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Dr Lawrence Lee

Curriculum Vitae

github.com/lawrence-d-lee
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About

Postdoctoral research fellow with proven quantitative expertise. Transitioning to a career in data science and machine learning, with programming proficiency demonstrated through an independently authored data-driven application.

Employment

Research Fellow in Mathematics 2021 – Present
University of Manchester

- Awarded two separate, highly competitive research fellowships.
- Invited to the Universities of Bristol and Exeter for research visits.
- Given numerous invited seminar talks to discuss my research.

Software (available on GitHub)

Housing App An interactive app for predicting UK house prices, built in Python with Scikit-Learn and Plotly Dash using data obtained via web scraping which is then tidied in Pandas. Allows a user to choose a UK city, click on a map and obtain an instant prediction for the chosen location. Published as a Docker image via GitHub Actions.

Skills

Programming	Python (Matplotlib, NumPy, Pandas, Plotly Dash, PySpark, PyTorch, Scikit-Learn, TensorFlow), R (dplyr, ggplot2).
Cloud Services	AWS (EC2, Lambda, S3), Terraform.
Other Technologies	SQL, Git, GitHub (including GitHub Actions), Docker, Linux, LaTeX.
Machine Learning	Familiar with a wide range of machine learning and statistical algorithms, including (but not limited to) regression, neural networks, clustering and gradient boosting.

Education

PhD in Mathematics (Fully funded by EPSRC) 2017-2021
University of St Andrews

- First prize (joint) for best talk at the Edinburgh Mathematical Society Postgraduate Meeting in 2018.
- Taught several tutorial groups and received highly positive feedback on my performance.

MMath in Mathematics (First Class Honours with Distinction, Avg 93%) 2013-2017
University of York

- Kathleen Ryan Project Prize for the best overall MMath final year project performance.
- P B Kennedy Prize for outstanding performance in the final degree examination in Mathematics.
- Annie Curry Williamson Scholarship (based on academic potential).
- Awarded funding for two summer research projects by EPSRC and the LMS.

Certifications

Machine Learning, Stanford University, Coursera. 2023
Deep Learning Specialisation, DeepLearning.AI, Coursera. 2022
IBM Data Science Professional Certificate, IBM, Coursera. 2022

Publications

Math. Z.	Ledrappier-Young formulae for a family of nonlinear attractors (with N. Jurga).
ETDS	L^q-spectra of measures on planar non-conformal attractors (with K. J. Falconer, J. M. Fraser).
Nonlinearity	L^q-spectra of self-affine measures (with J. M. Fraser, I. D. Morris, H. Yu).
Mathematika	Diophantine approximation on manifolds (with V. Beresnevich, R. C. Vaughan, S. Velani).