

Curriculum Vitae

Mark Ruddy

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Personal Statement

I'm a data-driven scientist using R, SQL, GIS and other tools to tidy, explore, analyse and visualise data; deliver reproducible work; and creatively communicate ideas and insights. I have academic and commercial experience using machine learning and a variety of statistical approaches, use GitHub, have additional experience with python, and am currently training with Hadoop and MapReduce.

My background in Earth, energy, and environmental sciences (PgDip, MSc, PhD) has been the springboard to over 10 years' experience in quantitative public and private sector projects. I am now looking to transition my skillset into a business space working with big data problems.

Employment History

- Data and Environmental Consultant:
 - Data science: University of Westminster / Transport for London - Wrangling, integrity checking and machine learning for a transport study.
 - Geo-science support for archaeology: Museum of London Archaeology; L-P:Archaeology - Predicting archaeological potential through fieldwork and spatial modelling.
 - Writing and Instructional Design of e-learning products: energy-future.com - Using research, technical and journalistic writing skills, and dataviz and design expertise to present tutorials on subjects such as petroleum exploration, the energy system, and climate change.
 - June 2011—September 2014 and May 2016—present
- Science Advisor (East of England)
 - Archaeological Science support to the heritage sector.
 - Historic England, 24 Brooklands Avenue, Cambridge, CB2 8BU, UK
 - July 2015—May 2016 (Maternity)
- Database administrator
 - Development and population of the Ancient Human Occupation of Britain project database.
 - Natural History Museum, London, UK
 - November 2010—April 2011
- Bibliographic database management and GIS
 - Building global models of sea-level change.
 - Neftex Exploration Insights, Abingdon, Oxon., UK
 - February 2006—September 2006
- GIS Technician and Technical Lead
 - Task Technical Lead for a world-leading digital mapping project.
 - Black & Veatch Ltd, Redhill, Surrey, UK
 - June 2001—September 2004

Key skills

- Statistical approaches
- Spatial data analysis
- Machine learning
- Database: design, management, querying
- Self-starter: Udacity training in Hadoop and MapReduce
- Data visualisation and instructional design
- Functional requirement studies
- Project management
- Independent research

Tools

- R: base R, *tidyverse*, caret, knitr, R Markdown, Bookdown,...etc
- Databases: SQL, MySQL, PostgreSQL, PostGIS
- Other languages: python, php, html, jekyll
- Geographical Information Systems: QGIS, ESRI
- Writing: markdown, LaTeX

Academic History

- **PgDip** (Distinction): Geographical Information Science
 - University College London, London, UK
 - October 2014—May 2015
- **PhD**: Quantitative palaeontology and stratigraphy
 - Quantitative shape analysis of fossils applied to geological dating.
 - *The western Palaearctic evolution of the water vole* Arvicola.
 - Royal Holloway, University of London, Egham, UK
 - October 2006—September 2010
- **MSc** (Distinction): Quaternary Science
 - Royal Holloway, University of London, Egham, UK
 - October 2004—September 2005
- **BSc** (2.1): Biology and Geology
 - University of Manchester, Oxford Road, Manchester, UK
 - September 1994—June 1997

References

On request