

Cheng Cheng

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Education

University of Malaya

Master of Mathematics(Research)

- Data-driven modeling and analysis of infectious diseases

Mar. 2024 - Present

Kuala Lumpur, Malaysia

Yuncheng University

Bachelor of Mathematics and Applied Mathematics (GPA: 3.2 / 5.0)

- **Relevant Coursework:** Mathematical Modeling (97%)Mathematical Analysis II(93%) Advanced Algebra(91%)

Sep. 2019 - May. 2023

Yuncheng City, China

Activities

TDINN With Application to COVID-19 infections

Dec. 2023 – Present

Working Papers

- Developed a TDINN model that integrates the SEIRDV compartment model into deep learning frameworks. This approach enhances traditional epidemic models by incorporating data-driven techniques .
- Applied the TDINN model to real-world data, demonstrating its effectiveness in fitting multiple epidemic waves and predicting future trends.

Estimated Serial Interval and reproduction number of SARS-CoV-2 Omicron variant

Dec. 2022 – Mar. 2023

Degree Dissertation

- Demonstrated strong data analysis skills through statistical analysis of Omicron transmission potential, utilizing Python and R for data collection, cleaning, and analysis, and providing recommendations for control measures in a research paper.

Prediction of World Temperature Based on PSO Optimized LSTM Neural Network

Nov 2022 – Apr 2023

ICIBA2023

- Utilized advanced machine learning techniques, including PSO-optimized LSTM neural network and sensitivity analysis, to predict global temperature and optimize loss function, demonstrating proficiency in programming languages such as Python and MATLAB.

Research on Identification of Seismic Event Properties Based on LS-SVM

Apr 2021 – Jun 2022

Journal of Geodesy and Geodynamics

- Responsible for data collection and analysis, literature review, and drafting the initial paper version.

Research on seismic discrimination based on PSO, GRNN and HHT Sample Entropy

Apr 2020 – Jun 2022

Progress in Geophysics

- Contributed to literature review and utilized Python for data mapping, resulting in a model with a 22% improvement over previous models.

Awards

National Second Prize in the National Student Mathematical Modeling Competition

11/2021

Nomination for the Mathematical Modeling Competition in Shanxi Province

04/2022

National Third Prize in the National Student Market Research and Analysis Competition

05/2022

Skills

Software: Python, Matlab, R, SPSS, Latex, Tableau, Origin

Language: Chinese(native), English(fluent)