Jinming Xing

NC State University, NC, US, 27606

Email: jmxing0000@gmail.com | Tel: +1-2019271095 | Website: https://xingjinming-real.github.io

Education

08/2023 **NC State University (NCSU)**, Raleigh, NC, US

09/2019 – 07/2023 **Shenzhen University (SZU)**, Shenzhen, Guangdong, China

- Bachelor of Engineering, College of Computer Science and Software Engineering

  GPA: 90/100 | Rank: 5/119 | TOEFL: 98

Technical Skills

Professional Skills:

- Intermediate use of Python, data analysis and visualization (scikit-learn, matplotlib, seaborn), basic image processing using OpenCV.
- Neural network construction using PyTorch, knowledge of common traditional classification, regression, clustering algorithms, CNNs, RNNs, GNNs, and basic RL.

Computational Skills: Matlab, Linux, Web Crawler, Web Development (Flask, MySQL), Latex, PyQT

Research Experiences

12/2021 – 07/2023 Research Assistant | **Prof. Can Gao's Lab**, Department of Artificial Intelligence, SZU, China

Project: **A Unified Semi-supervised Learning Framework Based on Fuzzy Rough Sets for Open-set Scenarios**

- Proposed a novel sample center identifying method based on One-vs-Rest strategy and Fuzzy Rough Sets.
- Introduced a one-stage learning strategy for adaptively and iteratively learning and classifying unlabeled data.
- Conducted extensive experiments on artificial and real datasets to demonstrate the model's effectiveness.

06/2021 – 05/2022 Research Assistant | **Prof. Can Gao's Lab**, Department of Artificial Intelligence, SZU, China

Project: **Weighted Fuzzy Rough Sets-based Tri-training and Its Application to Medical Diagnosis**

- Proposed a bad-points technique for dataset de-noising and a high-order strategy for comprehensive spatial information extraction.
- Three modal data ORI (original data), PCA (data after PCA), and DIS (data after discretization) are proposed to initialize tri-training base classifiers, augmenting their representation abilities.
- Designed a robust weighted fuzzy lower approximation classifier for supervised and semi-supervised problems.

Papers

1. **J. Xing**, C. Gao, "A Unified Semi-supervised Learning Framework Based on Fuzzy Rough Sets for Open-set Scenarios".

2. **J. Xing**, C. Gao, J. Zhou, "Weighted Fuzzy Rough Sets-based Tri-training and Its Application to Medical Diagnosis", Applied Soft Computing (IF:8.7), vol. 124, p. 109025, 2022, doi: 10.1016/j.asoc.2022.109025.

3. C. Gao, J. Zhou, **J. Xing**, X. Yue, "Parameterized-maximum-distribution-entropy-based Three-way Approximate Attribute Reduction" International Journal of Approximate Reasoning (IF:3.9), vol. 151, p. 85-100, 2022, doi: 10.1016/j.ijar.2022.09.007.

4. Z. Wang, C. Gao, **J. Xing**, "Three-way Approximate Reduction Based on Positive Region", Computer Science, vol. 49, p. 168-173, 2022, doi: 10.11896/jsjkx.210500067.

Projects

Project Leader

- "Open-world Semi-supervised Learning Based on Fuzzy Rough Sets", 2022.9-2023.7, Guangdong Province Science and Technology Innovation Strategy Special Fund Project
- "Multimodal Weakly Supervised Learning Methods and Applications", 2021.6-2022.5, National College Students Innovation and Entrepreneurship Training Project
- "Research on Handwriting Recognition Technology Based on Deep Learning", 2020.11-2021.10, Shenzhen University Innovation and Development Experimental Project

Competitions

1. "A multi-granularity Weighted Property Investment Model Based on ARIMA and LSTM", 2022.2, American Mathematical Contest in Modeling. (Honorable Award)

2. "Defect Detection Robots Based on Huawei AI platform", 2021.12, Huawei ICT Competition. (National Third Award)