

Matthieu Marshall

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Summary

Engineer working in the Data Science practice of a leading technology consultancy where he has gained experience working in a variety of projects using Python for Machine Learning, supporting testing of a complex PostgreSQL database and developing a big data platform using Scala, Python, Apache Hive, Hbase and HDFS, among other technologies. Matthieu has a strong academic foundation in statistical analysis and modelling.

Experience

ROKE

Data Engineer

Nov 2019- Present

Roke

Continued working on a project supporting development of a Big Data Pipeline for use in the defence domain.

- Matured features of a data pipeline which is using Apache Nifi and Kafka to ingest data to be stored in Apache HBase and then presented to users with a GraphQL API via a Scala backend.
- Worked on customer site in a rainbow team alongside other contractors.
- Produced documentation and technical drawings in order to design solutions.
- Experienced working in an agile scrum environment and took a leading role in Agile scrum ceremonies; taking the place of the scrum master when they were absent.
- Worked in a secured Linux development environment and with tools such as Jenkins, Docker, Ansible and Python to administer development environments and drive continuous integration.
- Communicated with users and external stakeholders to explain the platform and support their integration to it.
- Provided support to colleagues on other software engineering tasks to automate the testing and deployment of the platform.

ROKE

Graduate Data Engineer

Nov 2017 - Nov 2019

Roke

2 years 1 month

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

- Developed on 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.

- Generated 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.

- Risk assessed migration from Microsoft SQLServer to PostgreSQL and produced documentation for the customer on this.

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

- 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.

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

Other work activity:

- Successfully supported 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.



Finance Intern

Jun 2016 - Sep 2016

University of Southampton

4 months

My primary role as an intern with the Professional Services Finance Department at the University of Southampton was to prepare a data set for benchmarking analysis. In doing so, I built on the following skills:

- Technical knowledge
 - o Used Microsoft Excel to manipulate hundreds of lines of data using functions such as SUMIF, COUNTIF, VLOOKUP and others.
 - o Improved my ability to organise and analyse numerical data.
 - o Gained insight into business operations, finance and strategy within the university which can be applied elsewhere.
 - Project management
 - o Coordinated by email and in person with estates employees, managers, heads of faculty finance and other accountants in order to collect data.
 - o Managed and instructed team members on how to prepare relevant data for submission to the dataset.
 - o Completed work to deadlines while also carrying out day to day accounting tasks with Agresso.
 - Communicating Ideas
 - o Discussed with colleagues in order to overcome problems with the project.
- Used Pivot tables to summarise and present data clearly.

Education



University of Southampton

2014 - 2017

BSc, Mathematics and 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.
- Strengthened my ability to analyse situations in a mathematical manner and break down problems into logical set of steps in order to solve them.
- Group projects
 - o Used R for regression analysis on airline fares in order to assess the suitability of the model.
 - o Used Simul8 to solve a problem relating to queues in a call centre.

- o Improved my skills in discussing mathematical concepts with my team.
- o Collaborated to deliver high-scoring reports and presentations to academic staff and my peers.



The Cherwell School

2007 - 2014

A levels, Mathematics

Studied for A levels in French, Maths, Further Maths and Geography, as well as AS levels in Physics, Biology and General Studies.

Skills



Python • PostgreSQL • Data Analysis • Statistical Modeling • Scala • R • Agile Methodologies •
Docker • Hadoop Stack

Certifications

Introduction to R • DataCamp

Intro to Python for Data Science • DataCamp

Intermediate Python for Data Science • DataCamp