Data Engineer Lead
POSITION DESCRIPTION FORM

Region / Portfolio / Directorate:
State Intelligence and Command

Position Description Number:
S00223315

District / Branch:
Data Science and Analytics

Rank / Level / Band:
Level 7

Work Unit:
Data Management

Employment Conditions

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

Work Pattern: Monday - Friday: May be required to work outside normal operating hours

Location: Perth

Position Objective

Provides extensive management, leadership and expert advice in 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. Manages dynamic and changing priorities to positively impact the agency's engagement with the division and contribute to the Western Australia Police Force (WA Police Force) strategic plan. Implements workload prioritisation and management strategies to ensure deliverables are met.

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, security, patching and updates 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:
- Assistant Director, Level 8

Direct reports to this position include: varies dependant on project

Total number of positions under control: varies dependant on project

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Key Accountabilities

1   System and Data Management (65%)

1.1   Leads the delivery of operational activities to ensure priorities are achieved, in conjunction with the senior management.

1.1   Ensures through governance processes, that the design, analysis, and implementation of data structures and platforms are fit for purpose to enable the efficient and effective use of data resources to meet the agency's need for information products for corporate business intelligence, data science, analytical and reporting needs.

1.2   Leads the development, review, and implementation of new data extractions from corporate systems and data holdings for ingestion to meet data science, analytical and reporting needs.

1.3   Researches and analyses data engineering and information management issues, and local, national, and international developments and trends to provide new capabilities and increase efficiency to advance ongoing reporting and analysis processes.

1.5   Manages the design, analysis, and implementation of targeted data structures to support and facilitate the efficient and effective use of information resources for data science, analytical and reporting needs.

1.6   Manages the Extract, Transformation and Load (ETL) process from corporate systems and data holdings into the various data assets.

1.7   Provides an authoritative consultancy and advisory service to agency stakeholders to understand business requirements, and provide advice and guidance on data management process matters.

1.8   Develops and maintains productive relationships with key technical stakeholder groups.

1.9   Ensures effective and efficient communication between the division and its stakeholders through regular consultation and feedback.

1.10   Represents the Portfolio and the WA Police Force at various technical committees, working groups, meetings, and forums.

1.11   Ensures services to portfolios and data management reporting to the corporate executive are provided within deadlines and to a high quality.

1.12   Negotiates, consults, and influences at a high-level in relation to data management processes, initiatives, and outcomes.

2   Leadership and Project Management (30%)

2.1   Provides technical leadership, direction, guidance and mentoring to staff.

2.2   Provides data engineering support, training and advice to project teams to ensure achievement of key deliverables.

2.3   Coordinates and prepares reports and recommendations involving significant research on complex issues.

2.4   Leads the scoping, estimating, planning and execution of data engineering and management projects.

2.5   Leads the development and evaluation of corporate data management frameworks, projects, and initiatives.

2.6   Monitors progress of projects to ensure that milestones and performance indicators are met within time and budget constraints, and investigates and negotiates change proposals with relevant stakeholders.

2.7   Ensures that areas having an interest in, or which will be impacted by, projects are kept fully informed throughout the project life.

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.
Leadership skills	Leading, directing and managing the delivery of services in line with the strategic direction. Providing clear and purposeful leadership to team members and other unit managers in a changing and dynamic environment. Managing resources. Ensuring production of reporting and informational artefacts by a multidisciplinary team. Achieving management reporting deadlines.
Conceptual, analytical and critical thinking skills	Developing solutions to highly complex statistical data requests requiring a strong understanding of data management. Synthesising problem solutions from data, ideas, conversations, and environmental scans at both the detailed and high levels. Providing expert advice on strategy and architecture to support business needs.
Experience in data engineering	Leading system design and implementation ensuring it is fit for purpose and platform maintenance and operational activities are undertaken in a timely way. Leading the ETL process, standardising data modelling guidelines, data architecture and implementing best practices to meet operational and strategic objectives, government requirements, and organisational needs. Using a modern Azure data stack e.g. Synapse Analytics, Azure SQL and PowerBI Premium as well as interrogation of a range of databases.
Communication and negotiation skills	Representing the Agency on state committees, working groups, and within a team. Presenting complex issues effectively to senior personnel. Negotiating with clients internally and externally at all levels about delivery of their information products in context with multiple other requests. Chairing and participating in meetings. Coordinating and preparing reports, briefing papers and recommendations involving significant research on complex issues.
Project management skills	Deploying resources to address high priority work while ensuring longer term goals and productivity improvements are not compromised. Sequencing work packages to maximise productivity. Carrying out cost benefit analysis, business case developments, and other project management exercises. Investigating significant trends, issues, impacts, opportunities, and options to further the efficiency and effectiveness of the work unit and/or division.
Desirable	
Possession of progression towards a tertiary qualification, or equivalent experience.	Computer Engineering, Computer Science, or a related field.

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	Name	Date
Snr Organisational Design Consultant, Org Design and Analysis	Martine Dimond	27 April 2022
A/Assistant Director, Data Science and Analytics	Janelle Baily	24 April 2022