



POSITION DESCRIPTION

Position Title:	Data Engineer
Cluster / Business Unit / Division:	Information Technology
Section or Unit:	Development & Analytics
Classification:	Band 6
Job Family:	ICT & Digital Solutions
Position Description Number:	PD-2350
Work Contract Type:	Professional
STEMM/NON-STEMM:	STEMM
STEMM CATEGORY:	Technology

POSITION PURPOSE

The Data Engineer is responsible for the development and maintenance of the data warehouse and other key elements of the ANSTO data landscape. This will involve system integration and modelling of structured and unstructured data to support a variety of ANSTO business intelligence initiatives.

ORGANISATIONAL ENVIRONMENT

ANSTO leverages great science to deliver big outcomes. We partner with scientists and engineers and apply new technologies to provide real-world benefits. Our work improves human health, saves lives, builds our industries and protects the environment. ANSTO is the home of Australia's most significant landmark and national infrastructure for research. Thousands of scientists from industry and academia benefit from gaining access to state-of-the-art instruments every year.

Information Technology is dedicated to enhancing and maintaining ANSTO's digital facilities for operational reliability and providing a range of customer services to support ANSTO's research, business activities and projects. The IT Support unit is responsible for day-to-day IT service delivery, support and the execution of large capital projects.

The Development & Analytics team is responsible for development standards, practice, maintenance and delivery of a wide variety of solutions. As part of Development & Analytics, you will be high performing team player that embraces best practice to deliver positive outcomes to the greater organisation in a safe, secure and sustainable manner.

ACCOUNTABILITIES & RESPONSIBILITIES

Key Accountabilities

- Develop new integrations from diverse systems to the ANSTO data platform.
- Design, build, and maintain pipelines, dataflows and ETL code.
- Undertake a range of activities in the development life cycle using a range of tools, techniques, and programming languages to ensure business requirements are met
- Monitor the performance and stability of pipelines and dataflows.
- Conduct testing and root cause analysis and resolve issues around integration and storage.
- Review and improve existing solutions to improve cost-effectiveness, performance, scalability and reusability.
- Design and build data solutions that are accessible and fit for purpose. Adapt existing solutions as business needs change.
- Manage existing solutions, including upgrade, archival and decommissioning of data.
- Develop and manage metadata repositories.
- Support data platform infrastructure (integration runtime, gateway cluster, etc.).

- Develop professional documentation, including but not limited to integration architecture diagrams and data mappings.
- Ensure the integrity, accessibility, security, and maintainability of solutions.
- Maintain awareness of industry best practice, new and emerging technologies, and platforms to enhance ANSTO's standards, products, and accessibility.
- Understand, work within, and contribute to procedures and data standards and governance.
- Collaborate with IT internal and external stakeholders to understand and resolve issues.
- Collaborate with data stewards and other professionals to design and build solutions and advise on integration and data storage best practice.
- Undertake additional duties as required and during period of leave of other staff.

Decision Making

- The position is fully accountable for the accuracy, integrity and quality of the content of advice and the service provided to customers and other stakeholders and is required to ensure that decisions are based on sound evidence, but at times may be required to make effective judgements under pressure or in the absence of complete information or expert advice.
- Determine key work priorities within the context of agreed work plans and will consult with the Analytics team leader on complex, sensitive and major issues that have a significant impact.

Key Challenges

- Managing a changing portfolio of data stores.
- Being able to prioritise workloads and balance customer needs.
- Building and sustaining customer and vendor relationships over the long-term.
- Ensuring that regulatory driven applications are managed and maintained in accordance with regulators requirements.
- Working with ever-changing developments in technology and evolving business requirements to meet.

KEY RELATIONSHIPS

Who	Purpose
Internal	
Development & Analytics manager	<ul style="list-style-type: none"> • Actively contribute to the technical direction and strategy of Development & Analytics • Provide expert and technical advice on all phases of IT projects from concept to completion • Recommend and gain endorsement for improvement or development plans and goals and other initiatives
Work area team members	<ul style="list-style-type: none"> • Provide expert advice and analysis on a full range of matters • Collaborate and share accountability • Negotiate and resolve conflicts
ANSTO Clusters	<ul style="list-style-type: none"> • Actively engage, consult regularly to collaborate on data storage and integration development and delivery • Provide expert advice and exchange information • Collaborate on cross cluster/organisation projects
External	
Stakeholders/Vendors	<ul style="list-style-type: none"> • Develop and manage effective relationships to collaborate on IT initiatives, projects and delivery • Effectively exchange information with external stakeholders and vendors

POSITION DIMENSIONS

Staff Data

Reporting Line	Reports to the Analytics Team Leader
Direct Reports	Nil FTE, Contractors or consultants as required
Indirect Reports	Nil

Financial Data (2023/2024)

Staffing Budget	Nil
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Special / Physical Requirements

Location:	Lucas Heights Working in different areas of designated site/campus as needed
Travel:	May be required travel to ANSTO sites from time to time Very occasional travel both internationally and nationally
Physical:	Office based physical requirements (sitting, standing, minimal manual handling, movement around office and site, extended hours working at computer) Presentations/Public speaking
Radiation areas:	May be required to work in radiation areas under tightly regulated conditions Perform duties with and in an area where hazardous chemicals or materials are handled under tightly controlled safety conditions
Hours:	Willingness to work extended and varied hours based on operational requirements After hours work may be required for short and infrequent periods
Clearance requirements:	Satisfy ANSTO Security and Medical clearance requirements May be required to obtain and maintain appropriate federal government clearance

Workplace Health & Safety

Specific role/s as specified in AG-2362 of the ANSTO WHS Management System	All Workers Other specialised roles identified within the guideline a position holder may be allocated to in the course of their duties
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ORGANISATIONAL CHART

On file

KNOWLEDGE, SKILLS AND EXPERIENCE

1. Degree or higher in Computing Science, equivalent data engineering experience or relevant certifications in the Azure space.
2. Demonstrated experience with Integration/ETL tools preferably within the Azure environment.
3. Demonstrated experience in working with data warehouses and data lakes (SQL pool, Data Lake storage, Spark pool, Cosmos DB).
4. Demonstrated experience in data warehouse modelling (logical/physical, OLTP/OLAP, slowly changing dimensions).
5. Experience with Azure components such as Synapse, Data Factory, Databricks or equivalent from other cloud platforms.
6. Demonstrated experience with SQL and query optimisation.
7. Ability to design, implement and develop solutions across the full software development lifecycle. Familiarity with programming languages such as Python, R, and C# is desirable. Familiarity with data transformation tools such as dbt is desirable.

8. Experience with CI/CD process and tools.
9. Ability to understand and implement relevant data and security standards, and to understand risks associated with deployment.
10. Ability to analyse and solve problems.
11. Ability to translate between technical and non-technical language.
12. Strong written and verbal communication skills.
13. Willingness to learn new technology, adopt new strategies and contribute to the Development & Analytics process and strategy landscape.

VERIFICATION

This section verifies that the line manager and appropriate senior manager/executive confirm that this is a true and accurate reflection of the position.

Line Manager		Delegated Authority	
Name:	Angela Piper	Name:	Adam Barry
Title:	Analytics Team Leader	Title:	Development & Analytics Manager
Signature:		Signature:	
Date:		Date:	