


CRAIG P. HUTTON

I am a Senior Behavioural Scientist with the Province of British Columbia's [Behavioural Insights Group](#). I also teach an introductory [data analysis course](#) at the University of Victoria and occasionally work as a data science consultant for the [Winstanley Laboratory](#) at the University of British Columbia. My diverse training in experimental psychology, applied statistics, and data science leads me to apply a multidisciplinary and creative approach to doing research. I deeply enjoy solving complex problems and exploring new ideas.

EXPERIENCE

2024
|
present


● **Course Instructor**

University of Victoria Continuing Studies  Victoria, BC

- Development and teaching of [Data Analytics Coding Fundamentals](#) (BIDA302) to classes of 24-28 students.

2020
|
present

● **Data Science Consultant**

Winstanley Laboratory, University of British Columbia  Vancouver, BC

- Developed an R package, [crgt](#), to facilitate operant behavioural data processing.
- Statistical analysis and computational modelling of rodent decision-making behaviour and impulsivity.
- Co-presented analysis findings at the [Computational Properties of the Prefrontal Cortex Conference](#) at the University of Oxford in 2022.

2023
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Present

● **Senior Behavioural Scientist**

BC Behavioural Insights Group  Vancouver, BC

- Leading qualitative and quantitative behavioural insights (BI) research projects to address behavioural challenges.
- Developing, testing, and evaluating BI solutions to improve government service accessibility for British Columbians.
- Statistical modelling, hypothesis testing, and machine learning with R.
- Developed an interactive dashboard using R and plotly to simplify monitoring and analysis of web traffic data.
- Advising senior executives and stakeholders on research methods to address strategic knowledge gaps.
- Building organizational capacity by training staff and developing data management and analysis processes.
- Research collaborations, science communication, and networking.

CONTACT INFO

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For more information, please contact me via email.

SKILLS


Scientific Research
Applied Statistics
Machine Learning
Project Management
Leadership
Teaching
Public Speaking
Software Development
Microsoft Office

DATA ANALYSIS

Data Visualisation (e.g. ggplot2)
Linear Models (GLM, GLMM)
Additive Models (GAM, GAMM)
Time-Series Forecasting
CART, Random Forests, XGBoost
PCA, MCA, Factor Analysis, FAMD
Cluster Analysis (e.g. k-means)
Deep Learning (MLP, RNN, CNN)
Bayesian Analysis (e.g. brms)
Causal Inference (DAGs)
Missing Data Imputation (mice)

2020
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2023

Data Scientist

BC Ministry of Social Development & Poverty Reduction  Victoria, BC

- Led a portfolio of four research and data science projects for the Ministry of Social Development and Poverty Reduction.
- Established collaborations with BC Stats, the Ministry of Housing, and the BC Centre for Disease Control.
- Population-level predictive modelling and analysis of educational attainment, homelessness, housing instability, poverty, and drug overdose risk.
- Research findings informed the development of the [Downtown Eastside Response Plan](#) and led to [\\$633 million in funding for homelessness in BC](#).
- Statistical modelling, hypothesis testing, and machine learning with R.
- Service demand forecasting using time-series analysis and regression modelling in R.
- Advising senior executives and stakeholders on research methods to address strategic knowledge gaps.
- Querying, modifying, and constructing relational databases using SQL and SAS.
- Recruiting, training, and supervising research staff.
- Led a team of three in designing, conducting, and evaluating a randomized controlled trial of a behavioural insights intervention, which doubled uptake of employment services within a month for a random sample of 206 income assistance clients.

2019-
2020

Data Science Fellow

BC Ministry of Citizens' Services

 Victoria, BC

- Evaluated the economic impacts of financial assistance policies with time-series regression models.
- Developed an R package to facilitate exploratory data analysis: bcgov.github.io/elucidate/
- Queried and modified relational databases using SQL.
- Constructed high throughput data processing pipelines to facilitate rapid and reproducible analysis.

