

LONDON BOROUGH OF LEWISHAM

JOB DESCRIPTION

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|---------------------------------|--|-----------------|--|
| Designation: | Data Scientist | Grade: | PO5 |
| Reports to (Designation) | Data Science, Insight & Performance Lead | Grade: | SMG1 |
| Directorate: | Chief Executive's | Section: | Strategy, Transformation, Equalities and Performance |

Main Purpose of the job:

To lead end-to-end data science projects, from understanding business requirements, interrogating complex datasets to designing and building advanced analytical solutions to inform evidence-based strategic and operational decision making across the organisation and deliver positive outcomes for residents we serve.

Apply machine learning, predictive analytics, risk modelling, simulation modelling, spatial optimisation and natural language processing to support diverse business needs and Council's transformation programme, drive service improvements and outcomes, and help solve some of the most pressing and complex challenges faced by local government such as increased demand for financial resilience, housing and social care services.

Translate complex business challenges into practical data science and analytical solutions, and actionable insights. Manage data science projects ensuring quality, strategic business alignment and strong stakeholder engagement.

Design and deliver analytical solutions that are robust, transparent, and compliant with GDPR and DPIAs, embedding trusted and responsible principles into operational systems and decision-making processes.

Effectively communicate complex insights through clear insight, analysis and visualisations tailored to both technical and non-technical audiences.

Summary of Responsibilities and Personal Duties:

- Work closely with the business to identify issues and propose data-informed solutions for effective decision making.
- Conduct research, interrogate multiple datasets and explore data using cutting-edge data science techniques.
- Use machine learning tools, statistical and analytical techniques to build models and generate new insight for customers and partners.
- Support the preparation, cleaning and linking data, through identification of issues and building automated solutions for resolving issues.
- Ensure compliance with ethical standards, including bias mitigation, transparency and fairness in the data and models used.
- Support/lead workshops to understand customer information, analysis and research needs.
- Combine internal and external datasets (e.g. partners' data, open data) to drive insights and develop models across the entire organisation.
- Create clear outputs (e.g. reports, dashboards or other visualisations) of identified insights for customers.
- Maintain awareness of data science and ML/AI developments.

- Understand behaviours, long term trends and the wider ecosystem to ensure analysis and outputs are relevant and action can be taken by stakeholders, informed by the evidence.
- Work with Service Designers to produce evidence-based solutions.
- Interrogate multiple datasets which range in size, complexity, source and format.
- Apply quantitative analysis and data science techniques to understand patterns in the data and identify answers to key questions.
- Lead and support workshops to understand the problem to be solved and propose methodology and solutions based on the available data.
- Working as part of a team and wider partnership working to fully understand requirements and generate appropriate outputs for stakeholders.
- Utilising open-source tools and software (e.g. Python, R) to full effect, work in an open and transparent manner to allow the wider analytical and Business Intelligence teams to understand and apply models and techniques in future.
- Identifying additional datasets required to better understand the problems or to monitor future outcomes.
- Visualising data and translating complex analysis into plain English for non-specialist audiences, helping them to understand the key themes/trends and root causes to support actions & decision making.
- To meet with members of the corporate leadership team and attend board meetings to summarise findings and potential next steps, working with the business as and when required to build the story.

Internal Contacts: These include colleagues across the organisation, service managers, IT & Digital services, communications team, customer services team

External Contacts: This will include residents, public sector partners and colleagues in similar roles across local government for knowledge sharing.

As a Lewisham Officer you will:

- Be responsible for professional advice and support in the service area to deliver in partnership with others the Council's vision, values and ways of working.
- Ensure the delivery of identified service objectives and continuous improvement of service targets.
- Ensure performance and quality improvement through supporting and nurturing others to lead and manage innovative approaches to achieving results.
- Carry out the duties of the post with due regard to the Council's Equal Opportunities Policy and core values.
- Carry out these and any other duties within the scope of the post flexibly and with full regard to the confidential nature of the post.
- All employees are required to participate in the Performance Evaluation Scheme (PES) and to undertake appropriate training and development identified to enhance their work.
- All employees are required to comply with the Council's Health & Safety policies and procedures at all times, taking due care for themselves, colleagues and members of the public.
- Assist in carrying out the Council's environmental policy within the day to day activities of the post.
- Undertake other duties, commensurate with the grade, as may reasonably be required.
- To carry out the duties of the post with due regard to the Council's Dignity at Work Policy and core values.

Consideration will be given to making reasonable adjustments for a disabled postholder

THIS JOB DESCRIPTION MAY NEED TO BE AMENDED BY THE DIRECTORATE TO MEET THE CHANGING NEEDS OF THE SERVICE.

