# Sheridan Grant — Curriculum Vitae

I develop statistical solutions to challenging social science problems. At Zillow Offers, I modeled housing economics with causal inference and ML techniques, as well as conducting algorithmic fairness analyses. During my PhD, I researched causal approaches to assessing fairness in peer review. In the more distant past I have worked on energy market economic modeling, algebraic geometry, image processing, high-dimensional hypothesis testing, and genomics.

## **Employment**

Applied Scientist

June 2021-Aug 2022

- Zillow Offers & Zillow Experimentation Platform
  - Corrected bias (\$100MMs/year) in home resale value model induced by variations in ZO offer strength
  - Created time-to-list forecast that decreased bias by 60% vs prior assumption
  - Increased experimentation capacity by optimizing Google Analytics custom dimension utilization
  - Implemented CUPED and outlier capping for trial acceleration

Instructor; Teaching & Research Assistant

Sept 2016-Sept 2021

University of Washington

Al Intern Summer 2020

Zillow Zestimate

Research Intern Summer 2018

Microsoft Research Genomics

Consultant June 2015–July 2016

Energy and Environmental Economics

## Software & Skills

- Programming: Proficient in Python, R, SQL. Familiar with C++, Java, Bash, Matlab, Mathematica, Haskell.
- O Libraries: numpy, pandas, scipy, sklearn, statsmodels, tensorflow, pymc3, lightgbm, matplotlib, seaborn, bs4.
- O Software: Git, Spark, Airflow, AWS S3 & EC2, PyCharm, Jupyter, Excel, Ubuntu, GATK, Azure, ArcGIS.
- o targetedordertest: R package implementing the statistical methods from Grant, Perlman, and Grant, 2020.

### **Education**

University of Washington

Sept 2016-Aug 2021

PhD, Statistics

Pomona College

Aug 2011–May 2015

B.A. magna cum laude, Mathematics (computer science minor)

#### **Publications**

- Sheridan Grant, Marina Meilă, Elena Erosheva, and Carole Lee: "Refinement: Measuring informativeness of ratings in the absence of a gold standard." British Journal of Mathematical and Statistical Psychology, 2022.
- O Sheridan Grant: "Causality, Fairness, and Information in Peer Review." ProQuest [dissertation publisher], 2021.
- Carole Lee, Sheridan Grant, and Elena Erosheva: "Alternative grant models might perpetuate Black-White funding gaps." The Lancet, 2020.
- Elena Erosheva, Sheridan Grant, Mei-Ching Chen, Mark Lindner, Richard Nakamura, and Carole Lee: "Criterion Scores Completely Account for Racial Disparities in NIH Grant Review." Science Advances, 2020.
- O Sheridan Grant, Michael Perlman, and Darren Grant: "Targeted testing for bias in order assignment, with an application to Texas election ballots." Journal of Statistical Planning and Inference, 2020.
- O Eleanor Anthony, **Sheridan Grant**, Peter Gritzmann, and J. Maurice Rojas: "Polynomial-Time Amoeba Neighborhood Membership and Faster Localized Solving." In "Topological and Statistical Methods for Complex Data" 1st ed. Springer-Verlag Berlin Heidelberg, 2015. *Mathfest undergraduate presentation award winner*.
- Technical reports for energy market models: Nevada Net Energy Metering, Energy Imbalance Markets 1 & 2.