Matthew Hockert

Contact Information
PhD Student in Applied Economics
Phone: 763•785•7058
Email: Matthew.hockert@gmail.com
LinkedIn: www.linkedin.com/in/matthewhockert/

Education

PhD in Applied Economics
University of Minnesota, Minneapolis, MN, September 2022 • Present
- Coursework: Applied Microeconomic Sequence, Ph.D. Econometrics Sequence, Programming for Econometrics, Big Data Methods in Economics, Introduction to Machine Learning, Principles of Database Systems.
- Completing final year of coursework; actively seeking employment opportunities in labor economics
- Classroom experience with econometrics and machine learning:
  - Built machine learning models including perceptron algorithm, decision trees, and Nearest neighbors (KNN) using Python in 'Introduction to Machine Learning'.
  - Applied and evaluated causal inference techniques in econometric modeling, utilizing R to construct and test various models as part of the 'Ph.D. Econometrics Sequence' course.
  - Implemented machine learning packages in python as well as text and web scraping analysis in R as part of 'Big Data Methods' and 'Programming for Econometrics' courses.

Master of Science in Applied Economics
University of Minnesota, Minneapolis, MN, September 2020 • May 2022
- Graduate minor: Data Science.
- Thesis: A Spatial Approach to Agrifood Supply Chain Structure.
  - Examined the structural dynamics of U.S. agrifood supply chains during COVID•19, using spatial regression models to measure the effect of food capacity on food flows at county levels across the supply chain.
  - Utilized various datasets, including IMPLAN and Census data, to develop spatial regression models, which captured movements of goods through the supply chain.
  - Generated results about the impact of adjacent supply chain segments on regional coefficients, providing insights into the potential fragility or resilience of the supply chains.
  - Chosen to be a Selected Paper Presenter at AAEA.

B.A. in Economics and Political Science
University of Minnesota Duluth, 2017 • 2020
- GPA: 3.7/4.0
- Honors: University Honors Program, Dean's List, Cum Laude, Economic Department Honors, Omicron Delta Epsilon.

Research Experience

Data Science Intern
Federal Reserve Bank of Minneapolis, Minneapolis, MN, June 2022 • Present
- Assisting the production team in Stress Testing to convert code from MATLAB to R to build forecasting models for assessing bank resiliency against various macroeconomic shocks.
- Analyzed data of U.S. banking conditions under the new CECL guidelines and presented findings to examiners and supervisors.
- Created Rshiny applications providing analytics and incorporating risk models to identify bank risk levels by loan and asset types.
- Investigated changes in rural banking quality and agricultural output in the Ninth District.
- Created Rshiny dashboard displaying differences in counties' economies and banking conditions.

Graduate Research Assistant (GRA)
Accessibility Observatory, Minneapolis, MN, September 2022 • Present
- Created public datasets on accessibility of transportation types (bike, car, and transit) using Pandas and SQL.
- Developed Python pipeline taking data from DBeaver, cleaning it, and generated weighted average data of jobs accessible from block group to state level within the US.
- Created Rshiny application using leaflet package to display job accessibility nationally from block group to state level.
- Experience using GIT in UNIX environment.
- Familiarity with SQL within Dbeaver and Python pipeline.

Graduate Research Assistant (GRA)
Project: Foodshed • Agricultural Commodities
University of Minnesota, Minneapolis, MN, September 2020 • 2022
- Conducted literature review for future publication.
- Examined regional food system resiliency during the COVID•19 Pandemic.
- Built comprehensive dataset using Census and IMPLAN data for OLS and spatial regression models in R.

Undergraduate Research Assistant
Bureau of Business and Economic Research, Duluth, MN, September 2019 • May 2020
- Generated local economic data and performed data analysis on IMPLAN, Excel, and SPSS.
- Cleaned and interpreted survey data on Qualtrics and Excel.
- Worked with fellow research assistants to write publications that were later published on the university website.
- Helped in crafting literature review and public outreach for labor market research.

Skills

• Programming languages: R, Python, SQL, SPSS, SAS, EViews, GAUSS
• Database Management Tools: DBeaver, psycopg2
• Data visualization tools: Tableau, Rshiny
• Survey platforms: Qualtrics
• Version control: Git, UNIX

Presentations

Selected Paper Presenter at AAEA , July 2023,
Paper title: "A Spatial Approach to Agrifood Supply Chain Resiliency".

Honors and Awards

• University Honors Program
• Dean's List (2017•2020)
• Cum Laude
• Economic Department Honors
• Omicron Delta Epsilon

Professional Memberships

Agriculture and Applied Economic Association (AAEA)