

This job description is a written statement of the essential characteristics of the job, with its principal accountabilities, incorporating a note of the skills, knowledge and experience required for a satisfactory level of performance. This is not intended to be a complete, detailed account of all aspects of the duties involved.

Job title	Data Scientist		
Job family	Data & Analytics	Band	D

Division	Marketing and Audiences, BBC World Service
Reports to (title)	Head of Audience Insight, BBC World Service
Location base	BBC New Broadcasting House, London

Job Purpose	<p>As Data Scientist in the Audiences team within BBC World Service, you will be leading on a number of business transformational projects. You will play a key role in modeling data for the calculation of the BBCs global audience reach metric. You will develop tools to analyze structured and unstructured data at scale. You will contribute to deeper audience understanding through projects that marry data science techniques with qualitative, quantitative, digital analytics and other forms of research. The projects you will be working on will involve a wide gamut of data science techniques- from regression and classification exercises to NLP and working with APIs- and the outputs will be used extensively in influencing long term business strategy as well as day to day decision making. In short, you have the opportunity to fundamentally transform how one of the world’s great journalistic organizations understands and connects with its global audience.</p> <p>The role offers significant opportunities to work with the wider Audiences team within the World Service, operating as part of project teams to deepen our understanding of our existing and prospective audiences across all platforms; web, social, radio and TV.</p> <p>The Organisation The BBC’s World Service Group delivers international news output and comprises of BBC World Service, BBC World News TV, BBC Monitoring and the BBC’s international online news services. Together, these services provide a focal point for viewers and listeners around the world, attracting a combined global weekly audience of over 394m. The World Service sits within this broader division, delivering journalism on TV, radio and online across the globe in 42 languages.</p> <p>Our Team We are a multi-national team of researchers, data scientists and digital analysts. The projects we work on tend to span all corners of the globe and cover multiple business challenges. We work with a broad range of agencies from around the world. However, the strength of our team is in bringing multiple disciplines together and much of the work we do is completely in-house.</p>
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We are a central team working with all parts of the business – eg Senior Leadership team, Editorial, Business Development, Marketing, Strategy, etc. We influence business and editorial decision making at all levels. Our work has won multiple awards over the years, including the 2019 MRS awards for Global Business Impact and International Research.

Key responsibilities and accountabilities

- Help the WS Audience Leadership develop a data science strategy for WS Audiences
- Play a leading role in integrating the data science discipline with digital analytics
- Help develop solutions that aid the automation of repetitive tasks and analyses
- Translate business challenges into machine learning problems
- Develop machine learning algorithms to problems that don't always have existing text book solutions
- Develop creative solutions to the acquisition, analyses, and management of third party data /analytics (ie from third party platforms where BBC content is hosted)
- Oversee the building of models that help in the calculation of the BBCs annual global reach
- Line management (one person)

Knowledge, skills, training and experience

The role is meant for a data science specialist with strong communication skills. The ideal candidate will have a strong theoretical grounding but will be able to apply concepts for practical problem solving.

Technical skills:

- Strong programming skills, including proficiency in Python or equivalent programming language
- Proficiency in the use of statistical packages and solid knowledge of statistical techniques
- Experience in using APIs and web scraping
- Experience in using machine learning algorithms
- Experience in data fusion techniques
- Experience in building predictive models desirable
- Familiarity with:
 - Extracting data from remote databases (e.g. via *Amazon Redshift*)
 - Data processing/manipulation/automation (using tools such as *Alteryx*)
 - Data visualisation (e.g. *Tableau, Power BI*)
- Project management

- Understanding of qualitative and quantitative research techniques and how they complement data science techniques
- Some knowledge of media analytics, data, measurement, methodologies and industry standards including online and offline channels is desirable.

Experience and competencies:

- You have achieved business impact through a primarily data science role.
- You know how to turn information into a meaningful story and communicate it effectively with stakeholders, especially those with limited technical knowledge.
- You are able to present sound and well-reasoned arguments to persuade people in a way that results in agreement or behaviour change.
- You have strong quantitative analytical skills, particularly in working creatively with existing data sources/large data sets.
- You are able to critically evaluate ideas and information, select relevant data, identify key trends, issues and solutions.
- You are an excellent collaborator and able to work on projects as part of a team.
- You are able to simplify complex problems into component parts and deal with them systematically.
- You have high perseverance, resilience, flexibility and creativity to be able to handle the pressures, challenges, and setbacks of working in global markets.
- You are able to take initiative and act independently while knowing when to get input from others
- You are able to think ahead in order to establish an efficient and appropriate course of action for self and others, balancing deadlines and resources.
- You are open to change and keen to seek out new ways of doing things.

