

David Grady, PhD

dai.grady@hotmail.co.uk • 07983484647 • davidgrady.info

Data specialist with over 5 years of experience and a passion for engaging with complex data problems, pursuing the opportunity to progress my career in analytics.

Data management and reporting officer (Energy Saving Trust)

(March 2021 – Present)

Managed several national databases (e.g. Home Analytics) and the Property Energy Analysis Tool (PEAT) modelling platform for use by Scottish Government, Local Authorities and housing associations to develop energy efficiency, net zero and fuel poverty policy and strategy.

- Proactively engaged with clients to understand their unique circumstances and data analysis needs, to tailor their data analysis support through R, Power BI, ArcGIS Pro and in-house data tools to produce high-quality insights and upskill their in-house teams.
 - Spearheaded the delivery of two data analysis and modelling projects for Fife and Perth and Kinross councils to inform their long-term energy efficiency, net zero and fuel poverty strategies and compliance with Scottish Government policy such as the Heat in Buildings Strategy and Local Heat and Energy Efficiency Strategies.
- Cultivated a strong, cooperative relationship with Scottish Government teams, 32 Scottish Local Authorities and >50 housing associations across Scotland to share their data, insights and feedback to improve model accuracy and functionality of the company's data tools.
 - Established the company's data products as a key asset for energy efficiency planning in Scotland and increased the number of clients by 160%, database users by 26% and >100 new modelling tool users (>170% higher than the KPI set by Scottish Government for modelling tool users).
 - Actively sought opportunities to advance my skillset and improve organisation workflows. Undertook Power BI, machine learning and advanced statistical modelling training to enhance my capacity to analyse data more effectively, provide additional insights for stakeholders and improve data tool engagement and accessibility.
- Supported multiple other teams at Energy Saving Trust to monitor ongoing Scottish Government funding scheme progress (e.g. Energy Efficient Scotland:Area Based Schemes), understand ongoing changes in UK and Scottish Government policy, analyse data and visualise insights to key internal and external stakeholders to inform energy efficiency and fuel poverty policy and strategy across the UK and EU.
 - Guided data-driven business strategy for the Scottish arm of the company (Home Energy Scotland) to best support the Scotland's decarbonisation ambitions by 2030 and 2045. Showcased data baselines, opportunity areas and key challenges a net zero housing stock in Scotland using R, Power BI and ArcGIS Pro.

Associate lecturer (based in Hohai University, China; 3 month contracts)

(October 2019 – December 2019; November 2020 – January 2021)

Designed and taught undergraduate hydrochemistry and environmental statistics (R and SPSS; comprised of 24 teaching sessions of 1.5 hours) modules to 70-80 Chinese university students both in person (in 2019) and virtually (during the COVID-19 pandemic).

- Excellent problem solving, time management and active listening skills were essential to ensure a successful delivery of multiple complicated scientific theories and calculations to Chinese students with a varied English language proficiency.

- Adapted quickly to a different work system in a foreign language and independently constructed the module including coursework, examinations, and the teaching timetable.

PhD in Geography and Earth Sciences

(Aberystwyth University: September 2016 – April 2020)

Research: Spearheaded month-long fieldwork in an unfamiliar environment with limited resources, in the Bale Mountains (>3,950 m elevation), Ethiopia, drilling sediments and sampling waterbodies to model and reconstruct environmental change in eastern Africa for the past 16,000 years.

- Fostered a collaborative, strategic direction with a multi-disciplinary, international group of 9 specialists as an implementer and shaper of ideas and resources to effectively communicate our findings to peers and stakeholders through international conferences (e.g. INQUA, 2019), reports and academic papers.
- Self-taught R to apply strong analytical skills, alongside good data management and presentation to ensure high-quality statistical analysis, graphics, maps, and reports.
 - Employed a variety of statistical hypothesis testing, regression, time series analysis, Bayesian statistical modelling, ordination and principal curves, general additive models (GAMs), rate of change, data cleaning and visualisation through R and Plotly to analyse and synthesise millions of geochemical and ecological data points.
- Having identified a new form of micro-algae from the samples I collected from my second study area: Lake Babogaya, Ethiopia, I reached out to experts at the Royal Botanical Garden in Edinburgh to confirm and publish my results and I gave it the name *Nitzschia fenestralis*.

Environmental Change, Impact and Adaptation MSc (Distinction class)

(Aberystwyth University: September 2015 – September 2016)

Thesis: Punctually delivered an extensive database of flood events, maps and impacts for Wales (1870-1900 AD) from the National Library of Wales newspaper archive (>15 million articles).

- Liaised effectively with Natural Resources Wales to adapt their research methods to catalogue 387 flood events across Wales from this historical media archive, extending their current database of flooding and its impacts to increase the resilience and adaptability of modern-day communities.
- I proved to be motivated, flexible and resourceful having taught myself complex Excel database management skills (e.g. VBA coding and pivot tables), SQL, ArcGIS and QGIS software alongside my studies to produce high quality maps, essays and reports.
 - I received the *Outstanding Masters' Award* for highest overall grades at Masters level in the University for 2016, highlighting my excellent track record of high quality presentations, essays and technical reports both individually and as part of a team.

Physical Geography BSc (1st class Hons.)

(Aberystwyth University: September 2012 – June 2015)

Thesis: Conducted analysis of samples from Sheheree Bog, Ireland using specialist lab equipment to quantify the magnitude of local mining pollution since the Bronze Age, 3,500 years ago.

- I was awarded the *Gregynog and James Fairgrieve Prize (Science)* for highest overall course marks across the cohort of BSc Geography students.

Hobbies & Interests

I am a dedicated kickboxer (>10 years training) having achieved a 2nd degree black belt and won several medals at multiple World Championships representing Wales. I led and planned sessions (3 times a week) for the Aberystwyth University Kickboxing Club (2013-2015) as chief instructor.