Richard Kelson

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Personal Summary

Experienced climate change analyst with a natural sciences MSc, specialising in the analysis of large datasets in academic and business settings.

Skills

- Python (7 years), MATLAB (8 years), R (2 years), SQL (2 years), Tableau (1 year)
- Machine learning, network analysis, text mining, database analysis, PCA analysis
- Communication of complex topics to both expert and non-expert audiences
- Weapons and flight training

Portfolio

- Projects: https://rkel1.github.io/RichardKPortfolio/
- GitHub: https://github.com/rkel1

Work History

Assistant to Professor, McGill University *(2020-2021) (concurrent with MSc studies)*

- Designed a data analysis project for students to undertake.
- Prepared and gave a lecture on synoptic meteorology.

Tax Advisory Analyst, Deloitte LLP *(2017 - 2019)*

- Training and accreditation in accountancy and tax professional qualifications (ACA/CTA).
- Analysis of client data for tax and project management.

Software Tester, Zühlke Engineering Ltd *(September – November 2012)*

- Testing and analysis of software developed for a medical environment.

Education

MSc: Atmospheric & Oceanic Sciences, *McGill University (2019 – 2021)*

- GPA: 4.00 / 4.00
- Presented research at the 2020 AGU Fall conference
- Max Dunbar Award for Oceanography

BSc: Physics, *Johns Hopkins University (2013 – 2017)*

- GPA: 3.89 / 4.00
- Majors in Physics; Earth & Planetary Sciences; German
- Max Kade Grant

City of London School (*2007 – 2012)*

- GCE: Physics (A*), Maths (A*), Further Maths (A*), Chemistry (A), German AS (A)
- GCSE: 12 A* grades including Maths, English, and Triple Science

Programming courses *(taken online independently)*:

- Google Data Analytics Specialisation (Google, 2021)
- Applied Data Science with Python Specialisation (University of Michigan, 2021)
- PostgreSQL Specialisation (University of Michigan, 2021)
- Programming in Python (Rice University, 2015)
- R Programming (Johns Hopkins University, 2015)

Research

McGill University, Atmospheric & Oceanic Sciences (2019 – 2021)

Analysis of the strength of the Atlantic Meridional Overturning Circulation measured in-situ at 26°N and comparison to pre-industrial simulations to gauge whether the trend observed is significant, with Carolina Dufour and David Straub. Use of multiple large climate datasets, both modelled and observed, requiring substantial web crawling and cleaning. Presented at the virtual AGU 2020 Fall meeting.

Johns Hopkins University, Earth & Planetary Sciences (2014 –2017)

Investigation into the effects of the Greenland-Scotland ridge on mediating the interaction between the Atlantic Meridional Overturning Circulation and sub-polar overturning circulation. Development of a numerical model to simulate the overturning based on buoyancy forcing, supervised by Thomas Haine.

Study into variations in seasonal variability of sea ice in the Arctic and Antarctic Oceans, led by Thomas Haine. Performed data analysis on a series of climate models to determine past and predict future trends in sea ice coverage and depth in the polar regions.

Extra-Curricular Interests & Achievements

- Analysis of the Age of Empires 2 video game, including over 400,000 matches.
- Production of an Astronomical Science podcast (https://soundcloud.com/atmospheres-podcast)
- Coordination of departmental events, including trivia nights and virtual happy hours.
- McGill postgraduate student representative; McGill Equity, Diversity & Inclusion committee member.
- PADI Open Water diver.

Publications

Gnanadesikan, A., Kelson, R., & Sten, M. (2018). Flux Correction and Overturning Stability: Insights from a Dynamical Box Model, Journal of Climate, 31(22), 9335-9350