

# Dr Aidan Boland

## SENIOR DATA SCIENTIST

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*Data scientist with 4 years industry experience, and 5 years research experience.*

## Employment

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### Edge By Ascential (formerly Clavis Insight)

*Dublin, Ireland*

SENIOR DATA SCIENTIST

*2018 - Present*

DATA SCIENTIST

*2016 - 2018*

- Researching and implementing 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.
- Created end to end process including GUI's to allow users easily perform intelligent text matching.
- 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

*Autumn 2019*

- Prepared and recorded lectures for an online postgraduate module titled 'Intro to Data Analytics'.
- Managed all continuous assessment and the final examination.

LECTURER - LOCHLANN QUINN SCHOOL OF BUSINESS

*Spring 2019*

- Delivered lectures for an undergraduate module titled 'Data Analysis for Decision Makers'.
- Helped to prepare, coordinate, and correct both the mid semester project and the final examination.

LECTURER - SCHOOL OF MATHEMATICS AND STATISTICS

*Spring 2016*

- Lectured an online undergraduate module titled 'Practical Statistics'.
- Coordinated tutors and teaching assistants for computer labs in Minitab and R.

### 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.
- Demonstrated and tutored computer practical classes (SAS, R and Minitab) of up to fifty students for both undergraduates and postgraduates.
- Graded undergraduate and postgraduate assignments in addition to final examinations.
- Created screencasts and administered discussion boards for an online module: 'Data programming with R'.

### AOL

*Heuston South Quarter, Dublin 8.*

STATISTICAL CONSULTANT

*Summer 2012*

- Undertook a three month study to create an algorithm to automatically detect spam searches on AOL's search engine.

## Education

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### 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 areas 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).
- Courses covered: Multivariate Analysis, Mathematical Statistics, Bayesian Analysis, Time Series Analysis, Applied Statistical Modelling, Data Programming, Monte Carlo Inference and Stochastic Models.

### University College Dublin

BSc IN MATHEMATICAL SCIENCE (UPPER SECOND CLASS HONOURS)

2006 - 2011

## Technical Skills

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### PROGRAMMING

- 10 years experience with R:
  - Code in daily use within a production environment.
  - Suite of UI applications developed using the Shiny library.
- Proficient in: Git, SQL (Postgres, MySQL),  $\text{\LaTeX}$ , Docker.
- Familiar with: AWS, command line tools, Python, HTML, C, SAS, SPSS.

### 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/max ent, random forests, neural networks, LDA, k-means, nearest neighbour classifiers.

## Presentations

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### INVITED

- 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 2018 (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

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- 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

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- 2019 **Shiny Contest** - 'Honorable Mention' for building an **Shiny app** which displays real time public transport info for Dublin.
- 2016 Awarded Graduate Statistician (GradStat) status by **The Royal Statistical Society**.

## Interests and Activities

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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.