

Zhiyu Xue

Phone: (86)18180055628 / Email: xzy990228@gmail.com

Personal Page: <https://xuezhiyu228.com.cn/>

EDUCATION

University of Electronic Science and Technology of China (UESTC)

Bachelor of Engineering in Data Science and Big Data Technology

GPA: 3.81/4.0; 87.9/100

Chengdu, China

Sept. 2017-Jul. 2021

PUBLICATIONS

Relative Position and Map Networks in Few-shot Learning for Image Classification

Zhiyu Xue, Zhenshan Xie, Zheng Xing, Lixin Duan

Proceedings of the IEEE/CVF Conference on Computer Vision and Pattern Recognition (CVPR) Workshops, 2020, pp. 932-933

[{Paper}](#) [{Codes}](#)

Region Comparison Network for Interpretable Few-shot Image Classification

Zhiyu Xue, Lixin Duan, Wen Li, Lin Chen, Jiebo Luo

arXiv preprint, 2020, arXiv:2009.03558 [{Paper}](#) [{Codes}](#)

Practical Study for Text Classification based on Naive Bayes

Zhiyu Xue, Mingyan Bai, Jiangyan Peng

Journal of the School of Mathematics, UESTC, 2020 [{Paper \(Chinese Version\)}](#)

RESEARCH EXPERIENCES

Research Assistant of [Data Intelligence Group](#), UESTC

Aug. 2018-Dec. 2019

Supervised by [Prof. Lixin Duan](#) on Few-shot Learning for Image Classification

- Developed Relative Position Network (RPN) based on attention mechanism, to compare different activation cells coming from each query and support images, which captured more intrinsic correspondences of them
- Presented Relative Map Network (RMN) to learn a metric between query and support images
- First author of the research paper, accepted by CVPR 2020 VL3 Workshop

Internship of [VISTa Group](#), University of Rochester

Dec. 2019-May. 2020

Supervised by [Prof. Jiebo Luo](#) and [Prof. Wen Li](#) on Interpretable Few-Shot Learning

- Built a new explainable model aiming to achieve promising performance on normal benchmarks (Mini-ImageNet) and fine-grained benchmarks (CUB)
- First author of the research paper, submitted to AAAI 2021

Internship of [Explainable AI Group](#), Shanghai Jiao Tong University

Jun. 2020-Present

Supervised by [Prof. Quanshi Zhang](#) on Explainable Learning Models

- Implemented the explanation of deep neural networks with transformation complexity
- Solved data imbalance problem in deep neural networks

Visiting Student of [Vision-CAIR](#), King Abdullah University of Science and Technology

Sept. 2020-Present

Supervised by [Prof. Mohamed Elhoseiny](#) on Semi-Supervised Few-shot Learning & Continual Learning

- Utilized PRW loss to improve the performance of FEAT
- Helped to finish the experimental part of the paper named *Semi-Supervised Few-shot Learning with Prototypical Random Walks*, which has already been submitted to AAAI 2021

Visiting Student, King Abdullah University of Science and Technology

Sept. 2020-Present

Supervised by [Prof. Di Wang](#) on Differential Privacy for Pairwise Learning

- Implemented new algorithms of private pairwise learning on AUC Maximization
- First author of the paper: *Differentially Private Pairwise Learning Revisited*, plan to submit to DaSFAA 2021

PROJECT EXPERIENCES

Antioxidant Proteins Classification with Machine Learning, UESTC

Dec. 2019-Present

- Selected protein data with similarity less than 60 percent from the protein database UniProt and encoded the protein sequences by using g-gap dipeptide composition
- Established a deep metric learning model to recognize the amino acid sequences

Document Classification Based on Naive Bayesian Algorithm, UESTC

Mar. 2018 – Jun. 2018

- Analyzed the feature vector of each single text using TF-IDF
- Classified documents based on naive bayesian algorithm and evaluated the model on test set.
- Published *Practical Study for Text Classification based on Naive Bayes* in the Journal of the School of Mathematics,

WORKING EXPERIENCE

- Intern, Big Data R & D Centre of Fintell Fintech Service Company, Beijing, China** **Jun. 2019- Jul. 2019**
- Maintained Ronghui data market and established Ronghui V7 version of risk management model
 - Developed a model with Apriori algorithm to provide the company with better plans and solutions based on the company's data market
 - Designed the DeepFM model, and assessed the potential risks of customers to financial firms by analysing their browsing traces

HONORS AND AWARDS

- Reviewer of CVPR 2020 VL3 Workshop **Mar. 2020**
- Excellent Student Scholarship at UESTC **Sept. 2018 & Sept. 2019**
- 2nd Prize (Group Award) of Mathematical Modelling Competition at UTSEC **Sept. 2018**
- National 1st Prize of the Fifth National College Students Art Exhibition, Viola Performance **Apr. 2018**
- Provincial 1st Prize of the Fifth College Students' Festival in Sichuan Province, Viola Performance **Sept. 2017**
- Group Award of School Champion of Freshman Cup Basketball Match **Oct.2017**

LEADERSHIP AND ACTIVITIES

- Executive Principal & Founder**, Hongya Children Programming Centre, Hongya, China **Jun. 2019-Jul. 2019**
- Team Leader**, MCM/ICM American Mathematical Modelling Competition, Chengdu, China **Feb. 2019**
- Team Leader**, Mathematical Modelling Competition at UESTC, Chengdu, China **Sept.2018**
- Participant**, Summer Camp on Innovation and Global Leadership, UC Berkeley, USA **Aug. 2018**
- Kindergarten Volunteer Teacher**, Sri Lanka International Volunteer Support Programme **Dec. 2017-Jan. 2018**

ADDITIONAL INFORMATION

- Language Skill:** Chinese (Native), English (Fluent)
- Computer Skills:** Python (Numpy, Pandas, Pytorch and so on), C, Java, Linux, MATLAB
- Interests:** Music (viola)