

# Joshua Olsen

[linkedin.com/in/olsenjosh](https://www.linkedin.com/in/olsenjosh)

[olsenecon.com](mailto:olsenecon.com)

[joshua.olsen@wsu.edu](mailto:joshua.olsen@wsu.edu)

## Research Experience

### Graduate Research Assistantship

2016-Present

Jonathan Yoder, Washington State University

- Cleaned, merged and analyzed terabytes of data using 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