

# Christiana Koebel

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## Technical Skills

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**Languages:** R, SQL, Python, SAS

**Data Visualization & Analytics:** RShiny, Excel

**Statistics:** Regression, Causal Inference, Longitudinal Analysis, Clustering, Generalized Linear Models

## Work Experience

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### Outdoor Education Instructor

*St. Clements, Ontario*

YMCAs OF CAMBRIDGE & KITCHENER-WATERLOO

*Sept 2019 - March 2020*

- Effectively collaborated with others to plan daily team-building and outdoor camp activities for students ages 10 to 18
- Fostered an educational and welcoming camp experience by teaching activities such as ropes course climbing, rock climbing, fire building, and archery
- Maintained daily communication with teachers and parents to tactfully address issues and discuss camp inquiries
- Identified and responded to student needs and issues with empathy and competence

### Data Scientist Intern

*Toronto, Ontario*

ONTARIO MINISTRY OF LABOUR, TRAINING AND SKILLS DEVELOPMENT

*Sept - Dec 2018 & Sept - Dec 2017*

- Built and deployed an interactive RShiny dashboard application by engaging with stakeholders to gather user requirements, cleaning and manipulating data in R, programming in RShiny, and utilizing CSS to improve the app's interface
- Drove policy development and evidence-based decision making by successfully presenting the dashboard application to 15 stakeholders and team members
- Analyzed and interpreted key performance indicator (KPI) trends in ministry apprenticeship program data sets using R and communicated findings in a written report

### Data Analyst Intern

*Mississauga, Ontario*

REGION OF PEEL HEALTH ANALYTICS

*May - Aug 2018*

- Uncovered key themes in unstructured textual data from a Region of Peel Facebook page and quantified user engagement of posts on the page by cleaning textual data and implementing clustering and topic identification in R
- Translated insights from the text mining analysis into actionable recommendations for increased engagement among users of the Facebook page
- Completed a comparative study of the analysis' results with previous outcomes and met with clients to communicate findings

### Data Analyst Intern

*Gatineau, Quebec*

INDIGENOUS SERVICES CANADA

*Jan - Apr 2017*

- Conducted a statistical regression analysis to determine the impact of drinking water advisories on socio-economic indicators in First Nation communities by manipulating and analyzing data and implementing linear regression models using SAS, SQL, and Excel
- Supported the Government of Canada's Open Data initiative by designing an Excel spreadsheet tracking system that improves transparency, usability, and replicability in finding and using data

## Projects

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### Statistical Analysis: Dealing With Missing Data

[HTTPS://GITHUB.COM/CHRISTIANAKOEBEL/MISSING-DATA-ANALYSIS](https://github.com/ChristianaKoebel/Missing-Data-Analysis)

- Applied random forest, inverse probability weighting and single and multiple imputation in R to analyze the Cardiac Catheterization Diagnostic Data dataset, which has a significant number of missing values
- Utilized generalized linear models to predict the odds of developing significant coronary disease given a patient's sex, age, cholesterol level, and duration of symptoms of coronary artery disease
- Compared candidate models and determined which variables are significantly associated with the disease

### Rock, Paper, Scissors Game

[HTTPS://GITHUB.COM/CHRISTIANAKOEBEL/ROCK-PAPER-SCISSORS](https://github.com/ChristianaKoebel/Rock-Paper-Scissors)

- Developed a rock, paper, scissors game in Python that is played between the computer and a human, who inputs their next move after reading a printed prompt
- Implemented a Fibonacci function to determine the computer's moves each round
- Utilized for and while loops, if statements, string methods and print functions to keep track of moves, wins and ties, and to display total game statistics

## Education

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### Bachelor of Mathematics in Honours Biostatistics (Co-op)

*Waterloo, Ontario*

UNIVERSITY OF WATERLOO

*Sept 2014 - Aug 2019*