Hao Cheng

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EDUCATION

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

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

RESEARCH AREAS

(1) 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

2018   **Hao Cheng**, Dongze Lian, Shenghua Gao, Yanlin Geng. "Evaluating Capability of Deep Neural Networks for Image Classification via Information Plane" ***ECCV2018***

2019   **Hao Cheng**, Dongze Lian, Shenghua Gao, Yanlin Geng. "Utilizing Information Bottleneck to Evaluate Capability of Deep Neural Networks for Image Classification" ***entropy2019***

2020   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**)

2020   Fanxu Meng*, **Hao Cheng***, Ke Li, Huixiang Luo, Xiaowei Guo, Guangming Lu, Xing Sun. "Pruning Filter in Filter" ***NeurlPS2020*** (**first co-author**)

2020   **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.

(2) Weakly Supervised Learning

- Learning with noisy labels

- Learning with unlabeled data

Publication on the related topic

2020   **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.

2020   Huixiang Luo*, **Hao Cheng***, Yuting Gao, Ke Li, Xiaowei Guo, Feiyue Huang, Xing Sun. "On the Consistency Training for Open-Set Semi-Supervised Learning" ***to be reviewed*** (**first co-author**)

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

- Self-Paced Learning

- Person Re-identification

Publication on the related topic

2019   **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***

2020   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***

2020   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***

Updated October 2020