

# Claudie Coulombe

## Data Scientist

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### SUMMARY

With 3 years of experience in data roles, over 5 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 most valuable asset: their people. I have successfully developed and championed research programs, designed algorithms and metrics to add product value, created interactive reports and presentations to deliver actionable insights, and automated workflows to support efficiency and data-informed decision-making.

### EDUCATION

Master's, Industrial-Organizational Psychology	GPA
University of Guelph	4.0 / 4.0
2020 - 2022	
BA (Honours), Psychology	GPA
McGill University	4.0 / 4.0
2015 - 2019	

### RECENT EXPERIENCE

#### Data Scientist - Research and Product Development

##### System-3

- 01/2024 - Present   Toronto, Canada
- Led the end-to-end development of key metrics to help clients assess candidates for senior leadership roles, from conceptualization to algorithm design in R and product integration, supporting data-driven hiring decisions.
  - Analyzed user feedback from multiple sources to identify key strengths and improvement areas for the company product; presented actionable recommendations to leadership, directly influencing the 2025 product roadmap and prioritizing key features based on client needs.
  - Redesigned Leadership Profile categories using statistical methods to add value to clients and align with industry standards.
  - Led 15+ science training sessions, simplifying technical concepts to help diverse audiences understand and use the System-3 assessment.
  - Developed an automated process to analyze user base composition and competency trends across roles and industries.
  - Launched the bi-annual Trend Insights report, uncovering insights from 750+ leaders that shaped a marketing campaign, two client-facing articles, and an internal strategic report.
  - 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 to improve operational efficiency, reducing client project time by 240 hours annually, cutting debrief preparation time by 75%, and reducing presentation development time by 50%.
  - Improved the company's scoring algorithm by eliminating hard-coded elements, reducing human errors, and enhancing accuracy.
  - Tested a previously untested assumption through data analysis, leading to a transformation in how participant results were presented that improved clarity, usability, and client impact.
  - Automated client analyses by developing use-case-specific R scripts and Quarto-based HTML reports, which improved efficiency, accuracy, and scalability; these reports became the foundation for a new client-facing product feature.
  - Enabled data-informed decision-making via interactive reports and impact tests. Produced 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 hiring assessments.
  - 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 concepts for 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 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 tests in R and Excel to support psychometric analyses.

### 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