

Jia-Zhen Zou

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Education

National Taichung University of Science and Technology (NUTC / NTCUST)	Taichung, Taiwan
M.S. in Computer Science and Information Engineering	2022 - Present
National Taichung University of Science and Technology	Taichung, Taiwan
B.B.A. in Applied Statistics	2017 - 2021

Publication

P1 Study and Forecast of Cases of Flu and Their Complications

Jia-Zhen Zou, Jau-Chuan Ke, Yu-Hung Chien et al.

Journal of the Chinese Statistical Association (JCSA), 2021

Experience

National Taichung University of Science and Technology	Taichung, Taiwan
Applied Statistics Teaching Assistant(TA)	2018 - 2025
<ul style="list-style-type: none">◦ Problem: No legal digital Minitab resources for 50 students (\$150/book, \$1,800/license).◦ Action & Result:<ul style="list-style-type: none">◦ Developed free Python-based teaching materials—migrated 48 exercises into Pandas/NumPy/Statsmodels/Matplotlib code;◦ Automating workflows to cut analysis time by 37% (48-hour feedback) and boosting average grades by 15% across 500+ assignments.	

Awards and Projects (see kasazou.me)

Frist Place , 2024 TBIA Dataathon	Biodiversity Research Center, Academia Sinica	2024
<ul style="list-style-type: none">◦ Problem: In a one-month Dataathon, our four-member team—assembled on the same day after a workshop—faced limited TBIA open data, inconsistent citizen-science records, and missing geocoordinates, yet needed to build an actionable dashboard in one week(2 weeks of prep, 1 week of build).◦ Action & Result:<ul style="list-style-type: none">◦ Led data pipelines in Python (Pandas, NumPy, requests, pyinaturalist, datetime) to clean and standardize data—filtering to 500+ high-quality records—and deployed an interactive Tableau dashboard in under 7 days;◦ Earning 1st place out of 12 teams and a showcased our poster at the Citizen Science Carnival.		
Second Place , Project Competition (see P1)	Applied Statistics, NUTC / NTCUST	2020
<ul style="list-style-type: none">◦ Problem: In 2020, while global attention centered on COVID-19, influenza and its complications still ranked among Taiwan's top 10 causes of death; we needed to understand its seasonal dynamics under pandemic conditions and build a reliable short-term forecasting model.◦ Action & Result:<ul style="list-style-type: none">◦ Collected and preprocessed 655 weeks of CDC flu data—applying log transforms, differencing, and stationarity tests—then implemented ARIMA/SARIMA, Croston's, and Holt-Winters models in Python.◦ Achieved short-term forecast accuracy with MAPE < 10% (as measured by MAD and RMSE) by the pipeline, providing insights to inform public health decisions.		

Skills

Programming Languages: Python (primary), SQL, R (basic), HTML / CSS (Web crawler basic)

Tools and Frameworks: Git, Pandas, Numpy, Matplotlib, Scikit-learn, PyTorch, Tableau, PowerBI, SPSS, Minitab

Knowledge: Time Series Forecasting, Statistical Machine Learning, Data Visualization

Languages: Chinese (native), English