**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 [distributed computing](https://dask.org) 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](https://www.zillow.com/research/ztrax/) and Microsoft’s [Building Footprints](https://github.com/microsoft/USBuildingFootprints).

Graduate Research Fellow 2014 - 2016

Joe Stone, University of Oregon

* Supervised and advised honors undergraduate capstone students on five external consulting projects.

Awards

1st place WAEA Graduate Paper Competition:

[Wildfire Refugia and Homes](https://github.com/JoshOlsen/Refugia).

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

* 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