Jack Kennedy

Newcastle Upon Tyne, United Kingdom
PhD Student in Bayesian Statistics with application to renewable energy

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EDUCATION

PhD Statistics   **Newcastle University, UK**
Uncertainty Quantification in Complex Energy Systems Models   *September 2022*

Master of Mathematics and Statistics (First Class)   **Newcastle University, UK**
A Statistical Approach to Product Costing (work with Nissan)   *June 2018*

KEY SKILLS

Statistics
- Bayesian & applied statistics, regression modelling, hypothesis testing, multivariate analysis.
- Particular interest in using Gaussian Process regression to facillitate computation; examples include probabalistic sensitivity analysis and Bayesian optimisation.

Programming & Computing
- Key languages: R (proficient), LaTeX (proficient), MATLAB (intermediate), Stan (intermediate).
- Linux: daily user. Conformable with GNU tools, remote access and using HPC systems.
- Git: regularly use Git, GitHub and Gitlab to maintain projects.

ACADEMIC PROJECTS

PhD Thesis   *Sept 2018 - Ongoing*
- Developing novel statistical methodology to analyse stochastic computer experiments via Gaussian Process models.
- Using complex stochastic computer models, Bayesian Optimisation and Gaussian Processes to enhance decision support for large offshore wind projects.

Master's Thesis   *Sept 2017 – May 2018*
- Acted as a consultant for accountants at Nissan to accelerate and provide greater insight to the product costing process of vehicles.
- Applied machine learning and data visualisation (t-SNE, PCA, hierarchical clustering) methods for error detection in $\sim$ 1GB databases.
- Final result included a fast, interpretable, prediction model to cost vehicles, saving hundreds of hours per year. The prediction model allows product costing data to be updated monthly rather than annually. The thesis was awarded a strong first-class mark.

TRAINING AND TEACHING

Maths Aid Tutor   *Dec 2018 – Ongoing*
- Maths Aid Senior Tutor: I have been providing maternity cover as the Senior Tutor; this involves coordinating and supporting other Maths Aid tutors as well as regular duties, described below.
- Delivering one-to-one support in mathematics & statistics for non-MSP students. Subject matter includes hypothesis testing, basic statistical modelling, programming in R and solving differential equations.

PGR Teaching Assistant   *Dec 2018 – Ongoing*

- Supported a range of modules at Newcastle University ranging from assisting in computer labs to leading tutorials and delivering lectures for Maths & Stats modules as well as service courses.
- Written exam questions in NUMBAS (bespoke assessment software) for Stage 1 Maths & Stats exams.

OTHER EXPERIENCE

Royal Statistical Society Volunteer *July 2020 – Ongoing*
- Committee member of the Young Statisticians Section since Summer 2020. Duties involve organising conference sessions and various events throughout the year to support the professional development of early-career statisticians.
- Social Media Officer for the YSS since January 2021 (@statsYSS); advertising events on Twitter as well as live-tweeting conference sessions and events.
- Newly elected to the North Eastern local group and will be serving as treasurer from January 2022.

Miscellaneous
- Frequent contributor on Cross Validated (user:283201). Top 2% contributor in 2021.
- Organiser, Postgraduate Forum, an internal seminar series for MSP postgraduates (2019–20).
- Chair of Maths & Stats Student-Staff Committee (2017–18).

AWARDS AND ACHIEVEMENTS

- Prize Winner - Best Talks of The Research Students' Conference (2019).
- Holder of RSS GradStat status (2018)
- EPSRC funding: 4 year PhD studentship (2018).
- Royal Statistical Society Prize for Outstanding Academic Achievement (2018).