

Job Description

Data and Insight Specialist

Reference: DDT112

Date: July 2026

Job Family: Data, Digital & Technology /Data and Insight
Level: 2
Band: 8
Career Track: Technical, Professional and Supervisory

Job Purpose

To lead the delivery of data science for Northumberland County Council's Communities First approach and work to improve support for adults with multiple disadvantage, using data ethically and appropriately to explore, model and communicate complex problems, and to turn linked datasets into actionable insight and scalable, maintainable data science products that improve outcomes for residents.

Working across services the postholder will shape data science approaches from discovery through to delivery, influence stakeholders on problem framing and method selection, and collaborate with business intelligence, analytics and data engineering colleagues to embed solutions into services, build organisational data science capability, and support strategic and operational decision-making.

Duties and Responsibilities

- Lead discovery with services to understand priority problems, define measurable outcomes, and agree success measures.
- Scope, estimate and plan data science work and managing dependencies with data engineering, business intelligence and service teams to deliver at pace.
- Design and implement evaluation frameworks to assess the effectiveness, fairness and business impact of data science interventions, using appropriate statistical methods to understand outcomes and support continuous improvement
- Develop and assure data science outputs (models, analytical tools, insight packs and visualisations) that support strategic and operational decision-making and clearly communicate recommendations.
- Apply advanced data visualisation and storytelling techniques to communicate uncertainty, risk and recommendations clearly to senior leaders, elected members and operational teams.
- Use of AI/Large Language Model based tools where it adds value, alongside statistical and machine learning methods to deliver insight, automation and decision support.

- Translate complex analysis for non-technical audiences, tailoring narrative, visuals and language to support understanding, challenge assumptions appropriately, and enable decisions across services.
- Monitor production models and analytical products to ensuring solutions remain accurate, reliable and fit for purpose. Ensure reproducibility and quality by applying appropriate validation, testing approaches and documentation so that analytical methods, assumptions and limitations are transparent and can be reviewed.
Lead creative problem-solving, generating and testing hypotheses, and designing innovative analytical approaches.
- Embed ethical and appropriate use of data in all work, identifying privacy and ethical risks early, advising stakeholders on mitigations, and aligning delivery with GDPR, information governance and council policies.
- Build effective cross-service relationships (with partners across local government, health, policing, housing, education and the voluntary and community sector) to enable joined-up delivery.

Person Specification

Professional and Technical Requirements

Qualifications

- Level 6 or above qualification in data science, statistics, mathematics, computer science or equivalent professional experience.
- Evidence of ongoing Continuous Professional Development (CPD) in data science methods, tools and/or ethics.

Knowledge, Skills and Experience

- Experience delivering end-to-end data science work and selecting appropriate techniques: problem framing, data exploration, feature engineering, modelling, validation, and communicating conclusions.
- Strong practical understanding of statistical modelling techniques including regression, classification, clustering, forecasting and hypothesis testing, with the ability to explain assumptions and limitations.
- Experience working with complex, messy and sensitive datasets, including data linkage where appropriate, and applying robust data preparation and quality approaches.
- Understanding of data ethics, privacy and governance, including applying GDPR-aligned practice and documenting decisions, assumptions and limitations.
- Experience collaborating in multidisciplinary teams to deliver scalable, maintainable analytical products and define support/maintenance needs.
- Python and SQL for data preparation, analysis and modelling.
- Experience using a visualisation or dashboard tool (for example Power BI, Tableau or similar) to communicate findings effectively.
- Practical knowledge of model evaluation and validation approaches, including performance metrics and assurance suitable for decision-making contexts.
- Experience using version control, code review and reproducible development practices to ensure quality, transparency and maintainability of analytical products

Core Competency Requirements

- **Communication:** Tailors communication to audience and context. Uses listening and questioning techniques to clarify complex issues and support team understanding.
- **Collaboration:** Coordinates with colleagues and partners to deliver shared goals and improve service outcomes.
- **Service Delivery:** Identifies and resolves service issues, improves processes, and ensures policy alignment. Promotes efficiency and avoids waste through practical improvements.
- **Decision-Making:** Uses evidence and judgement to resolve issues and improve delivery.
- **Digital & Data Literacy:** Interprets data to improve services. Applies knowledge of digital risks and ethical data use. Uses basic analytical techniques to support decision making.
- **Adaptability:** Adjusts approach responsively to evolving needs and priorities. Identifies opportunities for continuous improvement and supports others through change.
- **Problem-Solving:** Analyses problems and applies knowledge to develop practical solutions and suggest improvements.
- **Community & Customer Focus:** Engages with service users and customers to improve delivery, ensure accessibility, and reflect diverse needs.
- **Leadership:** Supervises day-to-day activity and supports team development. Coordinates tasks and resources to meet the needs of the service.

Strengths

- **Analytical:** You seek and analyse information to inform your decisions, based on the best available evidence.
- **Explainer:** You communicate thoughts and ideas, verbally or in writing. You simplify complexities and adapt communication so others can understand.
- **Problem solver:** You take a positive approach to tackling problems. You find ways to identify suitable solutions.
Preventer: You think ahead to anticipate, identify and address risks or problems before they happen.
- **Networker:** You create and maintain positive, professional and trusting working relationships. These can be with a wide range of people within and outside your organisation. You identify connections and reach out to bring people together.

Desirable

- Experience applying Natural Language Processing (NLP) and/or qualitative or text analytics methods.
- Exposure to spatial/GIS data management and analysis.
- Data or cloud platform certifications.