

CRAIG P. HUTTON

I am a data scientist and lead investigator with the Province of British Columbia's [Data Innovation Program](#). My diverse training in applied statistics, behavioural neuroscience, and epidemiology leads me to apply a multidisciplinary and creative approach to doing research. I deeply enjoy solving complex problems and exploring new ideas.

EXPERIENCE

2020
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Present

• **Data Scientist**

Government of British Columbia

📍 Victoria, BC

- Leading 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, causal inference, 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.
- Leading a team of three in designing, conducting, and evaluating a randomized controlled trial of a behavioural insights intervention to improve employment outcomes for income assistance clients in BC.

2019-
2020

• **Data Science Fellow**

Government of British Columbia

📍 Victoria, BC

- Evaluated the economic impacts of financial assistance policies with time-series regression models.
- Created 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.

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)



EDUCATION

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



RECENT TALKS

- 2022 • **Socioeconomic, demographic, and health predictors of drug overdose in the BC Provincial Overdose Cohort.**
BC Centre for Disease Control Grand Rounds
• 📺 <https://craig.rbind.io/talks/bccdc2022>
📍 Vancouver, BC
- 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

- 2021-Present • **Data Expert in Residence**
Exchange Lab; BC Public Service
📍 Victoria, BC
- 2019-Present • **Blog Editor & Content Creator**
[Data Science Studio](#); University of Victoria
📍 Victoria, BC



TECHNICAL PAPERS

- 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
- **9 scientific papers, 150 citations, h-index = 6**
craig.rbind.io/scholar

PROGRAMMING

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

REPRODUCIBLE REPORTING

R Markdown
blogdown
Jupyter Notebooks
flexdashboards

CERTIFICATES

• **Behavioural Insights**
University of British Columbia
Vancouver, BC | 2022-2023
(expected)

• **Future Leaders Program**
Government of British Columbia
Victoria, BC | 2021-2022

• **Fundamentals of OCAP®**
First Nations Information
Governance Centre
Ottawa, ON | 2021

*This resume was built with the
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