

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.

EDUCATION

PhD Statistics and Operational Research

- 📅 Oct 2018 – Present 📍 Lancaster University, UK
- Thesis: *Data-driven Alerts in Revenue Management*. Developing statistical methods to highlight deviations between real-world observations and the expected behaviour of revenue management 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

EMPLOYMENT HISTORY

Graduate Teaching Assistant

- 📅 Oct 2018 – Present 📍 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.
 - Evaluated teaching literature and practices to become an [Associate Fellow of the Higher Education Academy \(Advance HE\)](#).

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>

LANGUAGES

English	● ● ● ● ●
Italian	● ● ● ● ●
German	● ● ● ● ●

METHODS

Outlier detection

Classification

Functional analysis

Time series analysis

Clustering

Forecasting

Regression

Simulation

Statistical modelling

Dimension reduction

AWARDS

- 🏆 Nick Smith Prize for Research Excellence. Lancaster University. 2020
- 🏆 LUMS Research Conference Doctoral Poster Competition (3rd place). Lancaster University. 2019.
- 🏆 Dean's List. University of St Andrews. 2017.
- 🏆 Dean's List. University of St Andrews. 2016.
- 🏆 Dean's List. University of St Andrews. 2015.

CONFERENCE PRESENTATIONS

- OR Society WORAN Meeting: Early Career Researchers. March 2021.
- 5th AIRO Young Workshop. 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.
- 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](#).