

TING-HSUAN CHAO (JOEL)

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RESEARCH INTERESTS

- **Computer Vision:** Scalable Object Detection, Large Scale Image Classification, Scene Recognition
- **Machine Learning:** Convolutional Neural Network Compression and Speedup, Generative Network

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

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)
- Chun-yen Yeh, Yu-Chuan Su, Hsin-Fu Huang, Ting-Hsuan Chao, Sebastian Agethen, Winston H. Hsu, "Low-Bitrate and Online Mobile Video Classification," ICCE, 2016. (Short paper)

SELECTED PROJECTS

WhosDrive - HackNTU

PatternRecognition · OCR · Android

A mobile/web application devoted to solve traffic problem by automatically detecting car plate number, reporting dangerous drivers to our database, and reminding dangerous car's approaching.

Kaggle - National Data Science Bowl

ImageRecognition · ML · CNN · Caffe

Learn to recognize plankton by training convolutional neural networks. Rank 51th(4.9%) in competition.

National Taiwan University Hosipital - Swallowing Analysis

ImageProcessing · PatternRecognition · Tracking · ML · MATLAB

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

Flora

ImageRecognition · ML · SVM · Android · C++

A mobile application able to automatically recognize breed of a given flower.

ScoreMaster

Android · Database · Camera

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

ACADEMIC EXPERIENCE

- Reviewer for IEEE Transactions on Multimedia (TMM)
- Poster Presentation in CVPR 2015, Boston, USA
- Poster Presentation in ACM Multimedia 2015, Brisbane, Australia

PROFESSIONAL EXPERIENCE

National Taiwan University

Aug. 2015 - Feb. 2016

Research Assistant

CSIE Department, Communications and Multimedia Laboratory

Advanced research on deep learning, especially focus on compression and speedup.

OpenHCI - The 6th Student Organized Workshop on HCI

Apr. 2015 - Jul. 2015

Web Service

Responsible in website design and maintain, registration system development.

Network infrastructure construction.

National Taiwan University

Sep. 2013 - Feb. 2014

Teaching Assistant

CSIE Department - Seminar

Hewlett-Packard, Inc

Jul. 2012 - Jun. 2013

Software Engineer

Develop and maintain Softpaq Checking Tool, Wireless Diagnose Tool, and web service APIs.

TECHNICAL STRENGTHS

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