JOB DESCRIPTION

Senior Engineer Data

ROLE TITLE	Senior Engineer Data
SECTION/DIVISION:	IT Information Systems, Digital Division
REPORTS TO:	Group Leader Data Management
DIRECT REPORTS (FTE):	Nil
INDIRECT REPORTS (FTE):	Nil
PRIMARY PURPOSE OF THE ROLE:	In this role, you will design, build, and optimize our data and analytics platforms. You'll implement and maintain scalable data warehouses and data lakes, develop robust ETL/ELT pipelines, and leverage modern data platforms like Databricks to enable data-driven decision making across the organization. Working closely with data scientists, analysts, and business stakeholders, you'll ensure our data systems are reliable, performant, and support our growing analytics needs. Working alongside Information SMEs you will develop solutions and best practices for data management, including data quality, data governance, and data security, to ensure the integrity and confidentiality of the organization's data assets. A client focused and collaborative orientation providing excellent service delivery is critical to success in this role.
ACCOUNTABILITIES:	**Data management, DATM: Level 5** Devises and implements data governance and master data management processes. Derives data management structures and metadata to support consistent data retrieval, integration, analysis, pattern recognition and interpretation across the organisation. Independently validates external information from multiple sources. Plans effective data storage, sharing and publishing practices within the organisation. Identifies and addresses issues preventing optimal use of information assets. Provides expert advice to maximise data asset value, ensuring data quality and compliance. **Data engineering, DENG: Level 5** Plans and drives the development of data engineering solutions, balancing functional and non-functional requirements. Monitors application of data standards, architectures and security, ensuring compliance and scalability. Develops and promotes continuous integration, deployment and monitoring practices. Contributes to organisational policies, standards and guidelines for data engineering. **Database design, DBDS: Level 5** Provides specialist expertise in the design characteristics of database management systems or data warehouse products/services.

Provides expert guidance in the selection, provision and use of database and data warehouse architectures, software and facilities.
Ensures design policies optimise transactional data systems for performance and availability while meeting the needs of business intelligence and analytics platforms.

Database administration, DBAD: Level 4
Develops and configures tools to enable automation of database administration tasks.

Monitors performance statistics and create reports.

Identify and investigates complex problems and issues and recommends corrective actions.

Performs routine configuration, installation, and reconfiguration of database and related products.

Data modelling and design, DTAN: Level 4
Investigates enterprise data requirements where there is some complexity and ambiguity.

Plans data modelling and design activities, selecting appropriate techniques and levels of detail to meet objectives.

Provides advice and guidance to others using the data structures and associated components.

Programming/software development, PROG: Level 4
Designs, codes, verifies, tests, documents, amends and refactors complex programs/scripts and integration software services.

Contributes to the selection of the software development methods, tools, techniques, and security practices.

Applies agreed standards, tools, and security measures to achieve well-engineered outcomes.

Participates in reviews of own work and leads reviews of colleagues' work.

Machine Learning, MLNG: Level 3
Applies established machine learning techniques and algorithms to solve business problems.

Selects and prepares data for model training and evaluation.

Trains, optimises and validates machine learning models using standard tools and frameworks.

Deploys models into production and monitors their performance. Communicates results and limitations to stakeholders.

KEY RELATIONSHIPS:

Internal
Digital Division colleagues
AskOtago
Data Domain Working Groups
Strategy, Analytics and Reporting Office (SARO)
Staff

External
Universities, Health New Zealand, and Research Groups
Cloud and platform service providers

QUALIFICATIONS AND EXPERIENCE:

Essential
Tertiary level qualification in a relevant discipline or recognised qualification(s) appropriate to the role.
Considerable experience in the computing industry across a range of environments.

	Proven experience with leading data platforms like Databricks. Experience with data backup, recovery, security, integrity and query languages. <u>Preferred</u> Tertiary level IT qualification Relevant Certification or Familiarity with modern data platforms, and associated languages e.g. Python. Experience with delivery across a medallion data architecture. Proven experience in data management principles and information systems.
TECHNICAL SKILLS AND KNOWLEDGE:	<u>Essential</u> Experience in one or more or data platforms Deep knowledge of SQL is essential Exposure to DMBoK principles (Data Management Body of Knowledge) Data modelling design Knowledge of development using command line scripting languages. Big data and toolsets (e.g. Apache Spark, Databricks) CDC and event-based processing (e.g. Kafka, Flink, Azure Service Bus) <u>Preferred</u> Experience with at least one of the following: Oracle, AWS or Azure data platforms ETL, Data Warehousing, Data Cube design and implementation. Implementation and management of cloud-based data lake technology Data integration and toolsets Data platform optimisation, monitoring and observability toolsets A good understanding of enterprise non-relational database systems Building and optimizing 'big data' data pipelines, architectures and data sets File/Data format specifications such as XML, Parquet or JSON Knowledge of source control tools, CI/CD, processes and standards.
SPECIAL REQUIREMENTS:	May need to be available at short notice to participate in the response to unplanned service impacting events due to data layer issues. Support of scheduled after hours work, typically upgrades, will be required on occasion. Provide service and support to the University of Otago satellite campuses as and when required around data management activities. Maintain high levels of discretion and confidentially of information and data. Some travel may be required. At the University, we are required to be compliant with the Public Records Act 2005 and Privacy Act 2020. Staff are expected to participate in available training to understand these requirements and effectively manage information accordingly.
DIRECT BUDGET ACCOUNTABILITY:	Nil
MĀORI STRATEGIC FRAMEWORK:	Act in a manner consistent with the principles and implications, as well as the University's commitment to the Treaty as articulated in the Māori Strategic Framework.
PACIFIC STRATEGIC FRAMEWORK	Act in a manner consistent with the strategies and goals contained in the University's Pacific Strategic Framework, role-modelling and promoting Pacific values, equity and diversity principles and cultural safety practices.
HEALTH AND SAFETY:	Act and work in a manner compliant with current health and safety at work legislation and University procedures, frameworks and guidelines. Role model safe behaviour and practices, share the responsibility to prevent harm and contribute to a safe campus and work environment, including raising workplace health and safety concerns for self, students, visitors and other staff.
SUSTAINABILITY:	Act in a manner consistent with the University's sustainability commitments; role-modelling sustainable practices, with a particular emphasis on minimising the environmental impact of day-to-day activities.

SKILLS FRAMEWORK FOR THE INFORMATION AGE (SFIA)

Senior Engineer Data

Role Type: Engineer

SFIA Levels of responsibility

Autonomy	4	Influence	4	Complexity	5	Business Skills	5	Knowledge	4

SFIA Skills Profile

Category	Subcategory	Skill	Code	L1	L2	L3	L4	L5	L6	L7
Development and implementation	Data and analytics	Data management	DATM					■		
Development and implementation	Data and analytics	Data engineering	DENG					■		
Development and implementation	Data and analytics	Database design	DBDS					■		
Development and implementation	Data and analytics	Database administration	DBAD				■			
Development and implementation	Data and analytics	Data modelling and design	DTAN				■			
Development and implementation	Systems Development	Programming/software development	PROG				■			
Development and implementation	Data and analytics	Machine Learning	MLNG			■				

https://help.sfia.nz/hc/en-nz/sections/4407230514201-Levels-of-responsibility

https://sfia-online.org/en/sfia-8/sfia-views/full-framework-view?path=/glance