Tom Cantellow

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EDUCATION

University of Bristol — Bristol, UK
PhD in Human Geography — *Oct. 2020 – Nov. 2024*

University of Sheffield — Sheffield, UK
MSc, Distinction, in Applied GIS — *Sep. 2017 – Sep. 2018*
Awards: Sheffield Postgraduate Scholarship; Ian Masser Prize for best dissertation

University of Lincoln — Lincoln, UK
BA (Hons), 2:1, in International Relations — *Sep. 2012 - May 2016*

Ghent University — Ghent, Belgium
Erasmus Programme — *Sep. 2014 - Feb. 2015*

EXPERIENCE

Senior Scientific Officer - R&D Fellow — Aug. 2025 – Present
Department for Environment, Food & Rural Affairs — *Newcastle, UK*
- Developed interactive AI chatbots.

Teacher — Oct. 2020 – May 2025
University of Bristol — *Bristol, UK*
- Designed and lead lectures for *Understanding Global Problems Using Data* unit, teaching quantitative analysis.
- Conducted Political Geography workshops for widening participation initiatives.
- Lead seminars across geographic sub-disciplines: political, economic, urban, and health geographies.

Research Associate — Apr. 2023 – Sep. 2023 & Jun. 2024 – Dec. 2024
University of Bristol — *Bristol, UK*
- Developed Net-Zero Resilience Index, ranking UK areas by resilience to low-carbon economic restructuring.
- Contributed to public reports, academic articles, and built websites for policy engagement.
- Analysed energy efficiency of Bristol's rental housing and created webmap.

UKRI Policy Intern — Jun. 2022 – Sep. 2022
UK Home Office, Central Analysis and Insights Team — *London, UK*
- Led analytical initiatives in data visualisation, spatial analysis, and communication for non-experts.
- Consulted on evaluative survey redesign aligned with customer needs.

Consultant — Apr. 2023 – Present
- IPPR funded update to Net-Zero Resilience Index to include 2024 Parliamentary Constituencies.
- Produced all maps included in Demos' 2023 Good Credit Index Report.

PROJECTS

Net Zero Resilience Index | *R, Leaflet, Github, QGIS, HTML/CSS* — Jun. 2024 – Dec. 2024
- Developed an economic complexity methodology utilising machine learning to analyse employment in the UK.
- Created a ranked resilience index for regional geographies' net-zero economic transition.
- Visualised and published index map via GitHub Pages.
- Authored detailed report and journal article (under review).

PhD Thesis | *R, QGIS, SQL, LaTeX* — Sep. 2020 – Nov. 2024
- Authored 58,000 word peer-reviewed thesis.
- Uses big data surveys and local economic data with statistical models to analyse voting behaviour.
- Utilised machine learning, mixed-effects models, and descriptive statistics.
- Effectively balanced teaching, research projects, upskilling, and internships.

TECHNICAL SKILLS

Languages: R, Python, SQL (SQLite), HTML/CSS, LaTeX.
Tools: RStudio, Jupyter, Databricks, Posit, QGIS, ArcGIS, ArcGIS Online, Visual Studio, Excel, Overleaf, MS Office.
Libraries: Tidyverse, ggplot2, lme4, sjPlot, dotwhisker, webshot2; Pandas, matplotlib, scikit-learn
Datasets: ACLED, British Election Study, British Social Attitudes Survey, Business Register and Employment Survey, Chapel Hill Expert Survey, Energy Performance Certificates, Indices of Multiple Deprivation, Scottish Census, UK Census, UK Household Longitudinal Study, UK Land Registry, and many others.