Chaoquan Jiang

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Education

BeiJing Jiao Tong University (BJTU), Beijing, China 2018 – Present

B.S. in Mathematics and Applied Mathematics, expected graduation and in Sept.2022
GPA:3.83/4.00, ranking 8/60
Code: Python = MATLAB > C/C++

Papers and Pre-print

1. Rui Hu, Jitao Sang, Jinqiang Wang, Rui Hu, Chaoquan Jiang. Understanding and Testing Generalization of Deep Networks on Out-of-Distribution Data.***Link***
2. Jinqiang Wang, Jitao Sang, Rui hu, Chaoquan Jinag, Rui HU. Counterexample Contrastive Learning for Eliminating Spurious Correlations. **Working Paper**, Submitted to IJCAI 2022
3. Zijie Pan, Chaoquan Jiang, Haibo Yang. Theoretical model and experimental analysis of soap film filter. ***Pre-print***
4. Xiaowei Mao, Chaoquan Jiang, Zhigang Kou.Permutation Transition Entropy(PE): A new method of measuring the dynamical complexity of non-stationary time series.***Manucript***

Experience

1st**Generalization of DNNs on Out-Of-Distribution(OOD) Data** Jun. 2021 – Present

Research Training Deep Learning, in ADaM AI Lab in BJTU

- To improve OOD generalization of Deep network models, we analyzed the problem of experimental ID test and designing OOD test paradigm to accurately evaluate the practical performance.
- We propose novel OOD test paradigms to evaluate the generalization capacity of models to unseen data, and discuss how to use OOD test results to find bugs of models.

2nd**Contrastive Learning for Eliminating Spurious Correlations** Jan. 2021 – Present

Research Training Deep Learning, in ADaM AI Lab in BJTU

- We proposed novel method to eliminate spurious correlation by making full use of the samples in the dataset.
- Experimental results show that our proposed method can achieve state-of-the-art results when the bias labels are known.

3rd**Research Nonlinear-Optimization Algorithm** Jan. 2020 – Mar. 2021

Principle Graduate Research Program in BJTU

I researched the advanced applications of the diversification measurements, such as Rao's Quadratic Entropy(RQE). I innovated the Coordinate Descent algorithm to optimization of quadratic programming models of stocks time series. So I mastered many nonlinear-optimization theories and methods and wrote an article. Manuscript

♡ Awards and Student works

Awards:

Scholarship, National Encouragement Scholarship	2019,2020,2021
Honor, College Merit Student(10%)	2019
Second Prize, Contest of Undergraduate Physical Experiment in Beijing	2019
Second Prize, (National)Regional College Students Physics Contest	2019

Student works:

League branch secretary	Jun. 2020-Jun. 2021
Deputy Secretary of CPC General Branch	Jun. 2021-Present