

BAI, HAOLI

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Rm 101A, SHB, CUHK, Hong Kong.

EDUCATION

The Chinese University of Hong Kong

Aug. 2017 - Present

PhD in Computer Science and Engineering

Supervisors: Michael Lyu and Irwin King

University of Electronic Science and Technology of China

Sep. 2013 - Jun. 2017

BEng in Computer Science, Yingcai Honor's College

Overall GPA: 3.93/4.00

Supervisor: Zenglin Xu

Ranking: 2/87

EXPERIENCES

Huawei Noah Lab, Speech and Semantic Group

Jul. 2020 - Present

Tencent AI Lab, Machine Learning Group

Jun. 2018 - Jun. 2020

RESEARCH INTEREST

Efficient Deep Learning, Neural Architecture Search, Natural Language Processing

PROJECTS

PocketFlow: An Automated Framework for Compressing and Accelerating Deep Neural Networks.

<https://github.com/Tencent/PocketFlow/>. Stars: **2200+**, Forks: **480+**.

As one of three main contributors, I am responsible for developing network quantization modules with automatic searching engines.

SELECTED PUBLICATIONS

1. **Haoli Bai***, Jiaxing Wang*, Jiaxiang Wu, Xupeng Shi, Junzhou Huang, Irwin King, Michael Lyu, and Jian Cheng. Revisiting Parameter Sharing for Automatic Channel Number Search, NeurIPS, 2020. (* equal contribution in the random order)
2. Kuo Zhong, Yin Wei, Chun Yuan, **Haoli Bai**, and Junzhou Huang. TranSlider: Transfer Ensemble Learning from Exploitation to Exploration, KDD, 2020.
3. Jiaxing Wang, **Haoli Bai**, Jiaxiang Wu, Jian Cheng. Bayesian Automatic Model Compression, IEEE Journal of Selected Topics in Signal Processing, 2020.
4. **Haoli Bai**, Jiaxiang Wu, Irwin King, Michale Lyu. Few Shot Network Compression via Cross Distillation, AAAI, 2020.
5. Jiaxing Wang, Jiaxiang Wu, **Haoli Bai**, Jian Cheng. MetaNAS: Meta Neural Architecture Search, AAAI, 2020.
6. Yuhang Li, Xin Dong, Saiqian Zhang, **Haoli Bai**, Yuanpeng Chen, Wei Wang. RTN: Reparameterized Ternary Network, AAAI, 2020.
7. Liangjian Wen, Xuanyang Zhang, **Haoli Bai**, Zenglin Xu. Structured Pruning of Recurrent Neural Networks through Neuron Selection, Neural Networks, 2020.
8. Xianghong Fang, **Haoli Bai**, Ziyi Guo, Bin Shen, Steven Hoi, Zenglin Xu. DART: Domain-Adversarial Residual-Transfer Networks for Unsupervised Cross-Domain Image Classification: , Neural Networks, 2020.

9. Jiaxiang Wu, Yao Zhang, **Haoli Bai**, Huasong Zhong, Jinlong Hou, Wei Liu, Wenbing Huang and Junzhou Huang. PocketFlow: An Automated Framework for Compressing and Accelerating Deep Neural Networks, NIPS 2018 workshop on Compact Deep Neural Networks with industrial applications, 2018.
10. **Haoli Bai**, Zhuangbin Chen, Michael Lyu, Irwin King and Zenglin Xu. Neural Relational Topic Models for Scientific Articles, CIKM, 2018.
11. Hao Liu, Lirong He, **Haoli Bai**, and Zenglin Xu. Structured Inference for Recurrent Hidden Semi-Markov Model, IJCAI, 2018.
12. **Haoli Bai**, Zenglin Xu, Bin Liu and Yingming Li. Hierarchical Probabilistic Matrix Factorization with Network Topology for Multi-relational Social Network, ACML, 2016: 270-285. **Best Student Paper Runner-up**.

Preprints

1. **Haoli Bai**, Wei Zhang, Lu Hou, Lifeng Shang, Jing Jin, Xin Jiang, Qun Liu, Michael Lyu, Irwin King. BinaryBERT: Pushing the Limit of BERT Quantization, Preprint arXiv: 2012.15701, 2020.
2. **Haoli Bai***, Xianghong Fang*, Jian Li, Zenglin Xu, Michael Lyu and Irwin King. Discrete Autoregressive Variational Attention Models for Language Generation, submitted to NACCL 2021. (* equal contribution in random order)
3. **Haoli Bai**, Jiaxiang Wu, Irwin King and Michael Lyu. Cross Distillation: A Unified Approach for Few Shot Network Compression, submitted to Neural Networks.
4. Yuhang Li, Wei Wang, **Haoli Bai**, Ruihao Gong, Xin Dong, Fengwei Yu. Efficient Bitwidth Search for Practical Mixed Precision Neural Network. arxiv:2003.07577, 2020.

SERVICES

SPC Member: IJCAI-21

PC Member: ICML-21, NeurIPS-20, AAAI 19-21, IJCAI 20

Journal Reviewer: Cognitive Computation, Neural Networks, Neurocomputing

SELECTED AWARDS

AAAI Student Travel Grant of AAAI 2020.

ACM Student Travel Grant of CIKM 2018.

Postgraduate Studentship of the Chinese University of Hong Kong, 2017-2021.

Best Student Paper Runner-up of Asian Conference on Machine Learning, 2016.

National Scholarship in 2015, top 1% in the grade.

First Provencial Prize of National Mathematical Contest in Modeling in 2015.

TECHNICAL STRENGTHS

Programming	Tensorflow, PyTorch, Python
Developping Tools	Vim, Git