



Position Description

Position title:	Data Engineer
Salary range:	VCGS Professional & Administrative Salaries – Level 7 Step 1 – Level 8 Step 5
Reporting manager:	Project and Infrastructure Lead
Direct reports:	0
Home group:	VCGS Laboratory Services

Who we are

Victorian Clinical Genetics Services (VCGS) is a not-for-profit subsidiary of the Murdoch Children's Research Institute. We aim to provide and continually improve clinical care, support, genetic screening and diagnostic testing for children, adults and families at risk of, or living with a genetic condition. Our purpose is to deliver exceptional care and service to our patients, and the community, while shaping the future of genetics and genomics care in Australia.

Our values

People at VCGS follow our values



Value people first

People are at the core of our business. We lead with empathy. We display compassion and respect towards each other, our patients and the community.



Build trust

We communicate and act with transparency, sincerity, and truthfulness in all aspects of our work.



Pursue excellence

We share a commitment to delivering high-quality, sustainable science and services. We acknowledge mistakes and encourage each other to learn and grow.



Be innovative

We encourage curiosity, collaboration and critical thinking. We value new ideas, and continuous improvement.

Position Overview

VCGS operates a growing suite of operational, laboratory and clinical systems that generate large volumes of data. Reliable reporting and analytics over this data underpin day-to-day decision-making across the organisation.

Working within the Software Systems and Integration Unit, the Data Engineer designs, builds and owns the VCGS data warehouse, ETL/ELT pipelines and dashboards, enabling near real-time monitoring, reporting and deep-dive analysis of operational data.

This is a practical, hands-on data engineering role. The data originates from laboratory and clinical systems, but no clinical, genomics or scientific background is required. The role works alongside domain experts, developers and operational teams to build scalable, reliable and well-designed data solutions.

Strong practices in data governance, validation and compliance are essential to ensure reliable and secure data solutions.

Key Accountabilities

- Design, build and maintain a data warehouse that consolidates data from multiple source systems into well-modelled, reusable datasets.
- Build and operate reliable ETL/ELT pipelines feeding the warehouse from databases, APIs, laboratory instruments and other source systems.
- Develop dashboards and reports (currently using Metabase) to support near real-time monitoring, operational reporting and self-service analytics.
- Perform deep-dive analysis using SQL to answer operational and business questions raised by stakeholders.
- Ensure data quality, validation, traceability and structured storage across pipelines and datasets.
- Work with technical and non-technical stakeholders to translate reporting needs into well-designed dashboards and data models.
- Apply best practices in data engineering, including modular design, version control, code review, testing and documentation.
- Monitor pipeline performance and reliability, resolving failures and optimising queries and data models.
- Collaborate with software, infrastructure and operational teams to troubleshoot issues, support deployment and improve reporting workflows.
- Act as a subject matter expert in data engineering and reporting, promoting accountability, ethical data use, confidentiality and continuous improvement.
- Contribute to VCGS goals through collaboration, knowledge-sharing, compliance, and alignment with organisational values and priorities.

Selection Criteria

Essential

- Tertiary qualification in data science, computer science, software engineering, information technology or a related field, or equivalent relevant experience.
- Three or more years' experience as a data engineer, analytics engineer, BI developer or in a similar role, including building and maintaining production ETL/ELT pipelines.
- Strong SQL skills, including complex queries, data modelling, schema design and query optimisation on relational databases.
- Demonstrated data warehousing experience, including designing and building a data warehouse rather than only querying one.
- Experience building dashboards with a modern BI tool (Metabase highly regarded; Tableau, Power BI or similar also welcome).
- Solid Python skills for data work, and experience using version control tools such as Git in collaborative development environments.

- Strong written and verbal communication skills, including the ability to work with technical and non-technical stakeholders and explain technical concepts to non-technical audiences.
- Demonstrated experience in data quality, validation and governance practices.

Desirable

- Experience with Metabase specifically.
- Experience with cloud platforms, particularly AWS (experience with other cloud providers also valued).
- Experience with orchestration and transformation tools such as Airflow.
- Experience with Docker and CI/CD pipelines.
- Experience with clinical, laboratory or genomic data systems, such as LIMS.
- Experience developing or evaluating machine learning, statistical models or AI-assisted analytics tools.

Conditions of employment

- Keeping children safe is our highest priority. We maintain rigorous safeguarding standards and employ comprehensive screening processes to ensure the safety of the children we work with. This includes mandatory screening processes for all successful candidates, including:
 - Valid Working with Children Check (or equivalent)
 - Satisfactory criminal record check
- The right to reside and work in Australia and you meeting any applicable visa conditions

Health, Safety & Wellbeing

- We are committed to providing and maintaining a working environment which protects the health, safety and wellbeing of our people, partners and the community
- Employees conducting duties on behalf of VCGS are expected to meet the environment, health and wellbeing requirements and responsibilities specifically required for the role
- We are committed to supporting children in their right to be safe and adhere to the responsibilities we have to ensure their protection and safety as per the Child Safety Policy
- The Institute is committed to the safety of children and young people, and takes a zero-tolerance approach to all forms of child abuse, exploitation and harm. The Institute prioritises child safety in our decision-making at all levels of the Institute and supports our employees to understand and enact their safeguarding responsibilities
- We are committed to a diverse, inclusive workplace where all staff are supported to reach their full potential, regardless of gender, career status, age, disability, cultural background, religion or sexual orientation
- Specified positions may be subject to medical review to ensure that the inherent requirements of the role can be undertaken safely

As VCGS evolves to meet its changing strategic & operational needs and objectives, so will the roles required of its employees. As such, this document is not intended to represent the position which the occupant will perform in perpetuity. This position description is intended to provide an overall view of the incumbent's role as at the date of this statement.