

Taylor Dunn

Halifax, Nova Scotia

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Experience

Biostatistician

Halifax, NS

Ardea Outcomes

2017-

- Worked on global clinical trials and real-world evidence studies in multiple disease areas. Duties included:
 - Data management: reporting, transfers, database monitoring, queries.
 - Statistical analysis, interpretation, and presentation of results.
 - Study planning: protocols, statistical analysis plans, data management plans, literature reviews.
- Conducted patient-centric research, resulting in several peer-reviewed publications and presentations. Examples:
 - Developed a machine learning model to predict patient dementia stage, achieving 83% balanced accuracy. ([Paper 1](#), [paper 2](#).)
 - Used data simulations to investigate statistical properties of the Goal Attainment Scaling outcome measure. ([Project 1](#), [project 2](#).)
 - Analyzed neuropsychiatric symptoms reported by over 4000 online users tracking dementia symptoms. ([Paper](#).)
 - Presented public webinars on patient-centric outcomes. ([Xtalks](#), [WorkCast](#).)
- Built the R code infrastructure for many data analysis and management activities, saving analysts several hours per week in each project:
 - Developed internal R package for interfacing with AWS database and transforming raw clinical trials data into clean data sets and reports.
 - Developed internal R package for company-branded figures and RMarkdown reporting templates.
 - Developed open-source R package for simulating Goal Attainment Scaling data in clinical trials. ([GitHub](#).)
 - Developed internal Shiny dashboards and deployed on AWS for live data monitoring.

Teaching Assistant

Halifax, NS

Dalhousie University, Department of Physics

2014-2016

- Aided instruction of Physics students in the undergraduate course *Introduction to Numerical Programming*.
- Ran weekly Python tutorial sessions, graded assignments and projects, and gave lectures when professor was absent.

Education

Dalhousie University

Halifax, NS

MSc Physics

2014-2016

University of Prince Edward Island

Charlottetown, PE

BSc Physics, Honours

2009-2014

Projects

Predicting bike ridership in Halifax, NS

<https://github.com/taylorlordunn/hfx-bike-ridership>

2022

- An end-to-end machine learning project to predict daily bike ridership in Halifax, Nova Scotia, Canada.
- Deployed on Google Cloud Platform as a [Shiny dashboard](#) and a [REST API](#).
- Wrote about the steps taken in a three part series: [retrieving the data](#), [developing and evaluating models](#), and [putting the model into production](#).

Canadian COVID-19 dashboard

<https://taylor-dunn.shinyapps.io/canadacovidshiny/>

2021

- A dashboard built in Shiny that reports and visualizes the latest COVID-19 numbers in Canada.

canadacovid

<https://taylorlordunn.github.io/canadacovid/>

2021

- An R package to pull Canadian COVID-19 data from a public API. Published on [CRAN](#).

TidyTuesday dashboard

<https://taylor-dunn.shinyapps.io/tidyuesday-dashboard/>

2022

- A dashboard built in Shiny compiling tweets for the [TidyTuesday data project](#).

Skills

Programming

R: tidyverse, Shiny, ggplot2, RMarkdown, tidymodels
Python: NumPy, Pandas, Seaborn, Scikit-learn
SQL – Bash – C

Tools

Git – Amazon Web Services
Docker – Google Cloud Platform
GitHub Actions – Mendeley

Data analysis

Generalized linear modeling – Machine learning
Random forest – Support-vector machines
K-nearest neighbors – Principal components analysis
Data simulation – Visualization – Data scraping