Zihui Xue

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https://zihuixue.github.io

EDUCATION BACKGROUND

The University of Texas at Austin   GPA: 4.0/4.0   Sep. 2020 – Present

Department of Electrical and Computer Engineering

Fudan University   Rank: 10/189   GPA: 3.66/4.0   Sep. 2016 – Jun. 2020

B.E. in Electronic and Information Science and Technology

Semester GPA: 3.85/4.0 (2017-2018), 3.94/4.0 (2018-2019)

Selected to Elite Engineering Program (top 5%)

University of California, Santa Barbara (Exchange Program)   GPA: 4.0/4.0   Sep. 2018 – Dec. 2018

The College of Engineering Dean's Honors List

PUBLICATIONS

✧ Y. Huang, C. Du, **Z. Xue** and H. Zhao, "What Makes Multi-Modal Learning Better than Single (Provably)," *Conference on Neural Information Processing Systems (NeurIPS)*, 2021. [PDF]

✧ Y. Yang, **Z. Xue**, and R. Marculescu, "Anytime Depth Estimation with Limited Sensing and Computation Capabilities on Mobile Devices," *Conference on Robot Learning (CoRL)*, 2021. [PDF]

✧ **Z. Xue**, S. Ren, Z. Gao, and H. Zhao, "Multimodal Knowledge Expansion," *International Conference on Computer Vision (ICCV)*, 2021. [PDF][website]

✧ T. Hua, W. Wang, **Z. Xue** and H. Zhao, "On feature decorrelation in self-supervised learning," *International Conference on Computer Vision (ICCV)*, 2021. [PDF][website]

✧ S. Jiao, **Z. Xue**, X. Chen, and Y. Xu, "Sampling Graphlets of Multi-layer Networks: A Restricted Random Walk Approach," *ACM Transactions on the Web*, 2021. [PDF]

RESEARCH EXPERIENCE

MARS Lab, Tsinghua University

Research Assistant to Prof. Hang Zhao, Multimodal Learning   Aug. 2020 – Aug. 2021

✧ Proposed a novel framework - multimodal knowledge expansion (MKE) to learn from unlabeled multimodal data.

✧ Investigated the connection between model collapse and feature correlations in self-supervised representation learning.

✧ Provided theoretical explanations of what makes multimodal learning better than unimodal.

✧ Designed a regularization method to improve robustness of a multimodal network.

Multimedia and Mobile Networking Group (MediaNET), Fudan University

Research Assistant to Prof. Yuedong Xu, Graph Sampling   Apr. 2018 – Jun. 2020

✧ Developed a sampling method for estimating graphlet concentrations in a restricted-access two-layered graph.

✧ Designed Graph Convolutional Networks for fast and accurate estimations of graphlet concentrations.

Prof. Zheng Zhang's research group, University of California, Santa Barbara

Research Assistant to Prof, Zheng Zhang, Bayesian Tensor Learning   Dec. 2018 – Aug. 2019

✧ Implemented a Hamiltonian Monte Carlo (HMC) algorithm to address tensor completion.

WORKING EXPERIENCE

NLP Algorithm Intern, **Ping An Technology**   Mar. 2019 – June. 2019

✧ Investigated state-of-the-art Named Entity Recognition (NER) models and compared their performances;

✧ Built, evaluated and improved current NER models for Chinese medical cases;

✧ Annotated Chinese medical cases and maintained the datasets of medical cases and their annotations.

SCHOLARSHIPS & AWARDS

✧ National Second Prize & Shanghai Division First Prize in 2018 China Undergraduate Mathematical Contest in Modeling;

✧ Ranked 8/2115 teams in the first round and 13/2116 teams in the second round in 2018 Alibaba Global Scheduling Algorithm Competition;

✧ Second Prize of the Scholarship for Outstanding Students at Fudan University in the 2019-2020 academic year;

✧ Tung OOCL Scholarship at Fudan University (the First Prize) in the 2017-2018 academic year;

✧ Third Prize of the Scholarship for Outstanding Students at Fudan University in the 2016-2017 academic year.

EXTRACURRICULAR ACTIVITIES

Volunteer of World Artificial Intelligence Conference, Fudan University   Sep. 2018 – Sep. 2018

Deputy Minister of Arts Department, Student Union, Fudan University   Oct. 2017 – Oct. 2018

SKILLS

Programing language: Python, MATLAB, C/C++, Linux, Verilog

Language skills: TOEFL108 (R30 L30 S25 W23); GRE327 (Q168 V159 W4.0)