Aleks Hughes

Education

MSC ECONOMICS | TRINITY COLLEGE DUBLIN AND UNVIERISTY OF NOTTINGHAM | AUGUST 2014
- Thesis title: 'How do Oil Price Shocks Affect Scottish Real Economic Activity?'
- Selected for the Trinity College's 'Econometric Game' team 2014, econometricgame.com/.
- Writer for student run newsletter 'Nottingham Economic Review', neronline.co.uk/.

A/AS LEVELS | ST. PETERS SCHOOL, YORK | JULY 2008
- Maths (A), Further Maths (A), Economics (A), History (B) and Politics (a).
- UK Maths Trust Olympics team. Silver in UKMT Senior Challenge. Vice-Captain of Rowing.

Experience

DATA SCIENTIST | PARKER FITZGERALD | APRIL 2017 TO PRESENT
- Natural Language Processing (NLP) for two production projects. Techniques include text classification, sentiment analysis, topic modelling and entity recognition. Used embedded word vectors and TF-ID and extracted feature importance. Developed applications that have won and been shortlisted for two industry awards.
  https://www.mca.org.uk/news/updates/mca-announces-finalists-for-2019-consultancy-awards/
  https://www.risk.net/awards/5294851/consultancy-of-the-year-parker-fitzgerald

- Topological Data Analysis (TDA) for two projects.
  Segmenting bank customers by spending habits into n=400 densely populated segments. Model is used as an input for alternative credit scoring and suspicious account activity models. Backtesting showed 10% precision improvement in suspicious activity model.
  Also developed model to triage mortgage fraud investigations, improving investigation effectiveness by 15%.

- R-shiny GUI web application. Key requirements of visually representing column interdependence and generating a representative sample. Application won an industry award for "best use of technology".
  https://auditandrisk.org.uk/news/audit-and-risk-awards-2018-the-winners

- Time series predictive ARIMA model in R to identify behaviours of poor risk management across bank business lines.

- Range of technical exposure: Docker, git, AWS ML (Sagemaker), Solidity Ethereum blockchain, Kotlin web application, Ayasdi TDA platform, Data Robot and Kortical automated ML.

- Leadership: recruited and line manage 2 consultant Data Scientists and 1 intern

NLP ENGINEER | FULL FACT | OCTOBER 2018 TO PRESENT
- Working with a core maintainer of Python NLP package genism. Parsing parts of a claim into geography, direction, time frame, etc. Deployed model using Docker.

TECH CONSULTANT | IBM CONSULTING | OCTOBER 2014 TO APRIL 2017
- Graduate Managers Choice Award, October 2016. IBM Europe Award 'Putting Client First', August 2015.
- Python Developer and Business Analyst on Data Remediation, large universal bank.
  Scripted lightweight and multi-threaded Python application. Git version control, test executed in Bluemix. Gathered requirements, wrote sections of solution design document.
- Business Analyst and Python Developer on Data Migration, large UK credit card platform.

Resolved longstanding mapping for billing and payment of 300,000+ end customers. Scripted and tested Python decision engine that maps to 1,500+ target configurations.

- Commercial Manager for IBM internal account, large universal bank.
  Modelled resourcing and prices for 40+ contracts with a value range of £100k to £10million. Scripted VBA macros to automate project financial trackers. Resolved 3 longstanding issues around invoicing, debt collection and purchase order issuance, ensuring inflow of funds.
- Organised 17 Lunch and Learns, topics include DevOps, Design Thinking, Agile and Blockchain. Also organised Excel training and a joint NHS-IBM Healthcare Hackathon.

Skills

TECHNICAL
- Familiar with diverse programming paradigms and patterns, e.g. concurrency, building reactive GUIs and web frontends, lazy evaluation, distributed and multi-threaded execution.

- Python
  SciPy, numpy, pandas, keras and tensorflow, pyspark and imbalanced datasets.
  NLP frameworks: spaCy, genism, pyText, allenNLP and NLTK.
  Building my own class hierarchy object model and using decorators to enhance methods.
  SQL interfaces and data layers, web scraping, regex matching and application logging.
  AWS Sagemaker and controlled model release pipelines.

- Miscellaneous: Advanced Microsoft Office skills. Windows, Mac and POSIX operating systems. 85 words per minute typing speed.

LANUAGES
Native English, fluent Spanish, strong Dutch.

INTERESTS
Keen cyclist and swimmer. University Basketball 2nd team. 6 months volunteer English teacher in rural Mexican primary school. Combined 10 weeks Spanish immersion in Cuba and Spain. Biked 4,500Km through Alaska, hiked length of Pyrenees, through Patagonia and Atlas Mountains and spent 2 weeks dogsledding in Yukon.

References available on request