Dr. Jack **Kennedy**

STATISTICIAN | DATA SCIENTIST | EDUCATOR | ALL-ROUND-NERD

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Professional Summary

I am a PhD educated statistician and data scientist with experience in data science consultancy and training.

I love telling stories with data, working with technology, and finding data-driven solutions to challenging problems.

Experience

UKHSA

Senior Data Scientist   *Feb 2024 - Today*

- Develop and maintain reproducible analytical pipelines and data-driven products
- Construct forecasts and nowcasts for epidemiological surveillance
- Developing a culture of writing clean, maintainable code and modelling pipelines

Jumping Rivers

Data Scientist   *Jan 2023 - Jan 2024*

- Provide statistical consulting services to a broad range of clients
- Software development: contribute to production-ready R packages
- Teach statistical and programming concepts in R with best practices front and centre to academia, industry and government
- Outreach: organise the 'North East Data Scientists' meetup and contribute to company blog

NU Solve

Data Scientist (intern)   *Jan 2022 - May 2022*

- Collaborated with NU Solve, Jumping Rivers and the Food and Agricultural Organisation (UN)
- Developed a model-based clustering approach to diagnose the sustainability of fish populations across the world
- Developed a bespoke R package to provide FAO with the tools to take the developed methods forward
- Provided a rapid scoping project for a large automotive manufacturer

Newcastle University

Graduate Teaching Assistant   *Oct 2018 - Dec 2022*

- Providing one-to-one support via the university Maths-Aid service to students; queries ranging from 'How to calculate a percentage?' to 'Which test is most appropriate for my data?' and 'How to solve this differential equation?'
- Provided maternity cover for senior tutor: triaging and delegating Maths-Aid appointments
- Delivered lectures to undergraduate students on statistical topics
- Marked coursework in a timely manner

Education

Newcastle University

PhD Statistics   *2018 - 2023*

- Thesis: Uncertainty Quantification for Stochastic Simulators with Application to Offshore Wind Farms
- Applied and developed Gaussian process based techniques to improve the efficiency of stochastic simulation experiments
- Research themes: Bayesian methods; Decision Analysis; Bayesian Optimisation; Emulation; Gaussian Processes
- Published in a leading Statistics journal

Newcastle University

MMathStat (First class)   *2012 - 2018*

- Thesis: Multivariate Statistics & Machine Learning: An Application to Product Costing in Nissan
- Provided Nissan's finance team with a statistical and ML toolbox to help them understand their data; regression for fast product costing; dimension reduction and clustering for outlier detection
- Studied a range of mathematical and statistical topics: regression & statistical modelling; Markov models; time series; queuing theory; extreme value theory; flexible regression; multivariate methods

Technical & Professional Skills

R Programming

- Developed production-ready R packages as part of a team
- Proficient with base R and {tidyverse} packages

STATISTICS & MACHINE LEARNING

- Bayesian methods, linear andflexible regression, Bayesian optimisation, clustering, classification, inference, prediction

COMMUNICATING

- Award-winning speaker with over 5 years teaching experience
- Produces professional, reproducible documents with R Markdown and Quarto
- Writes technical yet accessible content and documents; PhD thesis and blog posts described as accessible

SOFTWARE DEVELOPMENT TOOLKIT

- Linux, Git, CI/CD, Command line

OTHER LANGUAGES & SOFTWARE

- LaTeX, Stan, MATLAB, SLURM

Extra Curricular & Service

Royal Statistical Society

FELLOW & VOLUNTEER
2019 - Today

- Active member of the Royal statistical society; organised a variety of in-person and online events; collaborating with Head of Conferences and Events to organise conference sessions
- Previously member & Chair of the Young Statisticians Section; supporting early-career statisticians and data scientists, overseeing a team of 12 volunteers
- Treasurer & committee member for North Eastern Local Group

Projects & Online Activity

THINGS I DO BECAUSE I LOVE STATS, DATA AND COMPUTERS
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- Participate in #TidyTuesday data visualisation challenge to practise visualisation and learn new-to-me R packages; see GitHub repository
- Top 5% overall contributor on Crossvalidated. As of September 2024 gained 2927 reputation and 29 badges

Interests

PROFESSIONAL

- Technical: Bayesian methods; data visualisation; modelling; reproducibility
- Non-technical: Supporting early-career statisticians and data scientists; communicating statistics

PERSONAL

- Cycling, hiking, running, you know, getting covered in mud