2013 - Jan. 2014*

MATLAB application development

Analyze swallowing function of patients by tracking bone in X-ray photos.

ScoreMaster *Oct. 2013 - May 2014*

Android App development

An online Q&A platform for junior/senior high school students. Teachers can answer questions and earn money on it.

Space Motion *Mar. 2012 - Sep. 2012*

Verilog programming on Altera DE2

Award for Excellent in InnovateAsia Design Contest 2012. It is a new touchpad system designed to have 3 degrees of freedom based on FPGA system.

Happy FACTory *Apr. 2011 - Jun. 2011*

Installation art

First Place in National Taiwan University Art Festival installation art competition. Exhibited in Liberal Education Classroom Building in 2011 Spring.

Technical Strengths

- Computer Languages: C++, Python, JAVA, MATLAB, JavaScript, HTML, PHP, Verilog
- Platform Development: Caffe, Torch7, Android, Node.js, MFC, Altera DE2, ShiVa3D