Sheridan Grant — Resume

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I develop statistical solutions to challenging economic and scientific problems. At Zillow Offers, I modeled housing economics with causal inference and ML techniques and conducted algorithmic fairness analyses. During my PhD, I researched causal approaches to fairness in peer review. In the more distant past I have worked on energy market 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 heuristic model
  - Increased experimentation capacity by optimizing Google Analytics custom dimension utilization
  - Implemented CUPED and outlier capping for trial acceleration
- **Instructor; Teaching & Research Assistant** Sept 2016–Aug 2021
  University of Washington
  - Instructor for Statistical Programming (spring 2020) and Probability Theory (summer 2019)
- **AI Intern** Summer 2020
  Zillow Zestimate
  - Assessed the calibration and predictive error of the Zestimate across census block demographics
  - Pilot study led to Chief Analytics Officer funding an AI Ethics program at Zillow
- **Research Intern** Summer 2018
  Microsoft Research Genomics
  - Wrote CL application that predicts SIDS incidence from high-dimensional genomic variant and clinical data
- **Consultant** June 2015–July 2016
  Energy and Environmental Economics
  - Optimized PUC energy market trading, underwrote $150MM transmission line, web-scraped market data

Software & Skills

- **Programming:** Proficient in Python, R, SQL. Familiar with C++, Java, Bash, Matlab, Mathematica, Haskell.
- **Libraries:** numpy, pandas, torch, scipy, sklearn, statsmodels, tensorflow, pymc3, lightgbm, seaborn, bs4.
- **Software:** Git, Spark, Docker, Airflow, AWS S3 & EC2, Hive, PyCharm, Jupyter, Excel, Ubuntu, GATK, ArcGIS.
- **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

- Causality, Fairness, and Information in Peer Review. Dissertation, 2021.
- Criterion Scores Completely Account for Racial Disparities in NIH Grant Review, Science Advances 2020.
- Targeted testing for bias in order assignment, with an application to Texas election ballots, JSPI 2020.
- Alternative grant models might perpetuate Black–White funding gaps, The Lancet 2020.
- Refinement: Measuring informativeness of ratings in the absence of a gold standard, BJMSP 2022.
- Polynomial-Time Amoeba Neighborhood Membership and Faster Localized Solving, Springer-Verlag 2015.
- Technical reports for energy market models: Energy Imbalance Markets 1 & 2, Nevada Net Energy Metering.