Adam J Campbell PhD

Summary

- Project management of the full data analysis lifecycle. Implementing projects from data processing, cleaning, and problem refinement, onto statistical inference and model integration. Delivery of interactive, engaging, and insightful data projects with 11 years experience on academic research and government projects.
- Providing excellent customer service delivery with a highly-collaborative approach, using Agile and ITIL best practices to iterate toward a final data analysis design, enabling intelligent decision making.
- Experienced leadership and communication ability, leading a science communication organisation for 2 years with an emphasis of data visualisation training.

Relevant Experience

Geospatial Analyst

August 2018 – Present

Dunedin City Council – Business Information Systems

- Performing data ETL, cleaning, and analysis on disparate data sources across a large and mature organisation where departments have differing data standards. Routinely using tools like R, Python, Elasticsearch, SQL, ArcGIS, PowerBI, and MS Office.
- Providing excellent customer services to internal teams throughout the council, to external organisations, and individual member of the public. Using Agile practices in a collaborative environment to develop quality data products quickly.
- Communicating actionable insights through data visualisations, statistical inference and customised reporting tools.

Projects have included:

- Developing geospatial dashboards, including a dashboard to visualise traffic flow integrating model output, calculating KPIs and flow statistics through key corridors.
- Creating a reporting tool for the public to report street light outages via smartphone. Including companion apps for service agents to take further action on streetlight outages, and high-level system overview dashboard for managers.
- Designing a machine-learning tool to categorise council documents. Developing a ML clustering algorithm tool to sort documents with similar key words and phrases in full-text. Allowing archivists to quickly sort through incredible amounts of documents.

Postdoctoral Researcher

September 2015 – August 2018

University of Otago – School of Surveying

- Developed a new multivariate statistical analysis method for interpreting present-day changes to Antarctica's ice shelves. This method combined computational models with geospatial-time series data to create statistical fingerprints for ice shelf events, which correctly identified the timing and magnitude of past known events. Model used to forecast next 300 years of ice shelf evolution.
- Designed, conducted and presented original research: writing of 5 peer-reviewed publications, and presenting at 5 conferences, in New Zealand and abroad.

- Lead the Glacier Research Team, responsible for group research projects, assigning work and writing plans, monitoring progress, and deciding research directions.
- Lectured Surveying papers in topics of statistics, maths, and computational analysis.

Postdoctoral/Graduate Researcher September 2009 – September 2015

University of Washington

- Mentored staff and students the best-practices for crafting data visualisations and communicating insights by facilitating 8 seminars across university.
- Developed computational models and analysed data using a variety of statistical approaches on 4 major projects, responsible of managing research databases.
- Published PhD dissertation and 2 peer-reviewed publications, presented research at ~15 conferences, and 2 large (100+ people) public lectures.

Education

Ph.D. Earth and Space Science, University of Washington 2015

Dissertation: Could narrow marine embayments prevent sea-glacier invasion, and protect photosynthetic life during a Snowball Earth?

M.S. and B.S. Geology, Portland State University 2009

Software

R / tidyverse	Python / Anaconda	Elasticsearch
ArcGIS/QGIS	Smartsheets	SQL
Linux OS	OSX	PowerBI

Service

- Co-organiser for Open Data Dunedin Meetup 2018 – Present
- Guest Lecturer for Surveying 208 paper at U. Otago April 2019
- Manger of Engage Science, a science communication training program 2013 – 2015

Awards

- Regional Winner, New Zealand Space Challenge May 2018
- David A. Johnston Award for Research Excellence, U. Washington May 2015
- Best Presenter, Earth and Space Sciences Research Gala, U. Washington April 2014

Activities

Running Bicycling Beer Brewing