

Connor Tynan

connor.tynan@outlook.com | LinkedIn | GitHub | Website | ORCID

Education

University of Exeter

Master of Mathematics (MMath) Degree (Hons) – First Class (75.6 %)

Sept 2019 – June 2023

Exeter, UK

Skills

Programming: Python, MATLAB, R
Libraries & Frameworks: pandas, NumPy, scikit-learn, seaborn, matplotlib, PyTorch
Tools: AWS, git, HPC, Jupyter, Docker

Experience

Higher Scientist (Data Science)

June 2025 – Present

National Physical Laboratory (NPL)

London, UK

- Ensembled gradient-boosted tree models to improve long-term forecasting of degradation estimates for photovoltaic systems, improving client's existing forecasting service
- Generated synthetic measurement data whilst working within an ultra-low data regime, saving hundreds of hours of lab measurement time
- Technical lead on a customer project evaluating randomness in quantum RNG pipelines, applying statistical testing and uncertainty-aware analysis to assess confidence in customer methods

Scientist (Data Science)

Mar 2024 – June 2025

National Physical Laboratory (NPL)

London, UK

- Awarded Early Career Scientist Award 2024 for Best Presentation: "*Estimating Trends in Essential Climate Variables and Their Uncertainty*"
- Developed software for synthetic tabular data generation, statistical modelling, and numerical analysis
- Contributed to technical reports on solving inverse problems, hypothesis testing, and trustworthy AI
- Maintained and extended existing uncertainty quantification software, improving reliability and usability for users
- Investigated how correlated stochastic processes can be used to improve uncertainty estimates

Projects

SMS Spam Detection Using NLP – GitHub | Kaggle

Nov 2023 – Dec 2023

- Explored and analysed raw text data using pandas and matplotlib before preprocessing the data using NLP techniques, such as tokenization, lemmatization and vectorization
- Compared the performance of several supervised learning algorithms and tuned the best performing model using a grid search approach, improving the accuracy and AUC scores
- Configured an AWS Lambda function to utilise the final model and deployed a REST API using AWS API Gateway to connect to and test the Lambda function

Predicting Student Success – GitHub

Oct 2023 – Nov 2023

- Established an understanding of relevant business application before performing exploratory data analysis to better comprehend the data; namely, univariate and multivariate analysis of categorical and numerical features
- Evaluated the performance of nine multiclass classification models using several evaluation metrics; the best performing model was chosen and underwent hyperparameter tuning for optimal performance
- Served the final model using Flask and waitress, containerised and isolated the project using pipenv and Docker before, finally, deploying the Docker image to a cloud service using AWS Elastic Beanstalk

Mathematically Modelling Microbial Interactions – GitHub

Sept 2022 – May 2023

University of Exeter

Exeter, UK

- Performed an extensive literature review, researched existing models and reproduced results to establish an initial understanding of the field
- Preprocessed and contextualised novel microbial growth data before fitting to an existing mathematical model using Hamiltonian Monte Carlo, validating fits using MCMC convergence diagnostics
- Investigated underlying dynamics using data analysis, steady-state analysis and bifurcation theory, finding a transcritical bifurcation to underpin changes in interactions