Charlie Homewood

9 Bernard Road, Brighton, BN2 3ER
charliehomewood99@gmail.com
07307233382
Github | Linkedin | Website

Summary

MSc Data Science student with strong academic and vocational experiences, utilising R and Python across a variety of analysis tasks. I love solving problems using statistical infererence and machine learning techniques, as well as communicating research insights to others to provide valuable decision-making evidence. I believe my skill set places me in a strong position to be a valuable addition to your data team. **I am currently seeking an exciting short-term experience as a data scientist (April-Sept 2025).**

Skills

R (Strong)
Python (Intermediate)
Excel (Intermediate)
SQL (Basic)

Education

MSc Data Science

2024-2026
University of Sussex

Relevant Modules

- **Data Analysis Techniques (Overall Grade: 90%)**
  - Mathematical background to core data analysis techniques: treatment of errors, maximum-likelihood estimation, least-squares fitting, Monte Carlo (incl. Markov Chain) techniques, gradient descent
  - **Software exercise: Monte Carlo estimation, model selection, and Markov Chain Monte Carlo parameter recovery (Grade: 88%, written in Python)**
- **Data Science Research Methods (Overall Grade: 74%)**
  - Data cleaning/wrangling, exploratory data analysis, supervised/unsupervised learning methods & dimensionality reduction
  - **Analysis of the Open University Learning Analytics Dataset (OULAD) (Grade: 73%, written in Python)**
  - **Analysis of IMDB dataset to recommend genre, director, lead actor for SussexBudgetProductions (fictional company) next movie (Grade: 64% [incl. -10% for exceeding word count], written in Python)**
    - Findings presented in 5 minute video presentation **(Grade: 97%)**
- **Monte Carlo Simulations (Overall Grade: TBA)**
  - Mathematical background to RNG, rejection/inversion methods, variance reduction & Markov Chain Monte Carlo
- **Wider Topics in Data Science (Overall Grade: TBA)**
  - Essay Title: *Detecting Misinformation On Social Media Using Neural Networks*

BSc Psychology with Economics
2019-2023
University of Sussex
Grade: 1st class (Hons)

Relevant Modules

- **Research Dissertation**
  - **Conducted computational reproductions of analyses published in peer-reviewed journal articles.**
- **Quantitative and Qualitative Methods**
  - **Conducted an exploratory factor analysis on data from a self-esteem questionnaire I produced.**
  - **Compared linear regression models via ANOVA to test hypotheses on parent-child emotional expression.**

Awards

- The Sage Publications Prize for Outstanding Application of Statistical Methods (2023).
  - *I received this award for my research dissertation project.*
  - *"To be awarded for the highest mark for a project that a supervisor has nominated based on outstanding application of statistical methods."*

Relevant Work Experience

Aten Consult
Data Analyst
May 2024 - Sept 2024

Responsibilities

- **Used SQL and consulted with council departments** to develop my team's understanding of various datasets, informing the production of a bespoke building safety management app to enhance compliance with the the "Golden Thread" recommendation from The Building Safety Act (2022).
- **Used R to pre-process and clean** a large resident contact details data extract, enabling Camden's resident engagement team to gain greater outreach to residents.

Internships

Datacove
Data Analyst Intern
July-September 2023

Achievements

- **Created a training course on conducting logistic regressions in R** to be offered as part of Datacove's portfolio of commercial training courses.
- **Wireframed an analysis dashboard (MS PowerPoint and Kibana)** for a client to help them identify and resolve security vulnerabilities in websites in the UK.
- **Optimised media mix models in R** to support clients in understanding how various contributing variables relate to their KPIs, allowing them to make evidence-based decisions in their marketing strategies.

Mindlab
Project Manager (Intern)
June-July 2022

Achievements

- **Designed and produced experimental stimuli** for the pilot phase of an internal research experiment seeking to validate and improve Mindlab's 'Findability' measurement tool.
- **Produced a summary report** of a project that developed a segmentation method to gain insight into consumer characteristics.
- Helped Mindlab to **explore the viability of incorporating 'Social Listening'** into Mindlab's series of measurement tools. This tool subsequently became part of Mindlab's commercial portfolio.

Personal Projects

Making Percentile Radars
January 2023

Description

- **Developed an R Shiny dashboard** to display live statistics for male football players, using data scraped from fbref