2018-
2019

Postdoctoral Research Fellow

Division of Medical Sciences, University of Victoria

 Victoria, BC

- Led multiple research projects investigating the neurological basis of concussion symptoms.
- Collaborated with an international partnership of 10 health scientists and clinicians to study disease patterns using integrated data from Canada, the United States of America, England, and Ireland.
- Employed a decision tree to predict the concussion status of over 450 patients with 95% test accuracy.
- Communicated research findings to project stakeholders in meetings and peer-reviewed publications.

2013-
2018

Teaching Assistant

Department of Psychology, Neuroscience, & Behaviour, McMaster University

 Hamilton, ON

- Developed course content and graded assignments for a total of 675 students in 10 courses.
- Supervised 9 community outreach group projects (4-5 students each).
- Delivered 6 guest lectures to a variety of class sizes (8-40+ students).

CERTIFICATES

• [Behavioural Insights](#)

University of British Columbia
Vancouver, BC | 2023

• [Future Leaders Program](#)

Government of British Columbia
Victoria, BC | 2022



• [Fundamentals of OCAP®](#)

First Nations Information
Governance Centre
Ottawa, ON | 2021









PROGRAMMING

R / tidyverse / data.table
SQL / MySQL
SAS / SPSS
Python / keras
h2o / Spark
Parallel processing
git / GitHub / GitLab
Bash



EDUCATION

- 2018 ● **Ph.D. in Psychology**
McMaster University  Hamilton, ON
• Awarded \$137,500 in competitive scholarships
- 2013 ● **Hons. B.Sc. in Biopsychology**
University of Winnipeg  Winnipeg, MB
• Awarded \$7,000 in competitive scholarships

RECENT TALKS

- 2024 ● **Data interrogation: how to check your data for common problems in 8 simple steps.**
BC Government Data Governance and Architecture Community of Practice
 Vancouver, BC
- 2023 ● **Improving Employment Service Registration Rates Among Income Assistance Clients in British Columbia.**
[BIG Difference BC](#)  Vancouver, BC
•  <https://craig.rbind.io/talks/bigdifference2023>
- 2023 ● **Risk factors for social assistance reliance after high school.**
BC Ministry of Social Development and Poverty Reduction - Executive Meeting
 Victoria, BC
- 2022 ● **Socioeconomic, demographic, and health predictors of drug overdose in the BC Provincial Overdose Cohort.**
BC Centre for Disease Control Grand Rounds  Vancouver, BC
•  <https://craig.rbind.io/talks/bccdc2022>
- 2022 ● **Socioeconomic, demographic, and health predictors of drug overdose in the BC Provincial Overdose Cohort.**
Employment and Social Development Canada  Victoria, BC
- 2020 ● **Social assistance and health in Vancouver's Downtown Eastside neighbourhood**
BC Government Deputy Ministers Board on Integrated Data
 Victoria, BC

COMMUNITY ROLES

- 2023
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present ● **Alumni Advisor**
[Advanced Professional Certificate in Behavioural Insights](#); University of British Columbia
 Vancouver, BC
- 2021-
2023 ● **[Data Expert in Residence](#)**
Exchange Lab; BC Public Service  Victoria, BC

REPRODUCIBLE REPORTING

R Markdown
blogdown
Jupyter Notebooks
flexdashboards

2019-
Present

- **Blog Editor & Content Creator**
[Data Science Studio](#); University of Victoria 📍 Victoria, BC



TECHNICAL PAPERS

- 2023 ● **Predictors of social assistance reliance after high school: a retrospective cohort study of Vancouver secondary school alumni from 2010-2019.**
Government of British Columbia 📍 Victoria, BC
- 2022 ● **Socioeconomic, health, and demographic predictors of drug overdose in British Columbia from 2015-2018.**
Government of British Columbia 📍 Victoria, BC
- 2022 ● **Socioeconomic, health, and academic predictors of high school graduation in Vancouver from 2000-2009.**
Government of British Columbia 📍 Victoria, BC
- 2021 ● **Social Assistance and Health in Vancouver's Downtown Eastside Neighbourhood from 1995-2017.**
Government of British Columbia 📍 Victoria, BC
- **8 scientific papers, 219 citations, h-index = 7**
craig.rbind.io/scholar
 - PDFs available upon request

This resume was built with the [pagedown](#) R package.

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