JIANGUO HUANG

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EDUCATION

ShanghaiTech University

M.S., Computer Science and Technology

Overall GPA: 3.71/4.0 Major GPA: 3.88/4.0

North China Electric Power University

B.S., Information and Computing Science

2017.9 - 2021.6

2021.9 - Current

Overall GPA: 3.93/4.0

RESEARCH INTERESTS

Trustworthy AI, Uncertainty Quantification (esp., Conformal Prediction), and Computer Vision.

EXPERIENCE

Research Intern, Southern University of Science and Technology.

2023.7 - Current

• My research field is the conformal prediction for image classification problems. We proposed a conformal score function based on label ranking, which can generate smaller prediction sets than that of other traditional methods.

Co-founder & Algorithm Engineer, Changsha Hongcheng Electric Technology Co., LTD. 2021.8 - Current

• To identify the location and category of faults in the power transformers, I developed a set of algorithms based on Machine Learning and Signal Processing, whose performance is significantly superior to other products on the market.

Open Source Projects

2021.7 - Current

- TorchCP: A Python toolbox for conformal prediction research on deep learning, using PyTorch.
- Magic-cv: A tutorial on Digital Image Processing along with instructional videos.

PREPRINTS

(† Equal contribution)

Does Confidence Calibration Help Conformal Prediction? Huajun Xi[†], **Jianguo Huang**[†], Lei Feng, Hongxin Wei^{*}. Under review in CVPR'2024.

Conformal Prediction for Deep Classifier via Label Ranking. **Jianguo Huang**†, Huajun Xi†, Linjun Zhang, Huaxiu Yao, Yue Qiu*, Hongxin Wei*. Under review in ICLR'2024.

Physics-informed invertible neural network for the Koopman operator learning. Yuhuang Meng[†], **Jianguo Huang**[†], Yue Qiu*. Minor revisions in Journal of Computational Physics (JCR Q1).

AWARDS AND HONORS

40/1758 in the 3rd Alibaba Cloud Panjiu Zhiwei Algorithm Competition

2022

Outstanding Departmental Student Awards

2019-2020,2020-2021

1st prize in the undergraduate group of the 6th "Discovery Cup" National College Students Internet Software Design Competition 2018-2019