Dejiao Zhang

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EDUCATION

Univerisity of Michigan — Ann Arbor, USA
Ph.D. in Electrical Engineering and Computer Science — 09/2013–05/2019

- − Advisor: Laura Balzano

- − Thesis: "Extracting Compact Knowledge From Massive Data"

Nanjing University of Information Science and Technology — Nanjing, China
B.S. in Information Engineering — 09/2009–06/2013

WORK EXPERIENCE

Amazon Web Services — New York City, USA
Applied Scientist II at AWS AI Labs — 08/2019–Current

- − Projects: Meeting Summarization, and Theme Detection in Dyadic Conversations

Technicolor AI Lab — Los Altos, USA
Data Science PhD Intern — 06/2017–09/2017

- − Mentor: Brian Eriksson and Yifan Sun

- − Project: Deep Unsupervised Clustering with Mixture of Autoencoders

TEACHING

Graduate Student Instructor — Ann Arbor, USA
University of Michigan — 09/2018–12/2018

- − Reinforcement Learning (EECS 598)

PATENTS

[1] *Apparatus and method to process and cluster data*, B. Eriksson, Y, Sun, **D. Zhang**. Patent grant 2019.

[2] *Programmatic theme detection in contacts analytics services*, A. Arora, A. Deo, R. Nallapati, H. Zhu, A. Arikatla, S. Kanduri, S. Prabala, **D. Zhang**. Patent filed 2020.

PUBLICATIONS

Journal

[1] J. He, **D. Zhang**, L. Balzano, and T. Tao, "Iterative grassmannian optimization for robust image alignment", *Image and Vision Computing*, vol. 32, no. 10, pp. 800–813, 2014.

Conference

[1] Y. Gao, H. Zhu, P. Ng, C. N. dos Santos, Z. Wang, F. Nan, **D. Zhang**, R. Nallapati, A. Arnold, and B. Xiang, "Answering ambiguous questions through generative evidence fusion and round-trip prediction", Accepted to ACL-IJCNLP, 2021.

[2] F. Nan, R. Nallapati, Z. Wang, C. Nogueira dos Santos, H. Zhu, **D. Zhang**, K. McKeown, and B. Xiang, "*Entity-level Factual Consistency of Abstractive Text Summarization*", Accepted to the Conference of the European Chapter of the Association for Computational Linguistics (EACL), 2021.

[3] F. Nan, N. dos Santos, H. Zhu, P. Ng, K. McKeown, R. Nallapati, **D. Zhang**, Z. Wang, A. Arnold, and B. Xiang, "Improving factual consistency of abstractive summarization via question answering", Accepted to ACL-IJCNLP, 2021.

[4] **D. Zhang**, F. Nan, X. Wei, S. Li, H. Zhu, K. McKeown, R. Nallapati, A. Arnold, and B. Xiang, "*Supporting Clustering with Contrastive Learning*", Accepted to the North American Chapter of the Association for Computational Linguistics (NAACL), 2021.

[5] **D. Zhang**, R. Nallapati, H. Zhu, F. Nan, C. Nogueira dos Santos, K. McKeown, and B. Xiang, "*Margin-aware Unsupervised Domain Adaptation for Cross-lingual Text Labeling*", Accepted to the Conference on Empirical Methods in Natural Language Processing (Findings of EMNLP), 2020.

[6] G. Ongie, D. Hong, **D. Zhang**, and L. Balzano, "*Online Estimation of Coherent Subspaces with Adaptive Sampling*", Accepted to the IEEE Statistical Signal Processing Workshop (SSP), 2018.

[7] **D. Zhang**, J. Katz-Samuels, M. A. Figueiredo, and L. Balzano, "*Simultaneous Sparsity and Parameter Tying for Deep Learning Using Ordered Weighted L1 Regularization*", Accepted to the IEEE Statistical Signal Processing Workshop (SSP), 2018.

[8] **D. Zhang**, H. Wang, M. Figueiredo, and L. Balzano, "*Learning to Share: Simultaneous Parameter Tying and Sparsification in Deep Learning*", Accepted to the International Conference on Learning Representations (ICLR), 2018.

[9] **D. Zhang**, T. Zhao, and L. Balzano, "*Information Maximization Auto-Encoding*", Workshop on Bayesian Deep Learning, NeurIPS, 2018.

[10] T. Zhao, **D. Zhang**, Z. Sun, and L. Honglak, "*Information Regularized Neural Networks*", Workshop on Integration of Deep Learning Theories, NeurIPS, 2018.

[11] G. Ongie, D. Hong, **D. Zhang**, and L. Balzano, "*Enhanced Online Subspace Estimation via Adaptive Sensing*", Accepted to the Asilomar Conference on Signals, Systems, and Computers (Asilomar), 2017.

[12] **D. Zhang** and L. Balzano, "*Matched Subspace Detection Using Compressively Sampled Data*", Accepted to the IEEE International Conference on Acoustics, Speech and Signal Processing (ICASSP), 2017.

[13] **D. Zhang** and L. Balzano, "*Global Convergence of A Grassmannian Gradient Descent Algorithm for Subspace Estimation.*", Accepted to the International Conference on Artificial Intelligence and Statistics (AISTATS), 2016.

[14] J. He, **D. Zhang**, L. Balzano, and T. Tao, "*Iterative Online Subspace Learning for Robust Image Alignment*", Accepted to the IEEE International Conference, Workshops on Automatic Face, and Gesture Recognition (FG), 2013.

Preprints / Technical Report

[1] **D. Zhang**, S. Li, W. Xiao, H. Zhu, R. Nallapati, A. Arnold, and B. Xiang, *Partially Supervised Contrastive Learning of Sentence Representations.* In preparation for EMNLP, 2021.

[2] **D. Zhang** and L. Balzano, *Convergence of a Grassmannian Gradient Descent Algorithm for Subspace Estimation from Undersampled Data.* 2018.

[3] **D. Zhang**, Y. Sun, B. Eriksson, and L. Balzano, *Deep Unsupervised Clustering with Mixture of Autoencoders.* UMich Deep Blue Technical Report, 2017.

Skills

Languages: Python (preferred), CUDA, C/C++, Latex

Tools: PyTorch (preferred), TensorFlow, Theano, Keras, Matlab

Professional Reviewing Activities

Journal
    IEEE Transactions on Information Theory (T-IT)
    IEEE Transactions on Signal Processing (TSP)
    IEEE Sensors Journal

Conference
    COLT 2017, ICML 2019