

DANIEL ARIF MURPHY

CONTACT

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COMPUTING SKILLS

LANGUAGES

- R
- Python
- LaTeX

TOOLS

- Microsoft Word
- Microsoft PowerPoint
- Microsoft Excel

ACHIEVEMENTS

- UKMT Senior Mathematics Challenge 'Senior Kangaroo' award.
- 'National Citizen Service' award.
- Black Belt in Goju-Ryu karate; multiple regional Gold medals.
- Captain of St. John's College Football A-team, Durham University.
- Tough Mudder and Wirral Bikeathon finisher.
- Head of House, Student Prefect & Sport Prefect.

SOCIAL MEDIA

in <https://www.linkedin.com/in/danielarifmurphy/>

References: Available upon request.

EDUCATION

MSc Mathematical Sciences
Durham University, UK

Distinction
2019-2020

- Courses: Statistical Methods, Bayesian Statistics, Stochastic Processes, Mathematical Finance, Partial Differential Equations, Mathematical Biology.

BSc Mathematics and Economics
Durham University, UK

First-Class Honours (all years)
2016-2019

- Courses: Operations Research, Decision Theory, Advanced Microeconomics, Applied Game Theory.

Calday Grange Grammar School, UK

2009-2016

A-Level: Mathematics (A*), Further Mathematics (A*), Chemistry (A), Economics (A).

AS-Level: 6As; **FSMQ:** A; **GCSE:** 10A*-A inc. Mathematics (A*) and English (A*).

PROJECTS

MSc Project: 'Sparse Machine Learning: Regularised Classification of DNA Microarrays'

- Researched generalisations of the LASSO penalty to introduce sparsity in high-dimensional data.
- Applied above models in **R** to classify cancerous patient tissue, as predicted from gene expression microarray data.

Kaggle Project: Deep Learning.

- Modelled a custom multi-class convolutional neural network in **Python** to identify the type of disease present in images of cassava leaves.

WorldQuant University Project: Natural Language Processing.

- Conducted a polarity analysis of text in **Python** to predict product ratings from Amazon reviews.

EXPERIENCE

TECHNOLOGY INTERN

Bright Network, Virtual | June 2020 - July 2020

- Assembled a release plan of a Facial Recognition technology for a mobile banking app.
- Outlined tailored communication styles and frequencies to different project stakeholders by using Agile methodologies.

ACTUARIAL CONSULTING SUMMER INTERN

Barnett Waddingham LLP, Liverpool | June 2019 - August 2019

- Employed an elastic-net GLM in **R** for expected loss-cost, and used the Gini index to quantify the 'lift' of an insurance rating plan.
- Utilised Excel models to calculate transfer values for pension-scheme members.
- Analysed volatile scheme assumptions by conducting sensitivity analyses.
- Researched predictors of UK mortality trends using datasets from actuarial databases; research was presented to BW partners.

UNDERGRADUATE STATISTICS TUTOR

Durham University, Durham | October 2018 - June 2019

- Chosen by the Natural Sciences Course Director to deliver help via 1:1 sessions.
- Led weekly sessions for students struggling with the Statistical Concepts II module.
- Suitably tailored teaching styles to individual students.

TAX CONSULTING SUMMER INTERN

Deloitte LLP, Liverpool | July 2018 - August 2018

- Performed tax-return calculations in Excel, and drafted pro forma for clients.
- Consulted with colleagues in Florence, Italy to research foreign stamp-duty laws.