ALEX KIRKUP

Data Scientist/Software Engineer

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GitHub: https://alex-kirkup.github.io/portfolio/
Medium: https://medium.com/@alex.kirkup

About

I have been Lead Data Analyst and Mathematics Teacher at a thriving secondary school in Fareham, Hampshire since 2019, where I have used Python, Django, SQL and VBA/Excel to transform the culture of learning and improve outcomes for pupils, parents and teachers using pupil data.

I am presently looking to move full time into data science and software engineering.

Skills

Python	SQL	Frontend	VBA/Excel	Statistics
Django	SQL Server	HTML / HTMX	Dashboards	Analysis
Pandas	MySQL	JavaScript	Visualisations	Modelling
NumPy	PostgreSQL	CSS / Bootstrap	PivotTables	Research
Matplotlib			PowerQuery	Stata / SPSS
AGILE / Git / Pylint			Xlwings	

Relevant Experience

Lead Data Analyst, Cams Hill School, 06/2019-present
- Implemented a new whole school approach to working with pupil data which has improved the outcomes of pupils, created positive feedback from parents and productive links with other local schools, and significantly reduced staff workload.
- This has developed from being based on VBA/Excel towards a Python/Django backend and a HTML/HTMX/JavaScript frontend.
- Modelled GCSE grades assigned to pupils based on individual, school and national past attainment during Covid disruption to exams.
- Trained a team of 70 teachers to use data more effectively, leading to a significant transformation of whole school practice and excellent feedback.

Teacher of Mathematics, Cams Hill School, 09/2015-present
- Introduced a new system of individualised pupil feedback in mathematics which has changed the culture of learning for pupils and improved outcomes, created new positive links between home and school, and increased teachers' capacity to plan effectively.
- Created the Mixed Question Worksheet Generator based on a bank of 10,000 pre-made questions to match the department's teaching to the latest education research.

Pupil Premium Coordinator, Cams Hill School, 06/2017-06/2019
- Created a system of deprivation indexing which continues to enable teachers to work with disadvantaged pupils more effectively.
- Introduced an annual review process which assesses the impact of all interventions with this group and the effectiveness of spending. Expanded this as a process to manage and monitor all interventions across the school.

Teacher of Mathematics, The Hayling College, 09/2013-08/2015

Research Fellow, Department of Politics and International Relations, University of Sheffield, 09/2010-08/2012

University Lecturer, Department of Politics and International Relations, University of Sheffield, 09/2009-08/2010

Teaching Fellow, Department of Politics and International Relations, University of Southampton, 09/2008-08/2009

Education

Software Engineering Bootcamp
(Python, Django, SQL, AGILE, Git)
HyperionDev, 12/2022-03/2023

PGCE Secondary Education
University of Portsmouth, 2012-2013

PhD Global Political Economy
(Including MPhil Statistical and Research Methods)
University of Southampton, 2005-2009

MSc Global Politics
University of Southampton, 2004-2005

BSc (Hons) Economics and Politics
University of Southampton, 2001-2004

A-Levels Mathematics, Further Mathematics (AS), Computing, Business Studies
Fareham College, 1999-2001

My Medium blog posts

Clean a Kaggle dataset with Pandas and insert into a Django database using Python

Making error messages visible in Django forms

The "ManagementForm data is missing or has been tampered with" error in Django

Creating dynamic labels for Django form fields

Access an item in a list using Django Template Language by writing a Custom Filter

References

Mrs Gwennan Harrison-Jones
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Mr Charles Fairhead
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