Jeffrey Pollock

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Overview

- Innovative thinker, hard working and interested in practical solutions
- Advanced knowledge of statistical methodology with experience in application
- Excellent programming skills including R, C++, Java, MySQL

Education

Heriot Watt University **Edinburgh**
PhD, Statistical Modelling *2012–2015*

Utility-Based Behaviour Models With Application To The In-Play Tactics Of Association Football Teams

- An inhomogeneous Poisson process model for goal times in the English Premier League. The rates at which each team scores depends on their current behaviour, which they change depending on time and score during a match, and also depending on their current league position
- It is shown that separate matches may not be independent, for example news of a goal may become available to a different match, which puts one of the teams in the relegation zone, and they change their behaviour in light of this
- Bayesian methods are employed, Markov Chain Monte Carlo (MCMC), Reversible Jump MCMC, and particle filtering methods

Heriot Watt University **Edinburgh**
BSc, First Class, Statistical Modelling *2006–2010*

- Bayesian inference
- Generalised extreme value distributions
- Spatial epidemiology models
- R

Experience

Yes Campaign
Data Analyst *2014*

- Processing of messy survey data into a usable format
- Building predictive models was able to make recommendations regarding what type of people the campaign should target and with what information
- After the success of the work I was asked to repeat the analysis on a second survey dataset, which was presented to members of the SNP party

William Hill
Quantitative Analyst *2010–2012*

- Developed statistical models which are used to drive the prices seen on the William Hill website
- Implementation of statistical models in Java
- Worked (largely alone) on the building and implementation of Ice Hockey models used to calculate prices for in-play matches in the NHL and throughout Europe. The model produced a consistent profit
- Worked as part of a team on a very large project to derive prices for in-play American Football (NFL), possibly the most complex sport which bookmakers consider
- Worked as part of a 2-3 man team to a very tight timescale to build and implement a Rugby Union model in time for the 2011 Rugby World Cup, and was interviewed by the Sunday Times newspaper regarding it's success (`http://tinyurl.com/pm5865f`)
- Also worked on models for other sports including Soccer, Baseball, and Cricket

Skills

Statistical Modelling

- Inhomogeneous Poisson Processes
- Generalised Additive Models
- Ridge/Lasso Regression Models
- Gaussian/Poisson/Logistic Regression
- Decision Trees
- Mixed Effects Models

Programming

- R
- Java
- Linux
- C++
- MySQL
- Excel/VBA

Interests

- Interested in Machine Learning techniques and have taken on-line courses in Machine Learning and recommender systems
- Creator and maintainer of R package 'CompGLM' (on CRAN) which provides efficient functions for the Conway-Maxwell Poisson distribution
- Olympic Weightlifting
- Tennis
- Guitar
- Football