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

2021 | Present

Data Science Consultant
Winstanley Laboratory, University of British Columbia 📍 Vancouver, BC
- Computational modelling of decision-making which revealed impacts of Cannabis on impulsivity.

2020 | Present

Data Scientist
Government of British Columbia 📍 Victoria, BC
- Statistical modelling, hypothesis testing, causal inference, and machine learning with R.
- Population-level predictive modelling and analysis of educational attainment, homelessness, housing instability, poverty, and drug overdose risk.
- Research findings led to $633 million in funding for homelessness in BC: https://news.gov.bc.ca/releases/2022AG0012-000369
- Service demand forecasting using time-series analysis and regression modelling in R.
- Advising 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 3 in conducting randomized controlled trials of behavioural insights interventions to improve employment outcomes for income assistance clients.
- Supported my team in interviewing 25 front-line employment and assistance workers and analysing the audio recording transcription data we collected to discover ways of making WorkBC Employment Services more accessible for income assistance clients.

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
- Employed a decision tree in R to predict the concussion status of 457 patients with 95% accuracy.
- Used clustering to identify disease patterns across Canada, the United States, England, and Ireland.

📇 CONTACT INFO

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👤 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   📍 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

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

2021-Present

Data Expert in Residence
Innovation Hub; 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, 148 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
Jupiter 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 **pagedown** R package.*

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