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NathanielForde
Data Scientist and Logician

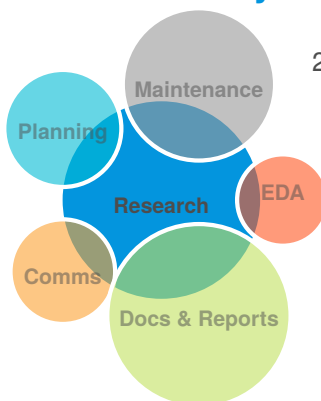## Programming
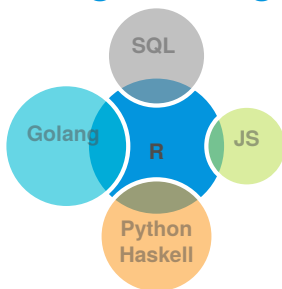
Time Spent in a Day

Selected Experience

2019 - Now   **Cartrawler**   Dublin, Ireland
Data Scientist - R & D
Building and maintaining models to move markets. Focused on timeseries forecasting and insurance claim prediction with explainable ML. From model design to production, A/B testing and improvement

2018 - 2019   **Paddy Power Betfair**   Dublin, Ireland
Senior Insights Analyst
Working within the Customer Operations Insights team using data science techniques to better understand the needs of the customer, in areas of Fraud, Responsible Gambling, CS, CX, Payments
 Notable projects:
  • Developed bespoke model for NLP and sentiment analysis for the gaming industry based on customer service chat-data
  • Worked with industry think tank to refine and augment external and internal model for predicting problem gambling.
  • Deployed propensity modelling projects to evaluate effects of interventions with customers e.g. the ROI for VIP relationship management.
  • Built Shiny web-app for the measurement of customer service QA procedures.

2017 - 2018   **Marsh and McLennan - Innovation Centre**   Dublin, Ireland
Software Developer
Working within the CAT Risk Studio^{TM} developing web-apps to process and automate analytical solutions for statistical model assessment and refinement. Tools were built to compare industry portfolio prediction models against the historic record and Monte Carlo simulations.
The CRS conducts research in collaboration with 3rd parties to provide insight into catastrophic risk models for Guy Carpenter globally. Web development conducted with the following stack: Golang, Postgres, JS (React, D3).

2015 - 2017   **Marsh and McLennan - Innovation Centre**   Dublin, Ireland
Data Analyst
Worked within a team of four (expanding) to design and implement the Data Quality function for Marsh globally.
  • Developed statistical metrics and classification methods to assess the health of numerous data-sets including placement, sales, billing, and reference data.
  • Established the data-quality process within Marsh for reporting and remediation of data-quality issues.
  • Built various reporting tools and analytic dashboards (Qlikview, Tableau, Shiny-Apps) to motivate increased data-quality (GIGO).
  • Developed over-sight procedures of statistical process control to ensure the data-quality function was maintained and operated as designed.
  • Coordinated with international teams to monitor and assess the process and progress of Data-Quality initiatives.
  • Conducted bespoke analyses at request from senior stakeholders.

2009 -2011	**Trinity College Dublin**	College Greeen, Dublin, Ireland

Researcher/TA - Philosophy Department
- Successfully designed and provided tutorials for sophomore mathematical logic courses, with a 90% pass rate.
- Set homeworks and graded examinations. Taught private classes (at request) in logic and mathematics.

Education

2011 - 2013	**Master's Degree in Mathematics**	University of Amsterdam

Dependence in Logic and Probability
This thesis developed models of explanatory updates within dynamic epistemic logic where strong and weak explanatory relationships were modelled using multiple dependence relations (e.g. transitive and non-transitive) drawn from deductive modal logics and Bayesian statistical networks.

2009 - 2011	**Master's Degree in Philosophy**	Trinity College Dublin

Identity over Possible Worlds
The thesis explored various philosophical applications of first order modal logics.

2005 - 2009	**Bachelor's Degree in Liberal Arts**	UCD/La Sorbonne

1st Class Honours
Courses in Philosophy, Mathematics, Politics, History and Literature

Awards and Achievements

05/2015	**Mongol Rally**	Christina Noble Foundation

Raised money for charity by completing endurance race to Mongolia

09/2010	**Irish Research Council - Graduate Scholarship Funding**	TCD/UvA

Awarded on merit for my masters' research

09/2009	**Philosophy Department Scholarship**	TCD

Relevant Certifications

2015	**Mathematical Biostatistics Bootcamp**	Coursera. E-learning

Probability and Statistics

2015	**Machine Learning**	Coursera. E-learning

Optimization and Statistical Learning

2015	**Regression Models**	Coursera. E-learning

Linear and Logistic Regression

Projects and Interests

Projects

Ongoing	**Statistical Inference and Algorithms**	Independent Research

Motivated by an interest in the interplay between the statistical algorithms and inference. See my blog **Examined Algorithms** *(in progress*

Ongoing	**Running and Biking**	Independent Interest

Focused on endurance and distance.

July 1st, 2019

Nathaniel Forde