

John M. Morehouse, Ph.D.

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Skills: R, Python, SQL, Julia, SAS, Version Control, Causal Inference, Machine Learning

EMPLOYMENT

Freddie Mac

August 2023 - Present

Quantitative Analyst Technical Lead (Portfolio Analytics)

Promoted from Senior in Sept. 2024

- Analyze climate and housing data from public and private sources to assess natural disaster risk. Estimated reserves needed to cover expected wildfire damages for underinsured high-risk properties.
- Research and monitor the impacts of natural disasters on loan prepayment and delinquency. Collaborating with the business and modeling teams to integrate results into internal models.
- Design and implement a methodology mapping natural disaster risk (hurricanes, floods, etc.) to credit loss by integrating vendor outputs with internal models. Identified a specific peril that poses substantial risk to the enterprise.
- Review code and other work from junior analysts and assure management of quality.
- Served as the lead analyst on a cross-divisional effort that assessed the impacts of energy efficiency codes on borrower outcomes.
- Deployed cloud computing and version control (Bitbucket) for a broader team of 10+ people.

Freddie Mac

August 2022 - August 2023

Senior Quantitative Analyst (Model Audit)

- Analyzed mission-critical models impacting a portfolio worth over two trillion dollars to ensure business efficacy and compliance with various regulatory requirements.
- Interviewed expert model developers and validators to form independent opinions on model-related issues and audits.

University of Oregon

September 2017 - June 2022

Graduate Employee

- Taught various undergraduate courses (urban economics 3x ([slides](#)), econometrics 1x).

Federal Reserve Bank of San Francisco

July 2021 - August 2021

Thomas J. Sargent Dissertation Intern

- Conducted academic research on climate policy and presented findings.

Vivid Economics (Acquired by McKinsey in 2021)

July 2020 - December 2020

Intern → Freelance Economist

- Led (managed one other employee) the development of global and regional energy demand projections.
- Developed cost estimation strategy for the UN's Sustainable Development Goals using a CGE model.

RESEARCH PAPERS

Publications

- Downwind and Out: The Strategic Dispersion of Power Plants and Their Pollution
with Ed Rubin [Paper](#), [Slides](#), [Replication Package](#)
Accepted: Journal of the Association of Environmental and Resource Economists
- The Environmental Cost of Land-Use Restrictions
with Mark Colas [Paper](#), [Minneapolis Fed Coverage](#)
Quantitative Economics, 2022. 13(1): 179-223.

Working Papers

- The Distributional Impacts of Climate Changes Across US Local Labor Markets
with Emmett Reynier [Draft](#)
- Carbon Taxes in Spatial Equilibrium
Won “Best Graduate Student Research Paper” award (University of Oregon) [Draft](#)
- In Search of Peace and Quiet: The Heterogeneous Impacts of Short-Term Rentals on Housing Prices
with Brett Garcia and Keaton Miller [Draft](#), [Slides](#)
- Labor Market Power in a Spatial Equilibrium
with Claudio Luccioletti and Sophie Mathes

EDUCATION

University of Oregon

Ph.D., Economics

June 2022

M.S., Economics

December 2018

B.S., Economics & Minor in Mathematics

June 2016

OUTSIDE LEADERSHIP & HOBBIES

Captain, USAC Elite Cycling Team (District Taco Racing)

Category 2 Road Racing Cyclist & Cycling Coach