NICOLA RENNIE

Statistician & Data Scientist

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TECHNICAL SKILLS

`R` `RShiny` `tidyverse`
`plotly` `Python` `pandas`
`NumPy` `matplotlib`
`SQL` `Git` `LaTeX`
`RMarkdown` `HTML`
`CSS` `Tableau`

PERSONAL SKILLS

- 🕐 Highly organised and detail orientated
- ✏ Designing and carrying out research projects
- 👥 Presenting research to a range of audiences
- 🏭 Collaborating with businesses to formulate mathematical problems

PROFILE

Passionate about using statistics to aid in better decision-making, and creating informative data visualisations to communicate findings. Creative, driven, and self-reliant. I am currently looking for a challenging new role where I can continue to utilise and grow my analytical skills to influence decisions.

EMPLOYMENT HISTORY

Mathematical Consultant

📅 Aug 2021 – Present　　📍 Smith Institute, UK

- Applying a broad range of statistical techniques to different business challenges, and implementing solutions in a programming languages including R and Python.

Graduate Teaching Assistant

📅 Oct 2018 – Jun 2021　　📍 Lancaster University, UK

- Tutored workshops in both Management and Statistics at undergraduate and postgraduate level. Modules include: Time Series Analysis, Statistical Methods for Business, and Spreadsheet Modelling for Management.

EDUCATION

PhD Statistics and Operational Research

📅 Oct 2018 – Oct 2021　　📍 Lancaster University, UK

- Thesis: *Detecting demand outliers in transport systems.* Developing statistical methods to highlight deviations between real-world observations and the expected demand for transport systems.
- Collaborated with Deutsche Bahn to ensure research is relevant to practitioners, and designed interactive dashboards for non-technical users.
- Designed and supervised an 8 week internship project, and supported the student in presenting our research.
- Awarded the Nick Smith Prize for Research Excellence in August 2020.

MRes Statistics and Operational Research, *Distinction*

📅 Oct 2017 – Oct 2018　　📍 Lancaster University, UK

BSc(Hons) Mathematics, *First Class*

📅 Sep 2014 – Jun 2017　　📍 University of St Andrews, UK

PUBLICATIONS

Identifying and responding to outlier demand in revenue management
N. Rennie, C. Cleophas, A.M. Sykulski et al.
European Journal of Operational Research (2021)
doi: https://doi.org/10.1016/j.ejor.2021.01.002

CONFERENCE PRESENTATIONS

- 31st European Conference on Operational Research (EURO). University of West Attica (Online). July 2021.
- 3rd IMA and OR Society Conference on Mathematics of Operational Research. Aston University (Online). April 2021.
- 5th AIRO Young Workshop. University of Naples Federico II (Online). February 2021.
- STOR-i Workshop on Prediction and Optimisation. (Cancelled) Lancaster University. April 2020.
- STOR-i Annual Conference. Lancaster University. January 2020.
- Lancaster University Management School Research Conference. Lancaster University. September 2019. (Poster - 3rd place)
- European Working Group on Pricing & Revenue Management. Erasmus University Rotterdam. August 2019.
- 30th European Conference on Operational Research (EURO). UCD. June 2019.
- STOR-i Annual Conference. Lancaster University. January 2019.

PROFESSIONAL DEVELOPMENT

- **Resilience and Self-Doubt**. Tracey Stead & Lancaster University. November 2020.
- **Associate Teacher Program**. Lancaster University. Jan – Jul 2020. Qualified as an Associate Fellow of the Higher Education Academy (Advance HE)
- STOR-i Workshop on **Time Series and Spatial Statistics**. Lancaster University. May 2020.
- **Storytelling** Training Course. Lancaster University. May 2020.
- APTS: **Design of Experiments / Flexible Regression**. Oxford University. September 2019.
- NATCOR: **Simulation**. Loughborough University. July 2019.
- NATCOR: **Stochastic Modelling**. Lancaster University. April 2019.

ADDITIONAL EXPERIENCE

- Member of the Organising Committee for the 44th Research Students' Conference in Probability and Statistics (January 2020 - present). In my role in marketing and publicity, I designed the conference website, produced marketing materials, and collaborated with universities to attract postgraduate participants.
- Regular contributor to open-source data visualisation challenges, with all code available on GitHub.