Dr Aidan Boland
MACHINE LEARNING ARCHITECT

 aboland.ie | aboland | aidanboland | BolandAi

Data architect with 7 years industry experience, and 5 years research experience.

Employment

Cubic Telecom
Dublin, Ireland

DATA ARCHITECT
2021 - Present

- Data Architect building end to end data products, with focus on leverage machine learning to improve and assist insights and analysis.
- Created a flexible framework for processing data feeds and automatically alerting on anomalies in the data.
- Carried out deep dive analyses into various data sources within the company.

Edge By Ascential (formerly Clavis Insight)
Dublin, Ireland

SENIOR DATA SCIENTIST
2018 - 2021

- Leading Data Science for the Digital Shelf product within Edge By Ascential.
- Managing a team of data scientists.
- Consulting on cross brand projects in the wider Ascential organisation.

DATA SCIENTIST
2016 - 2018

- Researched and implemented various statistical methods for use within ecommerce insights and analytics.
- Developed API in R which uses supervised classification to remove manual data input and QA testing.
- Created suite of UI's tailored for specific tasks within the organisation, allowing users to interactively manage data and apply machine learning techniques to simplify problems.
- Supervised and delivered statistical analysis projects for clients.
- Co-supervised Trinity College Dublin final year students projects in the areas of machine learning and data analytics.

University College Dublin
Belfield, Dublin 4.

LECTURER - SCHOOL OF MATHEMATICS AND STATISTICS & SCHOOL OF BUSINESS
2016 - 2020

- Prepared and delivered lectures for both in person and online, undergraduate and postgraduate modules.
- Managed all continuous assessment and the final examinations.

Insight Centre for Data Analytics & Clavis Insight
Dublin , Ireland.

POSTDOCTORAL RESEARCHER
2015 - 2016

- Researched text classification methods for use in ecommerce analytics.
- Involved research into both supervised and unsupervised text classification methods with the aim of solving an industry specific problem.

University College Dublin
Belfield, Dublin 4.

TUTOR
2010 - 2015

- Tutored undergraduate and postgraduate students over a broad range of courses including probability theory, actuarial statistics, Bayesian analysis, data programming and multivariate analysis.
- Graded undergraduate and postgraduate assignments in addition to final examinations.

Education

University College Dublin

PHD IN COMPUTATIONAL STATISTICS   *2011 - 2015*

- Title: 'Overcoming Intractable Likelihoods' (Supervisor: Prof. Nial Friel).
- Improved simulation methods for estimating intractable likelihoods in area's such as spatial statistics and social network analysis.

University College Dublin

MSc IN STATISTICS (FIRST CLASS HONOURS)   *2010 - 2011*

- Minor thesis: 'Supervised Probabilistic Classification' (Supervisor: Prof. Nial Friel).

University College Dublin

BSc IN MATHEMATICAL SCIENCE (UPPER SECOND CLASS HONOURS)   *2006 - 2011*

Technical Skills

PROGRAMMING

- 12 years experience with R: Code used within a production environments.
    - Suite of UI applications developed using the Shiny library.
- Daily use: Python, Git, Snowflake, Azure services.
- Proficient in: SQL (Postgres, MySQL), Docker, LaTeX.
- Familiar with: AWS, command line tools, HTML, C.

METHODOLOGIES

- In depth knowledge of many statistical and machine learning techniques, including but not limited to: regression, MCMC, time series, principal component analysis, Bayesian inference, non-parametric methods, logistic regression/maxent, random forests, neural networks, LDA, k-means, nearest neighbour classifiers.

Presentations

INVITED

2020   **Shiny Dashboards**, RSS Annual Conference - Visualising Data with Dashboards Session

2019   **Data Scientist or Statistician?**, Young-ISA meeting (Young section of the Irish Statistical Association)

SELECTED OTHERS

2018   **An R Case Study: From Research to Production**, CASI (Conference on Applied Statistics in Ireland)

2017   **Using R to automate the classification of e-commerce products**, EARL Boston (Enterprise Applications of the R Language)

2015   **Efficient MCMC for Gibbs Random Fields using pre-computation**, Scalable Monte Carlo workshop at NIPS (Neural Information Processing Systems)

Publications

2018   **Boland, A.**, Maire, F., Friel, N., **Efficient MCMC for Gibbs Random Fields using pre-computation** (*Electronic Journal of Statistics*)

2014   Alquier, P., Friel, N., Everitt, R. and **Boland, A.**, **Noisy Monte Carlo: convergence of Markov chains with approximate transitions kernels** (*Statistics and Computing*)

Awards

2019   Shiny Contest - 'Honorable Mention' for Shiny app displaying real time public transport info for Dublin.

2016   Awarded Graduate Statistician (GradStat) status by The Royal Statistical Society.

Interests and Activities

I enjoy all kinds of sport. I am particularly interested in rugby, Gaelic games, and golf. I played rugby until 2018, and I continue to play golf. I also enjoy exploring interesting datasets, developing R packages, and creating Shiny apps.