

Matthieu Marshall

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## Experience

### **Data Engineer at Roke Manor Research Ltd (November 2017 – Present)**

I started at Roke on the graduate development program, which I finished in November 2019 when I was promoted to a Data Engineer. During this time, I have been involved in the following:

Project supporting development of a Big Data Pipeline for use in the defence domain.

*(February 2019 - Present)*

- Developed a data pipeline using Apache Nifi and Kafka to ingest data which is stored in Apache HBase and then presented to the user with a GraphQL API via a Scala backend.
- Worked on customer site in a rainbow team alongside other contractors.
- Shadowed a data architect role, using Archimate to produce documentation for accreditation and to verify design solutions.
- Experienced working in an agile scrum environment with continuous integration and behaviour driven development.
- Worked in a secured Linux development environment and with tools such as Jenkins, Docker and Python to administer development environments.
- Communicated with users and external stakeholders to explain the platform and support their integration to it.

Project providing test support to a database development project in the law enforcement domain.

*(March 2018 – February 2019)*

- Risk assessed migration from Microsoft SQLServer to PostgreSQL and produced documentation for the customer on this.
- Delivered test data for migration of and creation of a new law enforcement database.
- Used Python, SQL and custom-made software to create a range of complex test data.

Project conducting a capability assessment of open source methods for face recognition.

*(November 2017 – January 2018)*

- Used image-processing and machine learning packages in Python such as sci-kit learn and opencv to identify individuals from a single photo.
- Investigated and carried out web-scraping for labelled face images.

Project assisting a cyber vulnerability assessment in the automotive sector.

*(January 2018 – March 2018)*

- Investigated the security of the internal network of a modern car.
- Collected, visualised and analysed bus network data.

Other work activity:

- Successfully provided support to the business in bidding for a Defence and Security Accelerator project.
- Planned and delivered activities for STEM promotion events and school visits.
- Assisted with the organisation and running of workshops with defence stakeholders.

- Contributed to a business development tasks to produce a Python tool to augment audio data for Machine Learning purposes.

## Education

**The University of Southampton** (September 2014 – June 2017)

**BSc Mathematics with Statistics, First Class Honours**

- Developed my coding skills with R, carrying out regression, factorial and survival analysis in order to complete coursework.
- Built on my modelling skills, learning about the properties and applications of a range of statistical distributions in order to select the most appropriate one for analysis.
- Engaged in extra-curricular activities; volunteered at CodePlus, and took on the role of President of the University athletics club.

**The Cherwell School** (September 2007 – June 2014)

- A levels: Mathematics - A, Geography - A, Further Mathematics - B, French – B

## Further Experience

**Finance Intern at the University of Southampton Professional Services Finance Department** (June 2016 to September 2016)

- Extracted financial data from Agresso accounting software.
- Labelled and cleansed data using functions such as SUMIF, VLOOKUP in Microsoft Excel.
- The above dataset was produced for a benchmarking analysis to be conducted between universities.
- Communicated with a range of stakeholders throughout the business about the task.

References available upon request