

Zhao Ma

MASTER STUDENT IN INFORMATICS
The Pennsylvania State University
☎ 8148529691 | ✉ zxm5153@psu.edu

Education

The Pennsylvania State University

MASTER OF SCIENCE IN INFORMATICS, CONCENTRATION ON DATA SCIENCE

- **Course:** Data Mining, Adversarial Machine Learning, Deep Learning

University Park, PA

August 20201 - current

Soochow University

BACHELOR OF SCIENCE IN PHYSICS, GPA: 3.3/4.0, TOP 15%

Suzhou, China

Sep. 2016 - June 2020

Experience

Quantum Information Laboratory of Soochow University

RESEARCH ASSISTANT

- Gave a method to detect quantum coherence theoretically using mathematical methods.
- Conducted some experiment to verify the theory.
- The research result was published in Physical Review A.

Suzhou, China

July 2017 - May 2019

Justin Silverman's Lab in Penn State University

RESEARCH ASSISTANT

- Derive an estimator to estimate elements in covariance matrices
- Theoretically prove some techniques used in machine learning.

State College, US

Oct 2021 - Current

Suzhou Juhe Data

DATA ANALYST INTERN

- Collected data from various platforms and cleaned the data.
- Visualized data and analyzed the effects of advertisement using Excel.
- Gave advice on advertising strategy.

Suzhou, China

July 2019 - Sep. 2019

Projects

The Impact of Spontaneous Protection on the Spread of Epidemics

- Use the *Eguíluz and Zimmermann* model to simulate human dynamics. Combined with the game psychology of individual in disease protection, study the transmission of disease where the individuals take the preventive measures against infections with a cost in dynamic populations.
- Under computer simulations, obtain the evolution process of the epidemics where population evolves with different parameters and different cost-to-benefit ratios.
- Analyze the possible mechanisms that cause the features observed in the epidemic process.
- Finish a thesis and the simulation program is written in C.

Skills

English Proficiency TOEFL 102, GRE 323

Techniques Machine Learning, Mathematical Modeling, Python, C, MATLAB

Honors

- Advanced Mathematics Competition Second Prize in 2016
- Academic Excellence Award in 2016
- Academic Excellence Award in 2017
- Outstanding Student Cadre in 2017

Publication

- Zhao Ma, Zhou Zhang, Yue Dai, Yuli Dong, and Chengjie Zhang, "Detecting and estimating coherence based on coherence witnesses", Phys. Rev. A 103, 012409, 2021. DOI: <https://doi.org/10.1103/PhysRevA.103.012409>