CLAUDIE COULOMBE

Data Scientist

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SUMMARY

With three years of experience in data roles, over five years of research experience in startup, non-profit, and academic contexts, and a background in Industrial-Organizational Psychology, I specialize in using statistical and data analysis techniques to help businesses make better decisions about their people. I have successfully developed and championed research programs, designed algorithms and metrics to deliver actionable insights, created reports and interactive dashboards, and automated workflows to support efficiency and data-informed decision-making.

EDUCATION

Master's, Industrial-Organizational Psychology

University of Guelph

📅 2020 - 2022

GPA **4.0** / 4.0

BA (Honours), Psychology

McGill University

📅 2015 - 2019

GPA **4.0** / 4.0

RECENT EXPERIENCE

Data Scientist - Research and Product Development

System-3

📅 01/2024 - Present   📍 Toronto, Canada

- Led the end-to-end development of 4 metrics for assessing senior leadership candidates, from conceptualization to algorithm design in R and product integration, enabling data-informed hiring decisions.
- Automated the generation of interpretive insights, reducing manual effort by 5 hours per project and improving output consistency.
- Delivered 15+ science training sessions, simplifying technical concepts for diverse audiences to enhance the effective use of the System-3 assessment.
- Redesigned Leadership Profile categories using statistical techniques to better reflect leadership styles, improving the tool's client value.
- Conducted trend analyses on 750+ leaders, uncovering patterns to inform a marketing campaign, producing two client-facing articles and a report for leadership.
- Designed and pitched a psychometric study to evaluate the predictive validity and reliability of the System-3 assessment, securing C-Suite approval.

Data Analyst, Research and Product Development

System-3

📅 10/2022 - 01/2024   📍 Toronto, Ontario

- Automated workflows, reducing client project time by 240 hours annually, cutting debrief preparation time by 80%, and reducing presentation development time by 50%.
- Optimized algorithms to minimize manual intervention and errors, improving accuracy and operational efficiency.
- Enabled data-informed decision-making by creating reports, dashboards, and impact tests, and delivering client-facing materials for 15+ major clients, including custom analyses and recommendations for hiring, succession planning, and talent development.
- Designed and implemented a psychometrics program and evaluation tool to assess the scientific rigor of assessment tools, supporting continuous improvement.
- Collaborated cross-functionally to develop and integrate new data visualizations and insights into products, enhancing client satisfaction.
- Produced technical manuals and infographics to simplify complex scientific concepts for internal teams and external stakeholders.
- Managed 2 contractors to deliver projects on time and within quality standards.

Research Assistant, Data & Psychometrics

Nugget.ai

📅 04/2021 - 08/2022   📍 Toronto, Ontario

- Led studies evaluating the reliability and validity of a selection tool, increasing confidence in its precision and accuracy while identifying areas for improvement.
- Automated data cleaning and analysis workflows, enhancing efficiency and replicability across projects.
- Drafted an article for publication to strengthen Nugget.ai's credibility and visibility.
- Created training and onboarding materials to support internal knowledge sharing.
- Conducted statistical analyses in R and Excel to support psychometric evaluations and research findings.

TECHNICAL SKILLS

Programming & Query Languages

R, SQL

Data Visualization

Shiny, Looker, Quarto, Highcharter, ggplot2, Plotly

Data Analysis

Data Cleaning & Transformation, Exploratory Data Analysis, T-Tests, ANOVA, Correlations, Chi-Square Tests, Latent Class Analysis, Logistic Regression, Linear Regression, Random Forest, Multilayer Perceptron, Psychometric Analyses

Other

Microsoft Office Suite (Excel, Word, Powerpoint), Google Suite (Docs, Sheets)

LANGUAGES

English
Native
●●●●●

French
Native
●●●●●

CERTIFICATION

SQL Fundamentals

Datacamp

PERSONAL PROJECTS

Turnover Prediction App

- Developed a Shiny app that allows users to upload datasets and train machine learning models (Logistic Regression, Random Forest, and Multilayer Perceptron) to perform binary classification tasks such as predicting turnover.
- Included features for comparing model performance and identifying at-risk employees to inform retention strategies.
- Designed an interactive and user-friendly interface to support non-technical users in exploring predictive insights.

Team Optimization Algorithm

- Designed an algorithm that uses test scores (e.g., personality, skills) to form groups optimized for maximizing similarities or differences, depending on project goals.
- Applied the algorithm in a real-world context, where it was successfully used to enhance team formation strategies.

RECENT PUBLICATIONS

Rogers communications: A leadership opportunity?

2024 | Sage Business Cases

License to retaliate: Good deeds as a moral license for misdeeds in reaction to abusive supervision.

2022 | Human Performance

Can two wrongs make a right? The buffering effect of retaliation on subordinate well-being following abusive supervision.

2022 | Journal of Occupational Psychology

Third-party reactions to supervisor mistreatment through an identity theory lens.

2021 | Canadian Psychology/Psychologie Canadienne