

POSITION DESCRIPTION

Senior Data Engineer



POSITION DETAILS

Position Title	Senior Data Engineer
Classification	HEW Level 8
Position Number	
School/Office	Data and Business Intelligence
Division	Operations

POSITION PURPOSE

The Senior Data Engineer is responsible for designing, developing, and maintaining data pipelines, integration processes, and transformation logic that enable timely, accurate, and secure access to trusted data across the University. The role brings together data from multiple systems and business units into a centralised data platform to support analytics, reporting, and operational use.

Operating with a high level of autonomy and strategic influence, the Senior Data Engineer applies standardised data engineering practices—including version control, reusable components, and automation—to ensure platform stability, scalability, and sustainability. The role leads strategic data initiatives and provides expert advice on enterprise-wide data integration approaches that shape university-wide analytics and decision-making.

KEY ACCOUNTABILITIES

- Design, build, and optimise Extract, Transform, Load (ETL/ELT) processes to ingest data from multiple internal and external sources into the University's centralised data platform.
- Ensure pipelines are well-structured, version-controlled, and documented in accordance with platform and governance standards.
- Transform Western's datasets into the medallion architecture framework, including student management systems (Banner), TCSI, Blackboard as examples.
- Automate ingestion and transformation workflows to reduce manual effort and improve reliability.
- Embed automated data quality checks and reliability metrics into data pipelines.
- Monitor pipeline performance and proactively resolve issues to minimise downtime and data integrity risks.
- Work with the Enterprise Data Architect to ensure technical designs align with enterprise

- architecture standards, including delivery of data into the CDO and external to the CDO
- Influence and contribute to enterprise architecture decisions by providing expert advice on scalable data engineering solutions.
- Contribute to the development of reusable data engineering frameworks and standards that support cross-functional analytics and reporting needs.
- Advise on the integration of external data sources and emerging technologies to enhance the University's data ecosystem.

QUALIFICATIONS, EXPERIENCE AND SKILLS

Essential

- Tertiary qualification (preferably post graduate) in Data Engineering, Computer Science, or related field.
- 3–5 years in data engineering, ETL/ELT development, or data warehousing.
- Demonstrated experience with ETL/ELT frameworks and orchestration tools (including, Azure Data Factory, Alteryx).
- Proficiency in SQL, Python, and equivalent ETL tools.
- Experience in cloud-based data platforms (including, Snowflake, Azure).
- Ability to troubleshoot and optimise data workflows for performance and scalability.
- Experience advising on enterprise data strategy or contributing to data governance frameworks.
- Demonstrated ability to lead or influence cross-functional data initiatives.
- Experience in cross-functional team collaboration and the capability of communicating technical concepts in a clear, accessible manner to non-technical audiences.

Desirable

- Experience in higher education, public sector, or other regulated industries.
- Familiarity with version control (e.g., Git) and CI/CD practices for data pipelines.
- An understanding of dimensional data modeling techniques and best practices.
- Familiarity with student management systems such as Banner, Blackboard or equivalent CMS (customer management systems)

KEY RELATIONSHIPS

This position reports to: Data Platforms Manager

This position supervises: No supervisory responsibilities

Key internal relationships:

- Data and Business Intelligence teams
- Information Technology & Digital Services
- Business systems owners
- Enterprise Data Architecture
- Data Governance & Compliance Analyst

Key external relationships:

- Vendors and solution partners

CHALLENGES

- Maintaining performance and reliability in large-scale data processing.
- Managing evolving data requirements from multiple stakeholders.
- Developing self-documenting code and pipelines that are clear, intuitive, maintainable and that are consistent with the Data Platform's established conventions and guidelines.

- Work closely with business stakeholders to gather, capture and clarify business requirements, translating them into data engineering solutions that align with the data platform.
- Implementation of the presentation layer as designed by CDO leadership.

UNIVERSITY EXPECTATIONS

The University expects that all employees are aware of, and comply with legislation and Western's policies and procedures relevant to the position, including but not limited to:

- Code of Conduct
- Work Health and Safety and Wellbeing Management System
- Enterprise Agreement or Award
- Anti-discrimination principles, Equal Employment Opportunity and staff and student equity.

Approved by: Office for People

Date: