

jakewagner

economist | researcher | data scientist

about

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programming

JavaScript
CSS3, HTML5
Python (pandas,
sklearn, etc.) & Stata

certificates

CITI human subjects
research training
Responsible conduct
of research training

strengths

statistical analysis; machine learning; communicating technical results to non-technical audiences; strong frameworks for evaluating problems and developing customer-oriented solutions; self-starter; curious learner; driven to succeed

experience

- 2018 - current **Economics Researcher, Washington State University** Pullman, WA
- *Led collaborative research projects to derive insights and deliver robust and actionable results.*
 - *Estimated rigorous econometric models, with a dominant focus on causal inference using quasi-experimental methods (synthetic controls, fixed effect models, instrumental variables).*
 - *Applied machine learning methods for prediction problems, and to estimate counterfactuals for causal inference (gradient boosted trees, random forests, neural networks).*
 - *Conducted discrete choice experiments to estimate consumers preferences and conduct non-market valuation (experimental sampling and design, discrete choice modeling).*
 - *Managed and cleaned datasets using statistical software (Stata) and Python libraries (pandas, numpy, etc.) for use in analysis and data visualization.*
- 2017 - current **Economics Instructor, Washington State University** Pullman, WA
- *Developed engaging and informative course materials to communicate complex ideas to diverse audiences.*
 - *Served as a mentor to my students within and beyond my class.*
- 2013 - 2016 **Assistant Coordinator, WWU Campus Recreation** Bellingham, WA
- *Trained employees in leadership and conflict management, leading to improved retention and customer satisfaction.*
 - *Organized events and community outreach, growing our customer base and increasing participation in special events.*
- 2015 **Analyst Intern, Institute for Public Policy & Economic Analysis** Spokane, WA
- *Forecasted regional economic indicators using time-series data, to inform local businesses and governments (PCA, predictive modeling, regression analysis).*
 - *Reviewed technical research, extracting important findings to aid and guide regional forecasting projects.*

education

2016-2020	Ph.D. Economics	Washington State University
2013-2016	B.S. Mathematics	Western Washington University
2013-2016	B.A. Economics	Western Washington University

publications

- 2019 **Household demand for water in rural Kenya**
Wagner, J., Cook, J. & Kimuyu, P. *Environ Resource Econ* (2019) 74: 1563.
<https://doi.org/10.1007/s10640-019-00380-5>

projects

ruralwaterdecisions.org

Web Application

Developed an online decision support tool used to inform/assist rural water planners in strategic management decisions (JavaScript, CSS, Google Maps API).

Predicting rental prices

Jupyter Notebook

Predicted rental housing prices using machine learning methods to estimate the rent premium of utility-included rental contracts. (Includes applications of hyperparameter tuning, and optimization over neural network architectures using random search.)

Multiple discrete-continuous model

Working Paper

Developed a multiple discrete-continuous demand model to estimate product demand and analyze consumers preferences over product attributes.

Water attributes valuation

Publication

Estimated households' valuations of source attributes (proximity, taste, etc.), and price elasticities, in rural regions of East Africa, to inform global water planners (non-market valuation, discrete choice econometrics).

Information asymmetries in the rental housing market

Working Paper

Analyzed the effects of utility-included rental contracts on energy efficient technology adoption using IV regression, finding results that challenge assumptions in the literature (causal inference, econometrics).