

Toby Gaskell

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PROFILE

I am confident, dependable and motivated - as well as eager to be in an environment where I am able to learn from others and contribute ideas.

I specialise in ensuring engineering is completed efficiently to a high quality following industry standards. I pride myself on my collaboration skills including the ability to communicate effectively and understand requirements from both technical and non technical stakeholders.

I relish the idea of working across a wide range of tools and technologies - as I have a thirst for all knowledge, especially widening my technical abilities. I am a competent programmer primarily in python with experience using other languages such as Java and R. I am driven, hardworking and excited by data.

EXPERIENCE

Security Data Engineer (Schroders) 3 Years

CLOUD MIGRATION

Part of the team responsible for pioneering the migration of the security data strategy from the on prem solution to the cloud. Which was the first of it's kind within Schroders.

I engineered a vast number of large machine generated security data sources which can ingest multiple billion rows a day. I had to consider solutions to batched, micro batched as well as streamed data sets from a variety of different sources - as well as complex unstructured data sets which required custom solutions.

As part of the cloud solution we integrated and became familiar with a number of different cloud platforms - including Snowflake, AWS, Streamlit, Azure and Team City.

RISK METRICS

Lead engineer on building two end to end security metrics solutions. One mapping on to the industry leading MITRE ATT&CK framework and the other used to monitor the companies risk position.

This work included designing and building the back ends which consists of two normalised databases, two full python engines used to automatically run and update risk metrics using data from a vast number of different data sources held in snowflake.

As well as working with the business stakeholders to design, build and implement an interactive front end and work flow - which is used across multiple teams to input risk values and commentary.

This automated solution has reduced the BAU work for our team dramatically as well as driving forward the quality of risk insights we generate.

DATA QUALITY MONITORING

Lead Engineer on building from the ground up a data quality monitoring solution for our cloud data. This work consisted of building a scalable solution which implemented a number of checks across our data - including volume and quality monitoring - then alerting the team via a messaging process when things went wrong. Figuring out how to dynamically identify what consisted a "normal" volume ingestion for each unique dataset was something i am especially proud of.

PHISHING ML MODEL

Built and deployed a predictive model which used a regression machine learning algorithm, to identify the likelihood of a reported emails being a phishing email. This used a number of different natural language processes and built features to get results showing accuracy and precision scores of 97% and 98% respectively. Once deployed this was used to prioritise security incidents based on our prediction - saving our SOC over 4 hours a week

DATA INSIGHTS

Generating data dashboards for use across the wider team is bread and butter in this role. During my time I have lost count at the number I have built. Some of the most useful however have included dashboards generating insights for our SOC showing length of time taken to handle a security incident showing areas needed for improvement Security tool coverage dashboards used by multiple teams operationally to ensure we have adequate estate coverage.

EDUCATION

University of York – Maths (2:1)

Xaverian college – Maths (A*) Economics (A) PE (B)

Longdendale high school – 3x (A*) 7x (A)

During my degree I specialised in pure Mathematics - studying cryptography in 3rd year and writing my dissertation on Knot Theory were two of my personal highlights.

Whilst studying economics at A-Level I was a member of a small team of students who were regional winners of the bank of England challenge.

SKILLS

Technical; Python, SQL, Snowflake, AWS, DevOps, Hive, Natural Language Processing, Tableau, Alteryx, Docker, Mongo DB, Apache NiFi, HTML, Spark, Machine Learning, Big Data, Streamlit, Pandas

Soft; Problem-solving, Critical thinking, Good Communication, Confident Presenter, Teamwork, Decision-making, Stress management, Leadership

PERSONAL

I have played rugby my whole life, playing at a consistently high level. In 2014 I was the youngest player in Nat 2 at the age of 17. I also played at academy level for Leicester tigers and represented numerous club and county sides including York university 1st team and Cheshire (captain).