

Data Skills Project, University of Manchester

A Blessing in Disguise? The Role of the Social Scientist in the Era of Data.

A'Aishah Patel | BA Politics, Philosophy and Economics



Data Skills Framework published by the Open Data Institute.

Overview of the Data Fellowship

The main purpose of this project was to investigate what is meant by “Data Skills” in industry, how “Data Skills” are currently sought by industry professionals, and whether industry could look to Social Science graduates as a future talent pipeline for data-related positions. This required: (1) reviewing literature definitions and frameworks for “Data Skills”; (2) investigating what employers are currently looking for when it comes to “Data Skills” and data-related professions; (3) evaluating whether there is a Data Skills Gap; whether Social Science graduates can fill this gap; and if there is no gap, how can we help employers look to the Social Sciences to fill positions in the labour market?

Data Analysis

After reviewing the literature, no agreed definition or framework for “Data Skills” was found. However, individuals from STEM or quantitative backgrounds were assumed a better fit for these data-related positions, such that a recent report by the Department for Digital, Culture, Media & Sport (2021) found ‘lack of high-level qualifications’ and ‘personnel [with] a master’s degree and upwards in ... computer science’ were common responses by employers when asked why they struggled to fill data related positions. Therefore, we investigated 59 job adverts, with different job titles, but similar, if not equivalent, set of job requirements to those describing the role of a “Data Analyst” according to the Data Profession Capability Framework published by the UK Government, to evaluate what skills, competencies, experiences and qualifications employers are looking for when it comes to data-related professions; whether job titles reinforced perceptions of who can “do” data; and whether this is denting the Government’s ambition for the the UK to become a world leader in data.

Findings

- Currently there is no agreed definition for “Data Skills”. This has proven problematic for scholars investigating the data skills gap. Without a framework, employers have a hard time knowing whom to hire. Secondly, it is unclear which skills must be measured to determine whether there is a data skills gap. Thirdly, given technology is constantly changing, some

data related roles are better developed on the job.

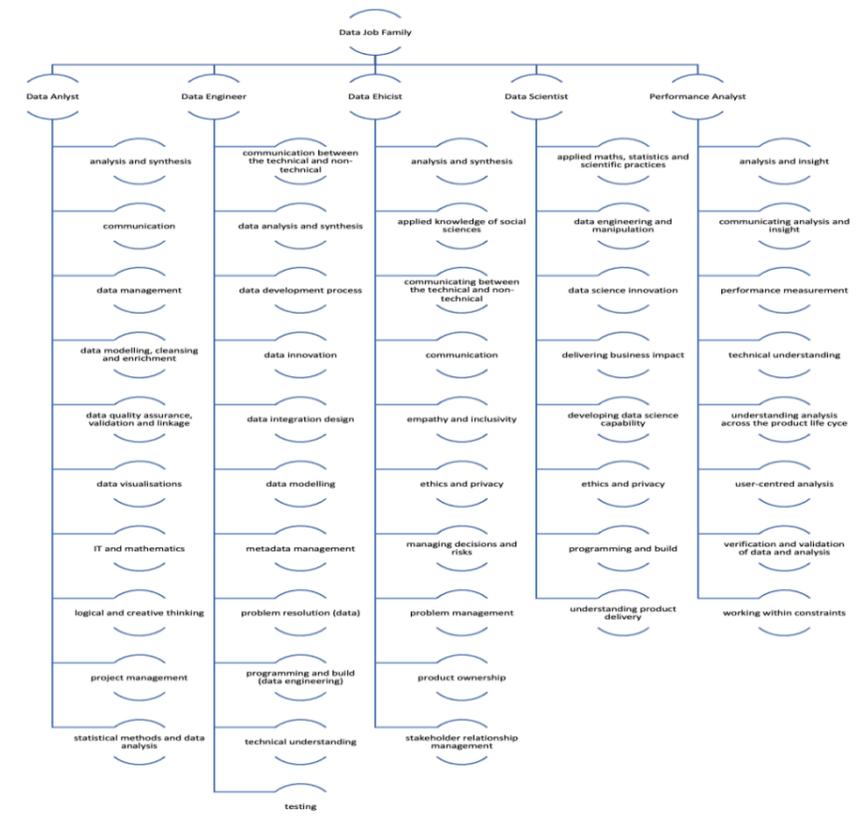
- Thus, rather than a skills gap, perhaps there is an underutilisation of talent, with social scientists being overlooked by employers in the era of data.

- Social scientists are uniquely positioned to examine data from multiple angles, interpret trends and outliers, and make nuanced decisions about which courses of action are worthy of pursuit (Brokensha et al, 2019). This is not to say technical skills are not important; however, ‘since these skills can be easily codified and taught, they will eventually get dispersed among individuals working in the same (or different) organisations, thereby making this resource ordinary across firms over time’ (Mikalef et al, 2018).

- Furthermore, Government, employers and academic institutions must work together to create a standard framework for “Data Skills” and set standards for data and analytics literacy across all curricula as ‘software, infrastructure and even data itself is insufficient to provide any value if there is a lack of personnel with the appropriate skills and knowledge to put them into action’ (Mikalef et al, 2018).

Key Skills Learnt

- Reviewing literature to identify and define problems.
- Designing research to critically assess ideas and information.
- Data skills (cleaning, visualisation, management, analysis).
- Programming knowledge in and experience of the statistical software, R Studio.
- Analysing and synthesising complex information.
- Proposing solutions and evaluating the merits of these solutions.
- Report writing.
- Presenting to and communication with different audiences.



UK Government’s Data Profession Capability Framework.