

## OVERVIEW

I graduated from the University of Nottingham with a MSc in Computer Science in 2016. During my MSc I covered the fundamentals of data structures, algorithms and programming and then went on to apply these ideas in machine learning and data modeling. I worked on projects involving writing machine learning algorithms in MATLAB, data modelling & analysis projects using R and WEKA and a coding project in Python.

After I finished university I started working for Concentra Analytics for 6 months where I used R to build a sequencer prototype to plan production based on the product wheel technique.

## WORK

### DATA ENGINEER – KUBRICK GROUP, LONDON

March 2017 – present

In addition to intensive learning, whilst at Kubrick I have worked in agile teams on many client projects deepening the skills I have learned. The Data projects which I have worked on have proven my skills in efficiently engineering very large datasets across a cluster. This has enabled me to deepen my analytical skills, both through data visualisation in Tableau and Plot.ly and through predictive modelling using the Python SkLearn module.

Examples of value I have added to businesses include insight derived from real time streamed social media analytics as well as predictive insights extracted from client side data warehouses.

### CONCENTRA ANALYTICS

October 2016 – March 2017

Developed algorithms and modeled solutions for Concentra Analytics' SupplyVue application.

## EDUCATION

### MSC COMPUTER SCIENCE, University of Nottingham

2014 – 2016

**Modules:** Programming, data structures and algorithms, operations research, machine learning, data modelling and analysis.

**Thesis:** : I applied a hyper-heuristic to the one-dimensional bin packing problem using a Monte Carlo method. My solution was to put a value on and choose the best heuristic to pack each item when it is allocated.

**Programming languages:** R, Python, Java, Matlab

### BSC (HONS) MATHEMATICAL PHYSICS, University of Nottingham

2011 – 2014

Modules included: Quantum mechanics, Relativity, thermodynamics, Linear algebra and statistical modelling.

## KEY SKILLS

I am experienced and qualified in the following technologies and disciplines:

<b>Data Skills:</b>	SQL, Python, Pandas and SciPy, SkLearn, Tableau, Plot.ly, Hadoop, Apache Spark & MongoDB
<b>Security Skills:</b>	Git, Security and Kerberos, SSH & Linux, GDPR
<b>Data Warehousing:</b>	Data Warehousing in T-SQL, Hive & Kimball methodology
<b>SDLC:</b>	Agile, problem solving
<b>Documentation:</b>	LaTeX and Markdown
<b>Soft Skills:</b>	Presentation skills
<b>Specialisms trained in:</b>	Retail, AML, Credit Risk
<b>Certifications:</b>	Cloudera Certified Associate (CCA) Hadoop & Spark Developer



## RORY BIRTWISTLE

Data Engineer

## ABOUT ME

My interest in physics was sparked very early on after reading a book by Richard Feynman – an American theoretical physicist. Upon leaving school with an A\* in maths and an interest in how the world works I decided to study mathematical physics in University of Nottingham.

In my final year project, I was introduced to programming whilst modeling a physics problem which furthered my growing interest in computer science and prompted me to do a masters degree in the field.

During my masters, I particularly enjoyed using computer science skills in relation to real world applications and solving problems. In my thesis, I tackled a problem which has no exact solution and wrote an algorithm to produce a solution in a realistic timescale.

For a large part of my life I have been playing squash. I have represented Ireland at the World Junior Championships, European Junior Championships and played on professional squash tours all over the world. The sport has taught me many things which I have translated into many parts of my life. I have found confidence, self-belief, perseverance and learned to adapt to a competitive environment where hard work is demanded at all times.

## CONTACT US

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