Senior Data Engineer
POSITION DESCRIPTION FORM

Region / Portfolio / Directorate:
State Intelligence and Command

Position Description Number:
Generic 375

District / Branch:
Data Science and Analytics

Rank / Level / Band:
Level 5

Work Unit:
Data Management Unit

Employment Conditions

Industrial Agreement/Award: Current PSA PSCSAA and Agency Specific Agreement

Work Pattern: Monday – Friday (Day Work): May be required to work outside normal operating hours

Location: Perth

Position Objective

Designs, develops and manages the engineering of data pipelines and databases for the purpose of provisioning data to support the extraction of statistical and operational information for data science, analysis and reporting. A key role is ensuring the quality and integrity of data and information in the data assets.

Role of Work Unit

The Data Management Unit (DMU) is responsible for maintaining a trustworthy foundation of data to support analytics across the Agency by managing data technologies through the application of high-performance computing, large scale data integration and emerging analytical platforms. This involves the management and engineering of data pipelines and databases for both near real-time and batch processes for the purpose of provisioning data to support statistical and operational tools and products for data science, analysis and reporting.

DMU ensure the quality and integrity of data and information for all DSA data assets. In addition to engineering responsibilities they are required to perform administration and take the technical lead on projects within DSA.

DMU use a modern Azure data stack including Synapse Analytics, Azure SQL and PowerBI Premium and Graph Technology is currently being introduced into the Agency.

Main activities of DMU:
- Understanding and managing the quality of data sources and liaising with data scientists and analysts to inform strategies to manage impacts and effects of this
- Interrogating data in corporate systems and data holdings to apply analysis, design, modelling, and quality assurance techniques and establishing, modifying or maintaining data structures and their components.
- Informing strategy and architecture and providing advice to analysts, report designers, data scientists, intelligence analysts and investigators using the data structures and associated components
- Building robust pipelines that support the ingestion of transactional data with high levels of performance and availability
- Designing targeted data structures to support analysis
- Influencing senior stakeholders through technical expertise, customer/domain knowledge and vision and objective, collaborates with senior stakeholders for new initiatives.

Reporting Relationships

This position reports to:
- Executive Manager, Level 7

Direct reports to this position include:
- Nil

Total number of positions under control: Nil

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Key Accountabilities

1   Data Extract, Transform and Load (70%)

1.1   Manages the existing Extract, Transformation and Load (ETL) and Extract, Load and Transform (ELT) processes from corporate systems and data holdings for ingestion and develops, reviews and implements new data extractions to meet data science, analytical and reporting needs.

1.2   Builds robust pipelines that support the ingestion of transactional data with high levels of performance and availability.

1.3   Designs, analyses and implements targeted data structures to support and facilitate the efficient and effective use of information resources for data science, analytical and reporting needs.

1.4   Contributes to the effective administration, operation and maintenance of the Azure data stack and new data technologies.

1.5   Contributes to the understanding and management of the quality of data sources and informs strategies to manage impacts and effects of this.

2   Advice, Consultancy and Stakeholder Management (25%)

2.1   Negotiates and consults at a technical level in relation to data management processes, initiatives, and outcomes.

2.2   Contributes to strategy and architecture decisions and provides advice to analysts, report designers, data scientists, intelligence analysts and investigators using the data structures and associated components.

2.3   Researches and analyses data engineering and information management issues, and local, national and international developments and trends.

2.4   Participates in meetings and workshops, provides timely and accurate advice, and attends to general and complex inquiries from personnel throughout the Western Australia Police Force (WA Police Force).

3   Other (5%)

3.1   Understands and complies with information security policies and procedures to ensure information holdings/systems are kept confidential and utilised accurately and reliably.

3.2   Demonstrates and advocates a high level of ethics and integrity in accordance with the Agency's professional standards and Code of Conduct including reporting wrongdoing.

3.3   Undertakes other duties as directed.

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Specialist Prerequisite(s)

It is a requirement that the position holder is:

- An Australian Citizen prior to the completion of the selection process;
- Successful in obtaining and maintaining a **NEGATIVE VETTING LEVEL 2** security clearance for the duration of their appointment in the position.

Work Related Requirements

Essential	Context in which work related requirements will be applied and or general standard expected.
Experience in data engineering	Managing and engineering data pipelines and databases for the purpose of provisioning data to support statistical and operational tools and products for data science, analysis and reporting. Informing strategy and architecture to support business needs.
Data extract, transform and load skills	Developing scripts to extract data from transactional systems, transform and load into datasets for access by the Data Analysts.
Analytical and conceptual skills	Designing, modelling and maintaining targeted data structures to support and facilitate the efficient and effective use of information resources for data science, analytical and reporting needs.
Communication skills	Liaising with a broad range of individuals and organisations internally and externally. Consulting with clients to clarify requirements and negotiating outcomes according to time and resources available.
Computer skills	Using a modern Azure data stack e.g. Synapse Analytics, Azure SQL and PowerBI Premium as well as interrogation of a range of databases.
Desirable Possession of or progression toward a relevant tertiary qualification in IT or a related discipline.	
Project Management Skills	Scoping, understanding and coordinating small data engineering projects.

Capability Framework

The framework is intended to support staff and supervisors through the performance cycle and identify core competencies relevant to the rank and/or classification level.

Certification

The details contained in this document are an accurate statement of the duties, responsibilities and other requirements of the position.

Position Title and Work Unit	Name	Date
Workforce Officer, Organisational Design & Analysis	Pamela Soares	26/04/2022
A/Assistant Director, Data Science and Analytics	Janelle Baily	26/04/2022
A/Assistant Commissioner, State Intelligence & Command	Tony Longhorn	27/04/2022