

Brendan Houg

Contact Information

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Web: [linkedin](#), [CV](#)

[github](#), [google scholar](#)

Summary

Data Scientist with a strong background in programming and statistics - experienced at project scoping, producing insights with visualisations and statistical analyses, and solving problems with data and software.

End-to-end skills: data extraction and cleaning, exploratory analyses, statistical modelling, presentations, and additionally, designing and building interactive dashboards and web prototypes. Previously, 12 years of combined experience as an applied economist in public policy research and in competition regulation.

Education

Ph.D. Economics

University of Melbourne (2018)

B. Commerce/ B. Software Engineering

University of Melbourne (2005)

Technical Skills

R, Python, Stata, PHP, SQL, bash, RMarkdown & Jupyter notebooks. See for example [R version](#) of Microsoft's TrueSkill algorithm. Recently completed CSIRO/Data61's 3 day [applied functional programming course](#), building a web application in Haskell using the Web Application Interface and Waargonaut JSON libraries.

Work Experience

Data Scientist (Insight Specialist), Ambulance Victoria (AV),

Doncaster Melbourne, October 2018 - Present

Joined AV as part of their Analytics Uplift project to improve AV's advanced analytic capability, resulting in the creation of AV's Insights Centre. Engaged in 4-6 analytic sprints under an agile framework to provide insights and solutions to internal customers and executive management.

- Designed and built an interactive audit automation tool using Python, SQL & Flask Web framework to run audits of the administering of complex medications by paramedics, reducing organisational risk. Data extraction from Enterprise Data Warehouse automated using Celery scheduler.
- Analysis of potential paramedic bias through estimating the impact of patient and case information received by paramedics on Turnout Time, the time taken by paramedics to acknowledge receipt of cases - with KPMG.

- Design Sprint on geographic profiling of Victoria's healthcare and ambulance services in collaboration with Victorian Department of Premier and Cabinet's Insight Centre.
- Built an interactive dashboard using R/Shiny including a map view and a daily view of demand and supply of ambulance services for AV's Rostering division.

Senior Research Officer, Melbourne Institute of Applied Economic & Social Research, University of Melbourne, January 2009 - August 2018

Conducted and collaborated on public policy research mostly in the area of Economics of Education for the Victorian Department of Education, and completed a PhD in Economics. Experienced in data analysis, report writing and presentations for academic and general audiences. Refer to [CV](#) for further details.

My thesis asked whether elite high schools, which admit students based on academic performance, improve their students' university entrance results. I estimate the selective school effect for an Australian state using propensity score matching and fuzzy regression discontinuity approaches. Refer to working paper [Houng and Ryan \(2018\)](#), which presents the main chapter of the [thesis](#).

Graduate/Project Officer, Australian Competition & Consumer Commission, February 2006 - July 2008

Contributed to investigations of merger transactions after completing the graduate program in the telecommunications, energy and mergers branches at the Australian competition regulator. Analysed price data to assess the potential change in local competition arising from proposed transactions.

Last updated: July 28, 2019

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