TABITHA DAVIES

Big Data Engineer

ABOUT ME

I chose to study mechanical engineering as I had a passion for mathematics at school, but wanted to learn how to apply it practically in real life.

During my time studying I rapidly realised I preferred the mathematical and analytical side over the practical side of engineering. Therefore, looking for a career opportunity that encompassed this I discovered the field of data. This appealed to me as I had enjoyed finding ways of sorting the data gained through the testing I did for my final year project, and the potential of the scope and use of data engineering to make a real difference in people's lives was an exciting prospect.

Hearing about projects like helping to prevent a food crisis in Kenya by getting better data about food pricing and consumption to influence monetary policy got me excited about the power of big data.

As a part of Cardiff University Christian Union, I coordinated events for international students as a group called Home from Home. This involved coordinating a team to do bag carrying at the beginning of the year to assist those newly arriving to their university residences, organising and budgeting regular events, public speaking, and pastoral care.

CONTACT US

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kubrick
GROWING DATA EXPERTS

OVERVIEW

I graduated with a bachelor's degree in Mechanical Engineering from Cardiff University in 2017. In my final year project, I was evaluating the material properties of foams used in safety helmets. I gathered vast quantities of data of various foam materials through testing, then used Excel to analyse this data and work out the material properties. Finally, I began building an accurate model of the foam materials using the FEA (Finite Element Analysis) program, ABAQUS. This gave me an appreciation for creating, storing, analysing, and using data.

During my studies I completed two computing based modules, Computing 1 & 2, which focussed on Excel, MATLAB, and the C++ language.

WORK

DATA ENGINEER - KUBRICK GROUP - LONDON

September 2017 - Current

At Kubrick Group I gained knowledge and real world experience in professional skills, a wide yet in depth array of modern technical and analytic skills. We studied the agile software development lifecycles and gained detailed knowledge of platforms and infrastructure.
I specialised in Data Engineering which involved learning and developing advanced skills in Python, Spark, Hadoop, NoSQL and SQL as well as advanced Excel - these lead me to work towards accreditation as a Cloudera Hadoop CCA Developer.

As a junior data consultant I applied my skills on real client projects including:

- Seasonality correlation to sales for a large retail client.
- Feature analysis for a large financial services client providing HR with churn rate modelling against different employee profiles.

The projects were developed in agile teams using Git and Kanban boards following agile processes in the presence of an agile coach. Delivery of the projects used virtual environments and Docker. The professional skills I have acquired and matured were invaluable in these projects.

SUMMER CAMP YOUTH LEADER, HOUSEPARTY AT BETHANY SCHOOL

2014 - 2017

For the duration of the 9-day summer camp I was the joint leader of a group of approximately ten high school aged children planning daily activities supporting them pastorally. I ran morning sessions for the campers. These sessions had to be planned and often materials for activities had to be sourced and ready the day before

POP-UP CAFÉ VOLUNTEER, OPERATION MOBILISATION

July 2013

Providing efficient customer service in a very busy environment of the main venue at a large festival.

UNIVERSITY COLLEGE LONDON HOSPITAL

May 2011

I worked in the Medical Imaging department, where I learnt about the design and production of titanium skull plates, and assisted in archiving patient data. Whilst there I made some short animated clips demonstrating the difference between a skull with Aperts syndrome and an "average" skull to assist in a presentation to raise funds for research into methods of correcting this rare skull deformity.

EDUCATION

BENG MECHANICAL ENGINEERING 2.2 - CARDIFF UNIVERSITY

2014 - 2017

Throughout the duration of my degree I participated in many group design projects. These often involved elements of logical thinking and problem solving, as well as teamwork such as coordinating meetings, distributing workloads, and piecing together final reports and presentations with all our contributions. For a project designing a product that would assist urban transportation I headed up a market research group within a team, this consisted of communicating with Cardiff and Bristol airports; building a relationship with them, gaining information, and visiting to conduct a survey of passengers.

Engineering Analysis – 84%
Computing 1 – 76%
Intro to Economics, Law, Accounting, and Management Science – 69%
Mechanical Engineering Labs – 68%
Energy Studies – 67%
Product Design – 61%

KEY SKILLS

Python Libraries:
Pandas, Numpy, SK Learn, NLTK, PyMongo and Plotly
Cloudera Hadoop version 5.4:
HDFS, Yarn, Sqoop, Flume, Avro, Parquet, Impala, Hive and Hue
NoSQL:
MongoDB, Neo4J
SQL:
SSIS, Lavastorm, Advanced SQL
Apache Spark:
RDD, DataFrames, SparkSQL, PySpark with some exposure to and understanding of Scala
Source Control and IDE:
Git, SourceTree and Git Extensions, PyCharm
Other Skills:
Datalku, Linux CentOS 6, SSH, Putty, Agile