

TAYLOR DUNN

I have made visualizations viewed by hundreds of thousands of people¹, sped up query times for 25 terabytes of data by an average of 4,800 times², and built packages for R³ that let you do magic⁴.

EDUCATION

2016
|
2014

- **M.Sc., Physics**
Dalhousie University 📍 Halifax, NS
 - Thesis: Image Segmentation and Modelling of Host-Pathogen Dynamics of *Salmonella*.⁵
- **B.Sc., Physics, Honours (minor Mathematics)**
University of Prince Edward Island 📍 Charlottetown, PE
 - Thesis: Studying Polymer Translocation with Dissipative Particle Dynamics and Monte Carlo Simulations⁶



EXPERIENCE

current
|
2017

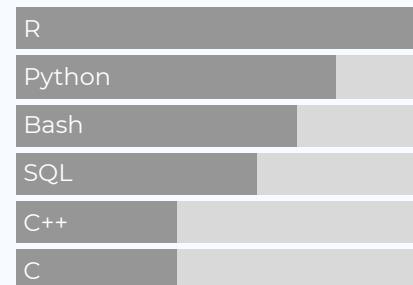
- **Biostatistician**
Ardea Outcomes 📍 Halifax, NS
 - Worked on global clinical trials and patient-centered research across multiple disease areas.
 - Assisted in study design, including the development of study protocols, statistical analysis plans, and data management plans.
 - Performed data collection, analysis, reporting, and interpretation. Aided in database maintenance and monitoring.
 - Conducted research in patient-centric outcomes, resulting in several peer-reviewed publications and presentations for scientific meetings and industry clients.
 - Led internal project management to ensure tasks are completed according to timelines. Communicated professionally with external stakeholders throughout projects.
 - Developed internal R software for effective, reproducible, and well-documented workflows.
- **Teaching Assistant**
Dalhousie University, Department of Physics 📍 Halifax, NS
 - Course: Introduction to Numerical Programming.
 - Aided undergraduate Physics students in exploring and modelling physical systems in Python.
 - Ran weekly tutorial sessions and marked assignments.
 - Gave lectures when the professor was absent.

2015
|
2014

CONTACT

- ✉ t.dunn19@gmail.com
- 🔗 tdunn.ca
- 👤 [taylordunn](https://taylordunn.com)
- 🐦 [TDunn12](https://twitter.com/TDunn12)
- linkedin [LinkedIn](https://www.linkedin.com/in/tdunn/)

LANGUAGE SKILLS



Last updated on 2022-01-09.
Source code is available on github.com/taylordunn/tdunn-cv.

2014
|
2011

- **Undergraduate Researcher**
University of Prince Edward Island 📍 Charlottetown, PE
 - Worked in a computational physics lab under supervision of a senior faculty member.
 - Developed software in C and C++ to simulate molecules and perform data analysis.
 - Presented results in various settings and formats (posters, presentations, papers).

- **Help Centre Tutor**
University of Prince Edward Island 📍 Charlottetown, PE
 - Ran weekly tutorial sessions where students would come for assistance in various subjects (physics, calculus, statistics, etc.).

- **Laboratory/Teaching Assistant**
University of Prince Edward Island 📍 Charlottetown, PE
 - Assisted with student instruction, equipment setup and marking of undergraduate physics labs.

2014
|
2011

2012
|
2010

☒ SELECTED DATA SCIENCE WRITING

2022

- **Canada COVID-19 data in R: creating a package⁸**
tdunn.ca
 - Detailed my steps and thought process in developing an R package that pulls Canadian COVID-19 data from a public API.

I regularly blog about data science and visualization on my blog [LiveFreeOrDichotomize](#).⁷

2020
|
2020

2019

☒ PUBLICATIONS

- **Use of Patient-Reported Symptoms from an Online Symptom Tracking Tool for Dementia Severity Staging: Development and Validation of a Machine Learning Approach⁹**
Journal of Medical Internet Research
 - Trained and evaluated various machine learning algorithms to predict patient dementia stage based on symptoms reported in an online app.

- **The Symptoms Targeted for Monitoring in a Web-Based Tracking Tool by Caregivers of People With Dementia and Agitation: Cross-Sectional Study¹⁰**
Journal of Medical Internet Research
 - Analyzed and characterized the symptom of agitation in dementia from web-based reports provided by caregivers.

- 2014
- **Evaluating the Applicability of the Fokker-Planck Equation in Polymer Translocation: A Brownian Dynamics Study"**
Journal of Chemical Physics
 - Through computer simulations, provided empirical evidence of the validity of the Fokker-Planck formalism for polymer translocation dynamics.

POSTERS AND PRESENTATIONS

- 2016
- **Modelling Host-Pathogen Dynamics of Salmonella.**
The New Bacteriology Conference  Royal Society, London

2015

 - **Modelling Growth in Host-Pathogen Dynamics.**
Chemical Biophysics Symposium  University of Toronto

2014

 - **Studying polymer translocation with dissipative particle dynamics.**
Atlantic Undergraduate Research and Astronomy Conference 2014  Dalhousie University

2013

 - **Polymer translocation dynamics through a nanopore.**
Atlantic Undergraduate Research and Astronomy Conference  University of Moncton
 - **Studying polymer translocation dynamics with dissipative particle dynamics.**
UPEI Science Undergraduate Research Conference 2013  University of Prince Edward Island

2012

 - **Polymer translocation dynamics through a nanopore.**
UPEI Science Undergraduate Research Conference 2012  University of Prince Edward Island

2011

 - **Conformational correlation times for a tethered polymer.**
UPEI Science Undergraduate Research Conference 2011  University of Prince Edward Island

HONOURS AND AWARDS

- 2016
|
2014
- **Nova Scotia Graduate Scholarship**
- 2014
|
2012
- **Undergraduate Student Research Award (NSERC)**
- 2013
- **The Robert Haines Memorial Science Award of Merit**

- 2013 ● ACEmat Award in Computational Modelling of Materials¹²
- 2012 ● City of Charlottetown International Ambassador Award
- 2011 ● Physics Department Prize in Modern Physics
- 2010 ● Global Issues Excellence in Writing Competition (winner)
- 2009 ● University of Prince Edward Island Full Tuition Scholarship
- 2009 ● High School Chemistry Prize (BioVectra)

🔗 LINKS

- 1: <https://www.nytimes.com/interactive/2016/08/26/us/college-student-migration.html>
- 2: https://livefreeordichotomize.com/2019/06/04/using_awk_and_r_to_parse_25tb/
- 3: <https://github.com/nstrayer/shinysense>
- 4: <http://nickstrayer.me/dataDayTexas/>
- 5: <https://dalspace.library.dal.ca/handle/10222/72174>
- 6: <https://github.com/taylordunn/tdunn-cv/raw/main/docs/dunn-2014-thesis.pdf>
- 7: <https://livefreeordichotomize.com/>
- 8: <https://tdunn.ca/posts/2021-12-30-canada-covid-19-data-in-r-creating-a-package/>
- 9: <https://github.com/taylordunn/tdunn-cv/raw/main/docs/shehzad-2020-jmir.pdf>
- 10: <https://github.com/taylordunn/tdunn-cv/raw/main/docs/rockwood-2019-jmir.pdf>
- 11: <https://github.com/taylordunn/tdunn-cv/raw/main/docs/polson-dunn-2014-chemphys.pdf>
- 12: <https://scienceatlantic.ca/divisions/physics-astronomy/past-winners/>