

# 1 Characterisation of space in Great Britain using the 2 Spatial Signatures model

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## 7 ABSTRACT

8 This is a manuscript template for Data Descriptor submissions to *Scientific Data* (<http://www.nature.com/scientificdata>). The abstract must be no longer than 170 words, and should succinctly describe the study, the assay(s) performed, the resulting data, and the reuse potential, but should not make any claims regarding new scientific findings. No references are allowed in this section.

9 Please note: Abbreviations should be introduced at the first mention in the main text – no abbreviations lists or tables should be included. Structure of the main text is provided below.

## 11 Background & Summary

12 (700 words maximum) An overview of the study design, the assay(s) performed, and the created data, including any background information needed to put this study in the context of previous work and the literature. The section should also briefly outline the broader goals that motivated the creation of this dataset and the potential reuse value. We also encourage authors to include a figure that provides a schematic overview of the study and assay(s) design. The Background & Summary should not include subheadings. This section and the other main body sections of the manuscript should include citations to the literature as needed.

## 18 1 Background and Summary

19 The best paper ever is<sup>1</sup>.

## 20 Methods

21 The Methods should include detailed text describing any steps or procedures used in producing the data, including full descriptions of the experimental design, data acquisition assays, and any computational processing (e.g. normalization, image feature extraction). See the detailed section in our submission guidelines for advice on writing a transparent and reproducible methods section. Related methods should be grouped under corresponding subheadings where possible, and methods should be described in enough detail to allow other researchers to interpret and repeat, if required, the full study. Specific data outputs should be explicitly referenced via data citation (see Data Records and Citing Data, below).

27 Authors should cite previous descriptions of the methods under use, but ideally the method descriptions should be complete enough for others to understand and reproduce the methods and processing steps without referring to associated publications. There is no limit to the length of the Methods section. Subheadings should not be numbered.

## 30 Subsection

31 Example text under a subsection. Bulleted lists may be used where appropriate, e.g.

- 32 • First item
- 33 • Second item

## 34 *Third-level section*

35 Topical subheadings are allowed.

## 2 Methods

### Data Records

The Data Records section should be used to explain each data record associated with this work, including the repository where this information is stored, and to provide an overview of the data files and their formats. Each external data record should be cited numerically in the text of this section, for example<sup>2</sup>, and included in the main reference list as described below. A data citation should also be placed in the subsection of the Methods containing the data-collection or analytical procedure(s) used to derive the corresponding record. Providing a direct link to the dataset may also be helpful to readers (<https://doi.org/10.6084/m9.figshare.853801>).

Tables should be used to support the data records, and should clearly indicate the samples and subjects (study inputs), their provenance, and the experimental manipulations performed on each (please see 'Tables' below). They should also specify the data output resulting from each data-collection or analytical step, should these form part of the archived record.

## 3 Data Records

### Technical Validation

This section presents any experiments or analyses that are needed to support the technical quality of the dataset. This section may be supported by figures and tables, as needed. This is a required section; authors must present information justifying the reliability of their data.

## 4 Technical Validation

### Usage Notes

The Usage Notes should contain brief instructions to assist other researchers with reuse of the data. This may include discussion of software packages that are suitable for analysing the assay data files, suggested downstream processing steps (e.g. normalization, etc.), or tips for integrating or comparing the data records with other datasets. Authors are encouraged to provide code, programs or data-processing workflows if they may help others understand or use the data. Please see our code availability policy for advice on supplying custom code alongside Data Descriptor manuscripts.

For studies involving privacy or safety controls on public access to the data, this section should describe in detail these controls, including how authors can apply to access the data, what criteria will be used to determine who may access the data, and any limitations on data use.

## 5 Usage Notes

### Code availability

## 6 Code Availability

For all studies using custom code in the generation or processing of datasets, a statement must be included under the heading "Code availability", indicating whether and how the code can be accessed, including any restrictions to access. This section should also include information on the versions of any software used, if relevant, and any specific variables or parameters used to generate, test, or process the current dataset.

## References

1. Singleton, A. & Arribas-Bel, D. Geographic data science. *Geogr. Analysis* **53**, 61–75 (2021).
2. Hao, Z., AghaKouchak, A., Nakhjiri, N. & Farahmand, A. Global integrated drought monitoring and prediction system (GIDMaPS) data sets. *figshare* <https://doi.org/10.6084/m9.figshare.853801> (2014).
3. Kaufman, D. *et al.* A global database of holocene paleotemperature records. *Sci. Data* **7**, 115, <https://doi.org/10.1038/s41597-020-0445-3> (2020).
4. Figueredo, A. J. & Wolf, P. S. A. Assortative pairing and life history strategy – a cross-cultural study. *Hum. Nat.* **20**, 317–330, <https://doi.org/10.1007/s12110-009-9068-2> (2009).
5. Babichev, S. A., Ries, J. & Lvovsky, A. I. Quantum scissors: teleportation of single-mode optical states by means of a nonlocal single photon. Preprint at <https://arxiv.org/abs/quant-ph/0208066> (2002).

79 6. Behringer, R. *Manipulating the mouse embryo: a laboratory manual* (Cold Spring Harbor Laboratory Press, New York,  
80 2014).

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## 87 Acknowledgements

88 (not compulsory)

89 Acknowledgements should be brief, and should not include thanks to anonymous referees and editors, or effusive comments.  
90 Grant or contribution numbers may be acknowledged.

## 91 Author contributions statement

92 Must include all authors, identified by initials, for example: A.A. conceived the experiment(s), A.A. and B.A. conducted the  
93 experiment(s), C.A. and D.A. analysed the results. All authors reviewed the manuscript.

## 94 Competing interests

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## 98 Figures & Tables

99 Figures, tables, and their legends, should be included at the end of the document. Figures and tables can be referenced in LaTeX  
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101 Authors are encouraged to provide one or more tables that provide basic information on the main ‘inputs’ to the study (e.g.  
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Condition	n	p
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**Table 1.** Legend (350 words max). Example legend text.



**Figure 1.** Legend (350 words max). Example legend text.