Job Description

Job title	Senior Data Analyst	Grade	B
Department	Science & Innovation		
Responsible to	Data Science Manager		
Revision Date	February 2025		

Purpose of the job

The Senior Data Analyst will be part of a small data insights team, Physics Insights, who have the technical skills and knowledge base to collate, analyse and visualise complex data sets to evidence issues and strengthen our understanding of the physics landscape in the UK and Ireland, and wider. They will be responsible for development and implementation of processes for data analysis working closely with the other technical members of the team to do so. The Senior Data Analyst will also work closely with colleagues across the IOP to help ensure a robust data and evidence led approach is taken in new and existing data driven projects.

Context of the job

This department's purpose is…
- provide science and innovation leadership.
- invigorate strategic member and community engagement across academia and business.
- proactively shape the debate on matters that the physics community cares about so that we influence stakeholders and stimulate action that makes a difference.

To achieve this, it will:
- Create data insights to evidence issues and strengthen our understanding of the physics landscape in the UK and Ireland.
- Recognise and celebrate excellence through awards.
- Energise our engagement and deliver value and impact via our networks, IOP Accelerator and business programme.
- Drive an ambitious physics programme of high impact projects to influence change.

The job will involve:
- Collecting and analysing data from a wide range of sources.
- **Developing processes governing what data is collected, and how it is stored, arranged, integrated, and used.**
- *Developing effective data science & statistical inference techniques to extract insights from different data sets.*
- **Designing and refining complex data workflows to enable the end-to-end analysis of detailed data sets.**
- Creating data visualisations.
- Communicating with senior stakeholders including members, committees and partner organisations to ensure our data processes are robust and high quality.
- Ensuring that Physics Insights adheres to best practice with regards to data security
- Working with colleagues from across the organisation to help design data and evidence driven approaches to key projects and activities.
- Working with a wide range of internal and external data sets to draw out insights for programmes and projects across the organisation.

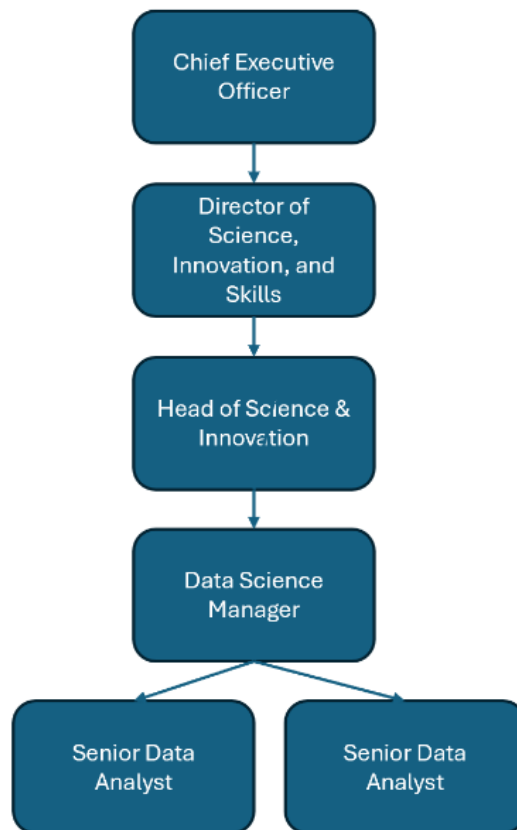**Key decision-making in the job**

- Autonomously determining what internal and external data are required for key projects and activities across the organisation.
- **Developing and implementing processes for data collection, storage, analysis and visualisation.**
- Determining and setting technical development priorities in order to drive required data insights.
- Advising colleagues on new data driven approaches for key projects and activities across the organisation.
- Ensuring project milestones and KPIs are met.

Accountability of the job

- Develop and oversee large-scale data analytics projects.
- Provide cross-organisation technical expertise with regards to data driven projects and processes.
- Ensure quality assurance of our data analytics processes and projects.
- Support and provide guidance to other technical members of the Physics Insights team.
- Advise on procurement decisions for data analytics and visualisation software.
- Ensure robust data security for large amounts of data, including personal information.
- Risk identification and management.

Organisational chart

The Institute of Physics is an open and inclusive organisation that welcomes and celebrates diversity.

Main responsibilities of the role	
•	Collecting and analysing data from a wide range of sources.
•	Using data analytics skills for the high-level manipulation of data from multiple internal and external data sources.
•	Designing complex data workflows in order to produce data and evidence for projects.
•	Implementing and driving use of an evolving range of data analytics tools and techniques, to best serve the organisations' goals.
•	Lead on the collection of data and how it is stored, arranged, integrated, and used in data systems.
•	Supporting the technical work across the data team.
•	Ensuring that Physics Insights adheres to best practice with regards to data security and management at all stages of development.
•	Providing cross-organisation technical expertise with regards to data driven projects and processes.
•	Producing effective data visualisations.
•	Communicating results to interested parties, and explaining analysis decisions and value of findings **(Revert)**

Person Specification

We are looking for someone who...
• Has a **drive for results**, who can be counted on to meet or exceed goals successfully
• Can **manage and measure work effectively**, taking proactive responsibility for tasks and decisions, and identifying opportunities
• Is **customer focussed** and dedicated to meeting the expectations and requirements of internal and external customers / partners
• Has **great functional/technical knowledge and skills** to do the job at a high level of accomplishment
• Is **committed to their personal learning**, picking up on the need to change personal, interpersonal, and where applicable managerial behaviour quickly

Experience this person should have is…
• Significant and proven experience of working as a data analyst or senior data analyst.
• Experience analysing structured/unstructured datasets, detecting issues & providing solutions.
• Experience designing workflows to extract usable data from complex or sparse data-sources.
• Experience interpreting and presenting data for reporting, developing user friendly interactive visualisations.
• An ability to communicate technical information clearly to a non-technical audience.
• An understanding of the science research and funding landscape in the UK and Ireland.
• Experience of measuring and reporting back on project targets and success criteria.

Skills this person requires are…
• Highly competent in using computer software to collect, analyse and display data to build evidence base.
• Significant data preparation and analytics experience – ideally Python.
• Significant data visualisation experience.

- Team player – the ability to work co-operatively with others to achieve common goals.
- Influencing skills – the ability to bring others to your way of thinking diplomatically.
- Proactive – to think ahead and act to ensure the smooth completion of team/individual aims and objectives .
- Dependable – ability to work with minimum supervision, prioritise workload, and handle multiple tasks to a high standard and within tight deadlines.
- Organisational skills – ability to work with minimum supervision, prioritise workload, and handle multiple tasks.
- Interpersonal skills – ability to positively communicate with others; the confidence to listen and understand .
- Communication skills – ability to express information clearly and effectively in written and oral form.
- Strategic – can plan and implement strategic approaches to project management.

Qualifications required are…

- A degree in a numerate subject or equivalent – essential.
- Data analytic skills obtained through educational programs or equivalent experience – essential.
- Programming skills obtained through educational programmes – desirable.
- An understanding of the science research and funding landscape in the UK and Ireland– desirable.