

Phillip John Paine, PhD.: Résumé

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Summary and Technical Skills:

- I currently work as a data scientist in the Underwriting Analytics team at BCAA to provide data-driven analytical support to the Home insurance underwriting group and the wider organisation.
- I have two years experience working as a statistical consultant post-doctoral fellow at the University of Sheffield, UK on a range of science- and engineering-based projects and two years experience as a post-doctoral research fellow in Statistics at the University of Nottingham, UK.
- I have a PhD. in Statistics from the University of Nottingham, UK

Programming Skills: Python (inc. PySpark), R, C++, Matlab

Other Relevant Skills/Software: AWS, PowerBi, Excel, Git, SQL, QGIS

Professional Experience:

Data Scientist, Underwriting Analytics, BCAA

May 2019 – Present

- Improved insurance pricing models using a spatial analysis of observed claims with GBMs and nearest-neighbour models.
- Created a PowerBI dashboard for new business to help inform marketing strategies and observe emerging trends in quotes and sales.
- Created a curated dataset of deduplicated online new business using PySpark in AWS Glue.

Statistical Consultant Post-Doctoral Fellow

University of Sheffield, UK

Sept. 2016 – Sept. 2018

My role was to work with researchers from within the University and external research centres to provide short-term (3 – 6 months typically) statistical consultancy on science- and engineering-based projects.

Selected Projects:

Modelling Commercial Fisheries and Marine Tourism Revenue under Proposed Fishing Effort Scenarios

- Collaborated with researchers at Plymouth (UK) Marine Laboratory to model commercial fisheries revenue and marine tourism with a Bayesian network was implemented in R.
- Regularised regression models were used at relevant nodes to describe the relationship between price and fishing strategies.

Bayesian Analysis of Clonogenic Survival Assay Data

- Produced a dose-response curve from data on the irradiation of cancer cells with multiple repeated measurements and experiments.
- A Bayesian hierarchical model was used to create a dose-response heat map around the mean curve quantifying the levels of uncertainty for each source of error. Code was written in R and Python and the outcome was a paper published in the Journal of Radiotherapy and Oncology.

Post-Doctoral Fellow (Statistics)
University of Nottingham, UK

Sept. 2014 – Sept. 2016

The aim of the project was to develop novel regression methods for manifold-valued data and landmark data; providing theoretical justifications, model diagnostics and numerical implementations for the methods. Applications of the work includes predicting cloud formations and modelling vector-cardiogram signals.

Education:

PhD Statistics, University of Nottingham

Sept. 2010 – Aug. 2014

Thesis: Parameter Estimation in Stochastic Differential Equations for Discretely-Sample Observations

In the thesis I developed a novel method for estimating the unknown parameters in a general class of stochastic differential equations given time-series observations. The work focussed around providing theoretical results for asymptotic properties of the estimators and implementing numerical simulations in Matlab and C++ to demonstrate practical application using simulated financial time series data.

BSc Mathematics, Cardiff University
First Class Honours

Sept. 2006 – July 2010

Other Experience:

Lecturer for Topics in Statistics – Spring Semester 2016

Lecturer for a final-year undergraduate and masters module that covered hypothesis testing in sequential analysis.