

# Andrew Baillie

## Data Scientist

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📍 Edinburgh

## SUMMARY

Data scientist with 5+ years of broad based experience in data analysis, validation and visualisation. Skilled in performing data parsing, data manipulation and data preparation. Good industry knowledge, analytical & problem-solving skills and ability to work well within a team as well as an individual. Highly creative, innovative, committed, intellectually curious, business savvy with good communication and interpersonal skills.

## SKILLS

Python

Matplotlib

Pandas

Numpy

Javascript

HTML/CSS

R

Tidyverse

SQL

Data Wrangling

Data Analysis

GIT Version Control

APIs

Manipulation

Data Cleaning

## EXPERIENCE

### Process Engineer

#### Jacobs

📅 08/2021 - Ongoing 📍 Edinburgh, United Kingdom

- Built a platform for data insights. Taking manually input data to provide risk scoring and improvement suggestions. Allowing project managers to be informed of technical data requirements before the start of a project.
- Lead of data science and programming group, setting monthly coding challenges, organising talks and developing a framework for continued learning.
- Cleaned data and processed client spending data into specific format with python libraries NumPy, Fuzzywuzzy and Matplotlib. This allowed for a clear understanding of cost to cost driver in the clients econometric models.
- Data scraped water quality data and used pandas and matplotlib to visually demonstrate extend of environmental pollution as a result of wastewater discharges in the UK.
- Worked within an environment handling official sensitive data. Used output of numpy and pandas to make data driven decisions about key project deliverables.

### Data Analyst

#### Scottish Water

📅 09/2019 - 09/2021 📍 Edinburgh, United Kingdom

#### Company Description

- Conducted a review of all communications channels by using user personas, customer insights, surveys and google analytics data. This allowed future communications to be measured and understandable.
- Built an internal visualisation platform using r and shiny to view historic engagement data of the intranet. Incorporating engagement trends and keyword highlights.
- Worked on Business forecasting, segmentation analysis and data mining and prepared management reports defining the problem; documenting the analysis and recommending courses of action to determine the best outcomes.

# EXPERIENCE

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## Process Engineer

### Scottish Water

📅 09/2017 - 09/2019 📍 Edinburgh, United Kingdom

- Used Agile methodology and SCRUM process for project development.
- Developed a python script and designed an automated template for reporting current condition of selected waste water assets based on assessment surveys.
- Analysed sewer maintenance schedule, to eliminate 200 redundant assets from the maintenance schedule while improving the issuing sequence using map visualisation to improve maintenance adherence.
- Developed a database of water quality data and projects which was manipulated with vba. This was used to engage with the environment agency to provide updates on water quality.
- Assessed and completed proposal process designs for water treatment works (WTW) to accommodate for expected growth. Responsible for leading the updates with project engineers and stakeholders.
- Assessed a number of WTWs function and capability using a developed checklist to output a quantitative score of current and future capability as well as immediate concerns and risks.
- Conducted root cause analysis and stakeholder interviews to identify time waste and procedure issues within the small value capital delivery programme. I successfully presented the results to the executive leadership team suggesting four options for rectifying problems.
- Analysed a water asset capability calculator to test the boundaries of assumptions made in development. Using basic principles of mass balances and chemical physical properties.

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## Project Scientist

### Solid Form Solutions

📅 09/2016 - 06/2017 📍 Edinburgh, United Kingdom

#### Company Description

- Developed and executed crystallisation research project proposals to provide recommendations for continued research and methods for effective process scale-up.
- Evaluated and troubleshooted a variety of client technical and operational issues, utilising a methodical approach to efficiently resolve problems.
- Developed weekly communication packs to deliver key results and updates to clients.
- What did you achieve in this role?

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## Process Engineer

### AstraZeneca

📅 08/2014 - 09/2015 📍 Macclesfield, United Kingdom

#### Company Description

- Used a series of lab experiments and data wrangling, analysis and visualisation to identify and resolve an active pharmaceutical ingredient processing issue.
- Developed a database of equipment sizes and locations. I organised the database and added python automation to allow user friendly updates.
- I resolved a particle size distribution problems with two drug products, using data wrangling and visualisation in python.
- Developed a tool to calculate volatile organic compound emissions, which were used to ensure that drug manufacture did not exceed permit and government limitations.
- Developed effective solutions to unique scale-up challenges, using new software and tools.

# EDUCATION

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## MEng Chemical Engineering with Oil and Gas Technology and a Diploma in Industrial Training

### Heriot-Watt University

📅 09/2010 - 06/2016