Jiangwei Liu

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Jiangwei-Liu

EDUCATION

- **Renmin University of China** September 2021 - present
  B.E. in Data Science & B.A. in Agricultural Economics GPA: 3.67
  Courses: C++ Programming, Advanced Algebra, Principles and Techniques of Data Science, Development Economics, Environmental & Resource Economics

- **University of California, Berkeley** July 2023 - August 2023
  Berkeley Summer Sessions
  Courses: Introduction to Finance , Academic Writing

RESEARCH EXPERIENCE

- **Impact of Urban Road Expansion on Air Pollution in Chinese Cities**
  Undergraduate Research Assistant, Renmin University of China June 2023 - present
  - Collaborated with Prof. **H. Allen Klaiber** (Graduate Studies Chair, Ohio State University) and Assoc. Prof. **Wei Chen** (Renmin University of China)
  - Collected road traffic and economic data across 39 Chinese cities.
  - Constructed instrumental variables with **Mahalanobis distance matching** strategy.
  - Employed regression analysis with IVs and explored various heterogeneities in the impact.

- **Impact of Sanitary Infrastructure on Fertilizer Usage in Rural China**
  Undergraduate Research Assistant, Renmin University of China June 2023 - September 2023
  - Conducted regression analysis on the Fixed Observation Rural Survey dataset (2009-2018) to investigate the impact of indoor sanitary toilets on rural fertilizer usage.
  - Wrote results and discussion sections of the paper, highlighting the shift in fertilizer usage and its socio-economic implications.

- **Relationship between $PM_{2.5}$ and Housing Price and its Spatial Heterogeneity in Beijing**
  Undergraduate Research Assistant, Renmin University of China August 2022 - September 2023
  - Collaborated with Prof. **H. Allen Klaiber** (Graduate Studies Chair, Ohio State University) and Assoc. Prof. **Wei Chen** (Renmin University of China)
  - Used **Python** to clean a dataset of 600k+ Beijing housing transactions spanning 120 months and 5,128 communities.
  - Leveraged **ArcGIS** to merge geocoded residential coordinates with high-resolution $PM_{2.5}$ satellite data and subway station locations.
  - Applied a hedonic model with **Stata**, finding a 0.0531% housing price drop per 1 $\mu g/m^3$ $PM_{2.5}$ increase, and analysed spatial heterogeneity in air quality's economic impact.

- **Impact of Agricultural Enterprise-Household Collaboration on Enterprise Performance**
  Research Assistant, Ministry of Agriculture and Rural Affairs of China January 2022 - March 2022
  - Cleaned a dataset covering 1,733 agricultural enterprises across 13 years, calculating performance indicators like ROI and ROA.
  - Catalogued the cooperation methods between enterprises and local farmers, merging this data into the primary dataset.
  - Conducted regression analysis using **multinomial probit model**, computing the marginal effects of independent variables.

WORKING PAPERS

- **Jiangwei Liu**, Wei Chen and H.Allen Klaiber. "Breath of the City: Unraveling the Economic Impact of Air Pollution on Housing Prices in Beijing."

- Wei Chen, Zhen Zhong, Jun Guo, Yangyang Gu and **Jiangwei Liu**. "The impact of toilet revolution on fertilizer usages in rural China."

CONFERENCES AND PRESENTATIONS

- Presenter. "The General and Spatially Differentiated Effects of Air Pollution on Housing Prices: A Large-sample Hedonic Analysis in Beijing." North American Regional Science Conference. San Diego, California, United States. 2023.

TECHNICAL SKILLS

Programming: Python, C/C++, SQL, Java, Html

Statistical analysis: Stata, R Studio, Matlab, Spss

Spatial econometrics: ArcGIS, GeoDa

AI/ML: PyTorch, CNN, LSTM, ChatGPT

Scientific writing and plotting: LaTeX, Visio, Origin