Rory Spanton

Behavioural Researcher

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I am a researcher interested in answering captivating questions about human behaviour and cognition. I have over five years of experience in quantitative research, data analysis, and statistical modelling using R. I am in the final year of my PhD investigating human memory and aspire to address new applied research questions upon completion.

SKILLS

Programming	R (including Shiny, RMarkdown, Quarto), JavaScript, CSS, Python
Statistical Modelling	Signal Detection Modelling, Monte-Carlo Simulation, Stochastic Modelling, Nonlinear Optimisation, Cross Validation
Statistical Analysis	Linear Mixed Effects Modelling, Regression (Multiple, Logistic, Polynomial), ANOVA, Bayesian Statistics, Non-Parametric Statistics
Technical Skills	Git/GitHub, Markup (HTML, LaTeX), Shell Scripting (Windows CLI, BASH), Package Development
Software Packages	Microsoft Office, Adobe Creative Suite, SPSS, OpenSesame
Soft Skills	Written Communication, Presentation, Scientific Writing, Teamwork and Collaboration

EXPERIENCE

Teaching and Support Assistant   2020 — Present
University of Plymouth   *Plymouth, UK*

- Prepared and delivered course content in psychology degree programmes. Provided written feedback to 250+ students
- Instructed students on quantitative analyses (including regression and ANOVA), and qualitative methods (interviewing, interpretive phenomenological analysis)
- Problem solved to quickly address ad-hoc questions and issues at short notice
- Verbally communicated challenging concepts to multiple student project groups as a direct supervisor, receiving excellent end-of-module feedback

Research Assistant / Modelling Explicit and Implicit Memory   2019 — 2020
University of Plymouth   *Plymouth, UK*

- Contributed to a £250k ESRC grant by designing and conducting new research investigating recognition memory
- Implemented behavioural experiments and surveys with JavaScript and Python based on stakeholder requirements
- Used R and RMarkdown to create reports with reproducible code and results

Senior Peer Assisted Learning Scheme Leader   2017 — 2019
University of Plymouth   *Plymouth, UK*

- Worked with colleagues to plan and lead study sessions for Stage 1 and 2 undergraduates
- Implemented student feedback to increase session attendance by 40%
- Facilitated two-day training workshops and provided guidance to newer colleagues, training 30+ incoming leaders

Placement Researcher   2017 — 2018
University of Plymouth   *Plymouth, UK*

- Designed and administered a large-scale study with 14 surveys, generating 1000+ datasets for use in teaching
- Performed data cleaning and quantitative analyses in R, including regression and analysis of variance
- Designed, conducted, and wrote a research article with multiple behavioural experiments and mathematical modelling

EDUCATION

PhD Psychology, *University of Plymouth*   *2020 — Present*
Thesis due for submission in October 2023, with completion by December 2023

BSc (Hons) Psychology, First Class, *University of Plymouth*   *2015 — 2019*
Awards:

- "Best Overall Performance in Stage 4 BSc Psychology" for achieving an 88% final year grade average
- "Best Dissertation in Cognitive Psychology" for achieving full marks on my final year dissertation project

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PROJECTS

Mathematical Models of Explicit and Implicit Memory
PhD project, currently being written as a thesis

- Managed all aspects of a large-scale research project with 9 behavioural experiments and advanced quantitative models
- Supervised teams of research apprentices as they tested and checked datasets from 300+ participants
- Maintained multiple open-access repositories of research materials, software, and data
- Created publication-ready data visualisations to clearly show trends in complex datasets

Testing The Encoding Variability Hypothesis
A pre-doctoral research project, now published in a peer-reviewed journal

- Identified theoretically significant research questions and designed three novel experimental methods to test them
- Deployed interactive dashboards with R shiny to illustrate quantitative model predictions
- Optimised data analysis and model fitting routines for 10-100x improvements in execution time

How Do Emotional Expressions Affect Location Memory for Faces?
An ongoing research project that I worked on as a consultant developer and analyst

- Implemented multiple experiments according to stakeholder specifications, giving input throughout the design process
- Developed experiments and questionnaires using JavaScript, HTML, and CSS and hosted them remotely on a web server for deployment to 100+ participants
- Cleaned complex raw data using R and regex, enabling further analysis by collaborators

OUTPUTS

Scientific Publications
- Produced multiple peer-reviewed scientific publications on human memory as a first-author
- Authored a commentary on AI ethics, achieving an Altmetric impact score in the top 5% of all research outputs
- Currently working on a new multi-experiment first-author publication alongside other collaborations

General Interest Writing
- Published 20+ web articles communicating challenging technical concepts from programming, data science, and other topics
- Worked with professional editors to produce clear and accessible technical writing for a publication quality standard
- Achieved 150,000+ total views and a republication deal with a major tech careers organisation

Presentations
- Gave over ten talks and poster presentations at national and international scientific conferences
- Presented three invited lectures using both online and in-person presentation formats
- Independently delivered lectures, workshops, and help sessions on statistics and R programming

Press Coverage: My research has been covered in online news outlets including Nature Index and The Debrief.

ORGANISATIONAL ROLES AND ACTIVITIES

Plymouth ReproducibiliTea Lead Organiser   2021 — Present
- Organised an open science-themed journal club as part of a global initiative
- Facilitated discussions about good research practices and inclusive working culture in psychology
- Regularly promoted sessions to a mailing list of attendees, maintaining an associated website

PhD Course Representative   2020 — 2021
- Represented 40+ psychology students in faculty meetings and discourse with senior stakeholders
- Planned and facilitated a scientific conference within the School of Psychology, University of Plymouth
- Organised social events with an emphasis on community building during a global pandemic

References available on request