Job impact

Decision making

- *Contributes to strategic decision making of the organisation through inputs into the work of the team overall*
- *Provides technical expertise in the development and implementation of data science capability and standards; promoting best practice within the area of business*
- *Develops novel data science approaches to vaguely defined business problems*
- *Integrates data science approaches into the day to day working of the Audiences team*

Scope

- *This is a role providing technical expertise across: project teams; technical delivery resources; an emerging matrix organisation*
- *Strategic dimensions: covering transformation mid and long-term (2-5 years)*
- *Learns and develops new and emerging approaches*

Key Relationships

Internal:

- *Audiences, Marketing, Digital development, Editorial, Product, Business Development*

External:

- *Research agencies, industry data providers, industry committees as appropriate, peers in external media companies*

Approval

Manager	Santanu Chakrabarti, Head of Audience Insight, BBC World Service
HR Business Partner	Kate Ezekiel
Date	9 th January 2019

Appendix: BBC Standard Job Description (For General Information Only)

The standard BBC job description for this role is as follows

Job title	Data Scientist		
Job family	Data & Analytics	Band	D

Job purpose

Individuals within the Data Scientist role are responsible for modelling complex problems, discovering insights and identifying opportunities through the use of statistical, algorithmic, mining and visualisation techniques. In addition to advanced interpretive skills, this role is also proficient at integrating and preparing large, varied datasets, building specialised database and computing environments, and communicating results.

These professionals will need a combination of business focus, analytical, problem-solving skills and programming knowledge to be able to quickly cycle hypothesis through the discovery phase of the project. Good written and communications skills to report back the findings in a clear, structured manner are required.

As a Data Scientist you will work as part of a multi-disciplinary team to ensure that the BBC’s data management, analytics and data science services are implemented and matured in the area that you support to transform business capabilities and enable the next generation of Broadcast and Digital services.

You will be a specialist in your field with specialist knowledge in at least one technology, software, infrastructure, application, digital or broadcast and production domain. You will provide knowledge and guidance to multiple stakeholders. You will have an appreciation of how the complete range of data science specialisms impact your area and you will use this knowledge to ensure you deliver data-informed change, improve decision making and creative reuse of assets across the area that you support.

Key responsibilities and accountabilities

- Designs experiments, test hypotheses, and build models
- Translates business challenges into machine learning problems
- Develops machine learning algorithms to problems that don’t always have existing text book solutions
- Collaborates with subject matter experts to select the relevant sources of data from across BBC divisions
- Works with team leaders and members to solve data science problems and documents results and methodologies
- Works in iterative processes and validates findings, performs experimental design approaches to validate finding or test hypotheses.
- Validates analysis by comparing appropriate samples, employs the appropriate algorithm to discover patterns
- Uses the expected qualification and assurance of the data to quantify the accuracy metrics of the analysis
- Qualifies where information can be stored or what data, external to the organisation,

may be used in support of the use case

- Assesses the volume of data supporting the initiative, the type of data (e.g., images, audio, video, text, clickstream etc.) and the speed or sudden variations in data collection
- Collaborates with the data engineer to ensure that the data used follows the compliance, access management, and control policies and that it meets the qualification and assurance requirements
- Recommends ongoing improvements to methods and algorithms that lead to findings, including new information
- Spreads the value of data and data science across the wider organisation

Knowledge, skills, training and experience

Essential

- Skills in mathematics, statistics or computer science
- Experience manipulating large datasets and using databases, and experience with a general-purpose programming language (such as Hadoop MapReduce or other big data frameworks, Java, Python)
- Good experience in the use of statistical packages and machine learning algorithms
- Familiarity with basic principles of distributed computing and/or distributed databases
- Demonstrable ability to quickly understand new concepts-all the way down to the theorems- and to come out with original solutions to mathematical issues
- Good communication and interpersonal skills
- Knowledge of one or more business/functional areas

Desirable

- Broadcast, production, start-up or media experience
- A mix of public sector and commercial experience

Job impact

Decision making

- *Provides technical expertise in the development and implementation of data science capability and standards; promoting best practice within the area of business*
- *Develops novel data science approaches to vaguely defined business problems*
- *Assessing options for business as usual and emerging technologies*
- *Assessing the appropriate mix of build/buy options within the area of business taking into account strategic direction, business flexibility and emerging disruptive tech*

Scope

- *This is a role providing technical expertise across: project teams; technical delivery resources; an emerging matrix organisation*
- *Strategic dimensions: covering transformation mid and long-term (2-5 years)*
- *Learns and develops new and emerging approaches*

JOB DESCRIPTION



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Other information	
For Reward team use only	
Job Code	
Definition:	Content Support