

TING-HSUAN CHAO (JOEL)

Phone: +886 912 016988

Email: joelthchao@gmail.com

Website: <http://joelthchao.github.io>

EXPERIENCE

Baidu Inc. - Senior NLP Engineer

2018/09 - present

- Social network app AI architecture design and tech team leadership
- Sticker recommendation system by natural language understanding
- Japanese website recommendation system by Elasticsearch and CTR prediction
- Input method editor Emoji prediction by language modeling
- Increase neural conversation diversity by maximizing mutual information

Appier Inc. - Machine Learning Scientist

2016/05 - 2018/08

- Large-scale multi-languages user topic module from Spark, AI algorithm, database to APIs
- Research on Chinese natural language understanding
- Scalable and robust machine learning ensemble framework
- Real-time user purchase intent prediction by RNN
- Automatic advertisement bidding bot by Reinforcement Learning
- Data augmentation by Generative Adversarial Networks for cross device user identification

National Taiwan University - Research Assistant

2015/08 - 2016/05

- Advanced research on deep learning compression and speedup

Hewlett-Packard, Inc - Software Engineer Intern

2012/07 - 2013/06

- Develop and maintain softpaq checking tool, wireless diagnose tool, and web service APIs

EDUCATION

National Taiwan University

2013/09 - 2015/07

M.S. in Computer Science & Information Engineering
Communications and Multimedia Laboratory (CMLAB), MiRA Group
Advisor: Winston H. Hsu

National Taiwan University

2009/09 - 2013/07

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," CVPR 2015. (Full paper)
- Wei-Tsung Lin, [Ting-Hsuan Chao](#), Jian-Min Wu, Tian-Huang Su, "Predict Emoji Combination with Retrieval Strategy", ACM Multimedia 2015. (Short 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)
- Wei-Tse Sun, [Ting-Hsuan Chao](#), Yin-Hsi Kuo and Winston H. Hsu "Photo Filter Recommendation by Category-Aware Aesthetic Learning", IEEE Transactions on Multimedia 2017. (Journal 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)

ACADEMIC EXPERIENCE

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

PROJECTS

Keras - Contributor

Deep Learning ◊ Tensorflow ◊ Theano ◊ Python

A high-level neural networks API, written in Python. Commit over 600+ lines, including a image preprocessing module, a locally connected layer and bug fixes. Answer 140+ issues and resolve 120+ of them.

Kaggle - National Data Science Bowl

Deep Learning ◊ Caffe ◊ CNN ◊ Computer Vision

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

Kaggle - Carvana Image Masking Challenge

Deep Learning ◊ Keras ◊ Image segmentation ◊ Computer Vision

Learn to segment car from background by training fully convolutional neural network. Bronze plate.

HackNTU - WhosDrive

Car Camera Recorder ◊ Car Number Plate Detection ◊ Android

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.

National Taiwan University Hospital - Swallowing Analysis

Object Tracking ◊ SVM ◊ MATLAB ◊ Computer Vision

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

Flora

ML ◊ OpenCV ◊ Android ◊ Computer Vision

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

ScoreMaster

Android ◊ Camera ◊ Education

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

TECHNICAL STRENGTHS

- Programming Language: Python, Scala, C++, JAVA, MATLAB, javascript
- Framework: Keras, TensorFlow, PyTorch, Spark, Caffe, Android, node.js