

## Dhruv Sinha

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### WORK EXPERIENCE

#### Zillow

Seattle, WA

##### Data Scientist II

Sep 2020-Present

- Resident expert on experimentation (A/B testing) and causal inference in the Zillow Offers Data Science team.
  - Use Hive and Presto to query relevant data for statistical analysis.
  - Identify impacts of changes at various stages of the acquisition process using Bayesian and Frequentist methods.
  - Contribute to the planning, design and execution of the experiments as the owner of reporting.
  - Identify best practices in reporting metrics from experiments, and contribute to the development of a framework for experimentation in the organization.
- Analyze the impacts of macroeconomic factors on business outcomes, and upload macroeconomic data into the company's datalake.
- Liaise with numerous stakeholders in a cross-functional setting, balancing competing priorities to produce deliverables of strategic importance. Present the results to broad audiences that include technical and non-technical participants.

#### Independent

Toronto, ON

##### Economic Consultant

May 2016-Aug 2020

- Drafted a report on the macroeconomic impacts of a proposed increase in electricity rates in a mid-sized Canadian province; the findings were integrated into Expert Testimony presented before the provincial energy regulator.
  - Analyzed the impact of the proposed rate increase on households and highlighted mechanisms to mitigate harm to consumers, including efficiency-improving programs for low-income segments of the population.
  - Conducted research on the facilities, electricity costs, and employment statistics of a consortium of firms that opposed the rate change; identified the economic sectors most likely to be impacted.
  - Performed comparative analyses on electricity intensity across Canadian provinces with data from the Canadian Socio-economic Information Management System (CANSIM) operated by Statistics Canada.
- Contributed to a submission to the provincial regulator on the modernization of energy regulation in Ontario.
  - Assessed regulatory modernization programs and the reporting of Key Performance Indicators (KPIs) across various domestic and international jurisdictions. The findings of the analysis were incorporated into the submission.
- Assisted in the preparation of a report on the introduction of energy storage by an electric utility in a large Canadian city.
  - Reviewed US battery storage market trends and projections, along with the Ontario Energy Board's Long Term Energy Plan and the Ministerial Directive to the Independent Electricity System Operator for Ontario.
  - Surveyed the academic and policy literature on energy storage programs and initiatives across jurisdictions.
- Worked with an early-stage start-up (US\$2.8m Series A funding) that quantifies financial risks from climate change for long-term asset managers.
  - Pulled workable subsets of large datasets from servers using PostgreSQL to perform analytics.
  - Conducted more than 300,000 regressions on panel data and utilized non-parametric estimation techniques in R and Stata; discussed the analysis in meetings with the co-founders.

#### University of Toronto

Toronto, ON

##### Course Instructor and Teaching Assistant

Sep 2013-Present

- Taught ECO206Y: an intermediate microeconomics course geared towards students in the economics specialization. Median evaluation: 4.0/5 ("Very Good").
- Head Teaching Assistant for several courses at the undergraduate and graduate levels. Courses include introductory economics, graduate energy and environmental economics, industrial organization and quantitative methods.
- Specific topics taught include: constrained optimization, price elasticities, probability and statistics, hypothesis testing, linear regression, mathematical modeling, structural estimation, macroeconomics, and game theory.

### EDUCATION & SKILLS

#### University of Toronto

- PhD, Economics (expected 2022)
  - Specialization: Corporate Sustainability, Energy Economics, Financial Economics, Industrial Organization.
- MA, Economics (received 2014)

#### University of Western Ontario

- BA, Honours Specialization in Global Economics (received 2013)

#### Technical Skills

- Stata, R, MATLAB, Mathematica, Microsoft Office, Python, SQL.