Taylor Dunn

Halifax, Nova Scotia

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Experience

Data Science Analyst *Remote*

Yelp *2022-*

- Design and analyze online experiments core to the Yelp platform.
- Interpret and present results to key stakeholders, and aid them in making data-driven decisions.

Biostatistician *Halifax, NS*

Ardea Outcomes *2017-2022*

- Worked on global clinical trials in multiple disease areas. Duties included: study planning, statistical analysis, and data management.
- 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.)
- 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 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/taylordunn/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://taylordunn.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/tidytuesday-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, Scikit-learn, Jupyter
SQL – Bash – C

Tools

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

Data analysis

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