Joshua Olsen

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Research Experience

Graduate Research Assistantship — 2016-Present
Jonathan Yoder, Washington State University
- Cleaned, merged and analyzed terabytes of data using underlined distributed computing and python to calculate price premiums on fire resistant housing attributes based on wildfire risk.
- Constructed parametric and nonparametric models to test spatial relationships between wildfires and homes.
- Utilized machine learning techniques and multi-level models to uncover county assessor pricing methods.
- Developed and implemented new models of wildfire spread and structure locations/attributes using spatial data including Zillow's ZTRAX and Microsoft's Building Footprints.

Graduate Research Fellow — 2014 - 2016
Joe Stone, University of Oregon
- Supervised and advised honors undergraduate capstone students on five external consulting projects.
- Utilized panel data models to test student outcomes by teacher experience for 10 million students in Oregon for 20 years.

Undergraduate Research — 2012-2014
Karen Travis, Pacific Lutheran University
- Conducted causal inference tests on the effectiveness of different outreach methods used to solicit gifts from major donors ($50k+ gifts).
- Analyzed results from a $100+ million capital campaign.

Education

Ph.D. Economics, Washington State University — 2022
Fields: Econometrics, Industrial Organization and Environmental
M.S. Economics, University of Oregon — 2016
B.S. Mathematics
B.A. Economics, Pacific Lutheran University — 2014
International Honors Program, Cum Laude

Awards
1st place WAEA Graduate Paper Competition: Wildfire Refugia and Homes.

Languages/Tools
Python (primary)
- GeoPandas (**spatial analysis**)
- NumPy   - Pandas
- TensorFlow - Scikit-learn
- Matplotlib   - Statsmodels
- Dask (distributed computing)
Frequently used:
   ArcGIS, SQL, STATA
   Matlab, Excel, Latex

Graduate Level Coursework
- Econometrics:
   - OLS   - MLE
   - Discrete Choice
   - Bayesian Econometrics
   - Machine learning
   - Time Series
- Industrial Organization
- Financial Economics
- 4 field courses in Non-Market Evaluation and Environmental Economics

Teaching Experience
- Money and Banking
   -Fall 2018 (Median rating 4.0/5)
- Fundamentals of Microeconomics
   -Summer 2018   5.0/5
   -Winter 2019 (online)   4.0/5
   -Summer 2020 (online) 4.0/5