Hao Cheng

Researcher at Youtu Lab, Tencent

Email: haocheng_louis@163.com
Google Scholar

EDUCATION

M.A. Communication and Information Systems, Chinese Academy of Sciences, 2019

B.S. Electronics Science and Technology, JiLin University, 2016

RESEARCH AREAS

(1) Weakly Supervised Learning

- Learning with noisy labels
- Learning with unlabeled data

Publication on the related topic

Hao Cheng*, Zhaowei Zhu*, Xingyu Li, Yifei Gong, Xing Sun, Yang Liu. "Learning with instance dependent label nosie: A Sample Sieve Approach" ***under review*** (* **denotes equal contribution**) arxiv paper.

(2) Understandind Neural Networks

- Understanding the working mechanism of DNN via information bottleneck.
- Understanding how network filters affect DNN training. The observation leads to efficient training and efficient pruning.

Publication on the related topic

Hao Cheng, Dongze Lian, Shenghua Gao, Yanlin Geng. "Evaluating Capability of Deep Neural Networks for Image Classification via Information Plane" ***ECCV2018***

Hao Cheng, Dongze Lian, Shenghua Gao, Yanlin Geng. "Utilizing Information Bottleneck to Evaluate Capability of Deep Neural Networks for Image Classification" ***entropy2019***

Fanxu Meng*, **Hao Cheng***, Ke Li, Zhixin Xu, Rongrong Ji, Xing Sun, Guangming Lu. "Filter Grafting for Deep Neural Networks" ***CVPR2020*** (**first co-author, corresponding author**)

Fanxu Meng*, **Hao Cheng***, Ke Li, Huixiang Luo, Xiaowei Guo, Guangming Lu, Xing Sun. "Pruning Filter in Filter" ***NeurIPS2020*** (**first co-author**)

Hao Cheng*, Fanxu Meng*, Ke Li, Huixiang Luo, Xing Sun, Xiaowei Guo, Feiyue Huang, Guangming Lu. "DGD: Densifying the Knowledge of Neural Networks with Filter Grafting and Knowledge Distillation" ***under review*** (* **denotes equal contribution**) arxiv paper.

(3) Other topics (not have much interest any more)

- Self-Paced Learning
- Person Re-identification

Publication on the related topic

Hao Cheng*, Dongze Lian*, Bowen Deng, Shenghua Gao, Tao Tan, Yanlin Geng. "Local to Global Learning: Gradually Adding Classes for Training Deep Neural Networks" ***CVPR2019***

Fengxiang Yang, Ke Li, Zhun Zhong, Xing Sun, **Hao Cheng**, Xiaowei Guo, Feiyue Huang, Rongrong Ji, Shaozi Li. "Asymmetric Co-Teaching for Unsupervised Cross-Domain Person Re-Identification" ***AAAI2020***

Shizhen Zhao, Changxin Gao, Jun Zhang, **Hao Cheng**, Chuchu Han, Xinyang Jiang, Xiaowei Guo, Weishi Zheng, Nong Sang, Xing Sun. "Do Not Disturb Me: Person Re-identification Under the Interference of Other Pedestrians" ***ECCV2020***

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