CALLUM BRADSHAW

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https://callumbradshaw1.github.io

>> DATA SCIENCE | MACHINE LEARNING

MOTIVATION

I am passionate about understanding and solving business problems using Data Science & Machine Learning. I systematically & creatively use my skillset to add tangible value to the team, the business, and the end-user. I am constantly learning and always looking to improve.

SKILLS & TOOLS

Programming: Python (Base, Pandas, Numpy, Matplotlib, Scikit-Learn, Keras), SQL, R

Machine Learning: Linear Regression, Logistic Regression, Decision Trees, Random Forest, KNN, k-means, PCA, Association Rule Learning, Causal Impact Analysis

Other: Power BI, Tableau, Statistics, Github, Data Visualisation, MS Office, AWS, Google Cloud Platform, Power Automate

EXPERIENCE

Data Scientist - AstraZeneca

SEPTEMBER 2021 - AUGUST 2022

- Power BI dashboard with automated alerts, reducing lab instrument downtime
  - Clarified current manual process with stakeholders
  - Created a dataflow to overcame slow data loading times
  - Used a fail-fast approach to tailor the dashboard to stakeholder's needs
  - *200 man-hours per annum saved so the stakeholder could focus on proactive ways of stopping instrument failure instead of reactive methods*
- Business case technical lead for enabling Python and R visuals in Power BI
  - Created complex visuals in R and Python such as PCA, tertiary axis plots, and correlation plots that aren't available in native Power BI
  - Equipped scientists to create, deploy and share their R and Python visuals in a more user-friendly environment
  - Allowed chemists to have more clarity on data exported from experiments in the lab which reduces their time spent on exploratory data analysis
- Built and deployed multiple linear & non-linear regression models in Python
  - Created an interactive Python web app to replace off-the-shelf predictive software
  - Created parameter-driven user-friendly front-end enabling user to self-serve
  - Communicated regularly with stakeholders to clarify their requirements
  - Optimised first principle models to achieve 99% accuracy.
  - Extrapolation of sell-by-date to predict drug shelf life so reducing drug batch waste
- Designed & delivered in-house training:
  - 'Introduction to Python' course for 30 employees
  - 'Demo of Power BI - Department Managing workflow dashboard ' to 50 people
  - 1-to-1 coaching
    - Introduction to Power BI
    - Advanced to Power BI
    - Business Statistics
- Co-author to an external pharmaceutical solubility publication
  - Produced all the plots for the publication by using stats and data visualisation in R
  - Adapted my approach based on the requests of the other authors and delivering contributions promptly
  - Enabled discussions around the data in quantitative terms
  - Documented the analysis with an R markdown for the publication appendix
- Redesigned (using Power Automate and Power BI) and facilitating weekly stand-up
  - Used Power Automate to feed data from Microsoft planner into Excel
  - Developed a more intuitive and standardised way of reporting data to team
  - Simplified work tracking for the team manager
  - Facilitated my team's weekly stand-up for 6 months and increased team participation

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Python Consultant - Leaseplan
JUNE 2022 - AUGUST 2022

- Taught an experienced software consultant to optimise Python use; reshaping and transforming their data
- Enabled data visualisation insights in Tableau to offer clarity for the product selection of corporate customers

Software Developer - InCyan
JUNE 2021 - JULY 2021

- Implemented full stack development using angular and C# to edit and produce websites by interacting with stakeholders within an agile SCRUM team
- Produced Power BI dashboards for LifeLanguages to enhance client experiences by creating insightful visuals that inform insights into effective communication

Tableau Developer - Surrey County Council
JUNE 2020 - AUGUST 2020

- Supported a more experienced Tableau developer. Assessing live dashboards for self-service by applying improved user-friendliness via standardisation between dashboards of common date parameters, dynamic titles and tooltips
- Created a spreadsheet which logged proposed changes for quick approval, before implementing changes in Tableau

PROJECTS

Grocery Delivery Optimization

- Created & applied a Genetic Algorithm in Python to search out a near-optimal route across 10 addresses. This led to estimated savings of up to 50% in both delivery time and fuel consumption over a route based upon transaction order alone. This approach could be utilised across many industries as a way to find more optimal solutions.

"You Are What You Eat" Customer Segmentation

- Used k-means clustering on grocery transaction data to split out customers into distinct "shopper types" that could be used to better understand customers over time, and to more accurately target customers with relevant content & promotions.

EDUCATION

Mathematics and Statistics BSc
2019 - 2023 - University of Bath, UK - Grade 2:1 (Expected)

PUBLICATIONS

[Pending] Pharmaceutical Solubility Manuscript

COURSES & CERTS

Registered Scientist (Royal Society of Chemistry)
Data Science Infinity
Data Science with Python (DataCamp)
Power BI (edX)
Tableau Desktop I: Fundamentals (Tableau)
Alteryx Designer Core (Alteryx)