Dr Peter Hargreaves

Impact evaluation, MEL and geospatial analysis

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PROFESSIONAL PROFILE

Quantitative researcher and project leader with a PhD and eight years of combined research and consulting experience turning complex data into evidence for decisions. I specialise in the design of studies and surveys, the statistical and machine learning analysis of large datasets, and geospatial and remote sensing analysis. I have led projects end to end, managing budgets of up to £800,000 alongside contracts, risk, quality assurance, and teams, and I am comfortable presenting technical findings to senior, non-specialist audiences. My work has been published in leading journals, including *Nature Climate Change*, and delivered for clients including the Rockefeller and Mastercard Foundations, the UK Government, and the University of Edinburgh.

CORE SKILLS

Data & statistics: Experimental and quasi-experimental study design, sampling and power analysis, survey design, statistical modelling, management and analysis of large datasets

Machine learning: Predictive modelling with random forest regression and classification and linear mixed-effects models, model selection and averaging, k-fold cross-validation, variable importance analysis

Geospatial: Geographic Information Systems (GIS), satellite image analysis and classification, remote sensing, spatial data extraction and mapping

Programming & tools: Statistical programming (R), Python, Google Earth Engine, eCognition, GIS software

Delivery & leadership: Project and budget management, contract and risk management, quality assurance, team leadership, competitive bidding and business development

Communication: Reporting and presenting to senior stakeholders, training and mentoring, teaching, conference presentation, technical writing

PROFESSIONAL EXPERIENCE

Independent Consultant / Director | Mirrormere Labs *2022–2023; 2025–Present*

- Provide independent consultancy in quantitative research design, data analysis, and geospatial analysis for international clients.
- Design experimental and quasi-experimental studies, surveys, and sampling frameworks, and deliver the associated statistical analysis and reporting.
- Designed an experimental study and statistical power analysis for a **Rockefeller Foundation**-funded programme in India assessing the impact of solar energy adoption on women-led small businesses.
- Provided quality assurance and technical oversight for a multi-country research programme funded by the **Mastercard Foundation** across four countries, spanning sampling design, tools, analysis, and reporting.

Consultant & Project Manager | NIRAS Group UK *2023–2025*

- Managed an **£800,000 UK Government-funded programme** end to end, with responsibility for budget, contract, risk, quality assurance, and team leadership.
- Secured a **£100,000 budget increase** and a contract extension to 2027 through strong delivery and client relationships.
- Led the analytical design for a major field study, including a quasi-experimental sampling strategy and a **survey of 2,200 respondents** across six sites.
- Conducted independent evaluations and analytical reviews across a portfolio of more than 700 projects, appraising applications, analysing results, and reporting to the client.
- Led and contributed to several successful competitive bids for UK Government framework contracts.

Doctoral Researcher | The University of Edinburgh *2018–2023*

- Completed a PhD applying satellite data and machine learning to measure economic development and human well-being, funded by the Natural Environment Research Council.
- Built statistical and machine learning models (linear mixed-effects models and random forest regression and classification, tuned with k-fold cross-validation) to predict socioeconomic outcomes from geospatial data.

- Designed and conducted large field surveys, including sampling design and primary data collection, and led data quality assurance and analysis.
- Applied Google Earth Engine for satellite time-series analysis and eCognition for object-based image classification.
- Lectured and tutored undergraduate and postgraduate students, and developed content for the online course *Earth Observation for Sustainable Development*.

EDUCATION

PhD, Satellite Data for Economic Development | The University of Edinburgh *2023*
MSc, Ecosystem Services (Distinction) | The University of Edinburgh *2017*
BSc (Hons), Ecological & Environmental Sciences | The University of Edinburgh *2015*

SELECTED PUBLICATIONS

- Wells, G.J., Ryan, C.M., Artur, L., Ribeiro, N., Bowers, S., **Hargreaves, P.K.**, Fernando, J., Farao, A. and Fisher, J.A. (2022). Tree harvesting is not the same as deforestation. *Nature Climate Change*, 12(4), 307–309.
- **Hargreaves, P.K.** and Watmough, G.R. (2021). Satellite Earth observation to support sustainable rural development. *International Journal of Applied Earth Observation and Geoinformation*, 103, 102466.
- Gibson, L., Sibanda, B.N., Gwate, O., Sibanda, S., **Hargreaves, P.K.**, and Watmough, G.R. (2020). Bulawayo Operational Observatory and mapping in response to COVID-19 social distancing requirements. *Space, Satellites, and Sustainability*, 11527, 16–22. SPIE.

ADDITIONAL INFORMATION

Languages: English (native), French (limited working proficiency)

Nationality: British

References available upon request.