Zhiyu Xue

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EDUCATION

University of Electronic Science and Technology of China (UESTC), *Chengdu, China*　　　　　　　Sept. 2017-Present
Bachelor of Engineering in Data Science & Big Data Technology
Cumulative GPA: 3.77/4.0
TOEFL: 86/120

WORKING EXPERIENCE

Big Data R & D Center of Fintell Fintech Service Company, Intern, *Beijing, China*　　　　　　Jun. 2019- Jul. 2019
- Responsible for the maintenance of Ronghui Data Market and the establishment of 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 situation of the company's data market
- Designed the DeepFM model to use customers' browsing traces to assess their potential risks to financial firms

PROJECT EXPERIENCES

Few-Shot Learning on Image Classification: Designing a Model for Image Classification of Few Samples, *Chengdu, China*
　　Aug. 2018-Dec. 2019
- Conceived a deep learning model framework based on *Relation Networks* and found the most suitable model structure and parameters through plenty of programming experiments
- Designed a new model whose effectiveness was better in the accuracy rate of Mini-imagenet and Cifar-FS than the existing methods
- Developed Relative Position Network (RPN) based on the attention mechanism to compare different pairs of activation cells coming from each query and training images, which captured more intrinsic correspondences of them
- Introduced Relative Map Network (RMN) to learn a metric based on the feature maps obtained from RPN
- Accomplished paper(**first author**) *Learning Where to Compare: Relation Map and Relation Position Network for Few Shot Classification*, which **was accepted by CVPR 2020 VL3 Workshop**

Interpretable Few-Shot Image Classification, *Chengdu, China - Rochester, USA (remote)*
　　Dec. 2019-Present
- Defined the concept of "interpretable few-shot learning" for the first time and came up with a new model as an attempt of this research direction
- Built the model which can both achieve promising performance on normal benchmarks (Mini-ImageNet) and fine-grained benchmarks (CUB)
- Accomplished the paper of this research and **submitted the paper to ACM MM 2020** as the **first author**

Machine Learning on Bioinformatics: Using Machine-Learning Methods to Classify Antioxidant Proteins, *Chengdu, China*
　　Dec. 2019-Present
- Selected protein data with similarity less than 60 percent from the protein database UniProt
- Established a new Deep Metric Learning model to encode the amino acid sequence via machine-learning
- Conducted literature research, participated in experiments, and planned to complete a research paper in March 2020 (it will be submitted by myself, as the first author, to a sci-tech journal for publication)

Application of Document Classification Based on Naive Bayesian Algorithm, *Chengdu, China*　　　Mar. 2018 − Jun. 2018
- Applied term frequency-inverse document frequency to compute a feature vector of each single text
- Classified documents based on naive Bayesian algorithm and evaluated the model on test set
- Published *Research Report on Text Classification Based on Naive Bayes* in *the Journal of the School of*

Mathematics, UESTC

Electronic Magic Mirror (Course Project), *Chengdu, China*   Mar. 2018 – Jun. 2018
  - Successfully made filters with Cartoon Gan, Spherical Imaging on Pytorch respectively
  - Realized the real-time image by using the OpenCV library through the computer camera

HONORS AND AWARDS

Reviewer of CVPR 2020 VL3 Workshop   Mar. 2020
Excellent Student Scholarship of UESTC   Sept. 2018
National 1st Prize of the Fifth National College Students Art Exhibition, Viola Performance   Apr. 2018
School Champion of Freshman Cup Basketball Match, Group Award   Oct. 2017
Provincial 1st Prize of the Fifth College Students' Festival in Sichuan Province, Viola Performance   Sept. 2017

EXTRACURRICULAR ACTIVITIES

Personal Cooperation Project with Bell Science and Education Group, *Hongya, China*   Jun. 2019-Jul. 2019
Hongya Children Programming Center, Executive Principal & Founder
  - As the first person in charge of the Center operation, mainly responsible for the administration work which includes teacher recruitment, teaching seminars, enrollment publicity and so on

MCM/ICM American Mathematical Modeling Competition, Team Leader, *Chengdu, China*   Feb. 2019

School-level Mathematical Modeling Competition, Team Leader, *Chengdu, China*   Sept. 2018
  - Won the School-level 2nd Prize of Mathematical Modeling Competition, Group Award

Summer Camp on Innovation and Global Leadership/UC, Berkeley, Participant, *California, USA*   Aug. 2018
  - Took courses of innovation, entrepreneurship, and global leadership at UCB's international house
  - Visited some Internet companies at Silicon Valley such as Google, Intel, etc

Sri Lanka International Volunteer Support Program, *Kindergarten Volunteer Teacher, Sri Lanka*   Dec. 2017-Jan. 2018
  - Primarily responsible for teaching pre-school children in kindergartens established by Sri Lanka's local monasteries and helping them to learn during interesting educational activities

SKILLS AND INTERESTS

Skills: Computer: Python (Numpy, Pandas, Pytorch and so on), C, Java
Interest: Music (viola)