Number of fully managed staff: 0

PERSON SPECIFICATION

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Note to Candidates

The Person Specification is a picture of the skills, knowledge and experience needed to carry out the job. It has been used to draw up the advert and will also be used in the shortlisting and interview process for this post.

Those categories marked 'S' will be used especially for the purpose of shortlisting.

Please ensure that Equality and Diversity issues are addressed specifically in relation to the role for which you are applying when addressing the requirements of this person specification where appropriate.

If you are a disabled person but are unable to meet some of the job requirements specifically because of your disability, please address this in your application. If you meet all the other criteria, you will be shortlisted, and we will explore jointly with you if there are ways in which the job can be changed to enable you to meet the requirements.

Equality & Diversity

Awareness of and a commitment to Equality of Access and Opportunity in a diverse community.
Understanding of how equality and diversity relates to this post.

S
S

Knowledge, Aptitude & Skills

(Skills can only be used as shortlisting criteria if the skill is to be tested)

(To Be Tested – S)

- Expert knowledge and ability to interrogate complex data sets and transform data as required for data science projects. **S**
- Able to scope, design and deliver data science solutions and products, and lead analytical work. **S**
- Extensive knowledge, use and application of data and analytical skills in a real-world setting. **S**
- A natural problem solver with an inquisitive mind who is interested in using best analytical tools and techniques to enhance understanding and develop solutions.
- Adept at communicating a story (verbally and visually) to a range of stakeholders, including non-specialists, and confident speaking to senior leaders. **S**
- To be able to apply objective analysis of facts on a given topic or problem before formulating opinions or rendering judgments to support decision making.
- Proactive, methodical, reliable, self-motivated and results focused. **S**
- Ability to interpret often complex requirements and deliver information and analytics solutions to a wide range of stakeholders. **S**

- Effective interpersonal skills with the ability to relate to all levels within the organisation and with partner organisations. **S**
- Good knowledge of the requirements relating to handling sensitive data and information, particularly in relation to GDPR and DPIA requirements. **S**
- Have strong written and verbal communication skills, being able to communicate complex issues simply and in a way that is tailored for different audience. **S**
- Able to work collaboratively within a multi-disciplinary team.
- Knowledge of local government systems, statutory duties and business processes.

Experience

- Experience with statistical modelling, machine learning, data mining, data linking, data visualisation and natural language processing. **S**
- Experience in building predictive, statistical, behavioural or other models via supervised and unsupervised machine learning, statistical analysis, and other predictive modelling techniques. **S**
- Experience with standard statistical techniques such as regression analysis, factor analysis, significance testing, Bayesian analysis, causal inference and conformal prediction. **S**
- Extensive experience with different Python and R libraries (e.g. scikit-learn, XGBoost, Keras, BERT, transformer libraries, PySAL, ggplot2, dplyr, tidyr, etc.). **S**
- Experience in linking and deduplicating disparate data sources using tools such as Splink, alongside fuzzy matching and record linkage techniques to improve data quality and consistency. **S**
- Demonstrable experience of quickly researching and learning new data science methods, programming tools and techniques. **S**
- Proven ability to construct and effectively communicate data insights using data visualisation techniques and narrative storytelling. **S**
- Experience of working within an agile project team and been involved in assisting with project tasks and sprint planning. **S**
- Understanding of data privacy and ethical considerations when applying data science **S**
- Good experience of programming best practices, writing manageable and reproducible code, using Git version control, RAP (Reproducible Analytical Pipelines) and producing quality documentation.
- Ability to write scalable code and experience with ETL concepts and data pipelines automation.
- Exposure to applying machine learning and AI tools such as Microsoft Copilot, Azure AI Foundry, Azure ML, Streamlit, and Power Automate in developing practical, real-world solutions to enhance decision-making and automation across services.
- Experience managing workloads, prioritising and completing tasks within deadlines and to the required standard. **S**
- Experience of data visualisation software and tools to build dashboards and reports (e.g. Power BI, R Markdown, Quarto, R Shiny or D3.js) **S**

General Education

- Proficiency in at least one of the following programming languages: Python, R (lead essential criteria). **S**
- Bachelor's degree in data science or numerate discipline or demonstrable relevant career experience as a professional data scientist. A Masters degree is desirable. **S**

Personal Qualities

Candidates are expected to adhere to Lewisham's values and behaviours.

Circumstances

N/A

DBS Disclosure Required? **No** **Basic** **Enhanced**

(Tick as appropriate – guidance available from your HR Advisor)

Physical

Generally candidates must meet the standard Lewisham requirements for the post.