



Position Description - Data Engineer

POSITION DETAILS

Department / Team: Information Management and Technology / Corporate	Reports to (title): Manager, Data and Reporting Services.
# Direct Reports: 0	# Indirect Reports: 0
Location: Brisbane	Salary Banding: AO?

THE CROSS RIVER RAIL PROJECT

The Cross River Rail Delivery Authority is building a new 10.2km rail line that includes 5.9km of twin tunnels running under the Brisbane River and CBD; with four new underground stations at Boggo Road, Woolloongabba, Albert Street and Roma Street.

Once complete, it will provide trains with a much-needed alternative rail path through the core of the current SEQ Rail network, unlocking a bottleneck and allowing more trains to run more often across the whole of South East Queensland.

The Cross River Rail Delivery Authority is also delivering multiple supporting projects and activities in conjunction with Department of Transport and Main Road. These include accessibility rebuilds for eight surface stations, construction of three new stations on the Gold Coast; upgrades for stabling yards; track works and surface rail enhancements; and the introduction of a new ETCS digital signalling system.

Further Information: www.crossriverrail.qld.gov.au

OUR VALUES AND BEHAVIOURS



WE COLLABORATE

- We treat each other with respect and speak up when this doesn't happen.
- We share information to help everyone be successful.
- We have honest conversations, no agendas or surprise.
- We are curious, asking questions to understand.
- We work through issues together and help each other.



WE INNOVATE

- We are inclusive, listening to and encouraging differing views.
- We challenge and push the boundaries.
- We apply and share our knowledge to do better.
- We seize our opportunity to set new standards and benchmarks.



WE DELIVER

- We act safely at all times.
- We do what we say we will do and when we will do it.
- We understand our individual role and how it fits into the project's success.
- We take responsibility for our work and speak up when we need help.
- We are committed to continuous development and take every opportunity to review, learn and improve the way in which we are delivering the project, learn improve.



ROLE OVERVIEW

The Data Engineer sits within the Data and Reporting Services team at the Cross River Rail Delivery Authority (Delivery Authority). The position reports to the Manager, Data and Analytics and works alongside a Data Engineer and two Data Analysts.

The Data and Reporting Services team plays a pivotal role in shaping the Delivery Authority's data strategy and analytics capabilities and is responsible for database management, data analytics, Power BI reporting, dashboard development, data governance, and compliance for internal clients.

The Data Engineer will design, build, and maintain scalable data pipelines and data architectures on Microsoft Azure, with a strong emphasis on Azure Databricks, Azure Data Factory, and the Azure SQL environment (including Azure SQL Database, Logic Apps, and related services). The ideal candidate will leverage these tools for big data processing, ETL/ELT workflows, orchestration, relational data management, and unified analytics to support data-driven decision-making and AI initiatives for the Cross River Rail project.

KEY RESPONSIBILITIES

- Design and implement end-to-end data pipelines using Azure Databricks for processing, Azure Data Factory for orchestration and ingestion, and Azure SQL environments for structured data storage and querying.
- Develop and optimize Spark-based jobs (PySpark, Spark SQL, Scala) on Azure Databricks for large-scale data processing, utilizing features like Delta Lake for reliable data storage and ACID transactions.
- Build and maintain data solutions integrating Azure Databricks with Azure Data Lake Storage (ADLS), Azure Data Factory, Azure SQL Database, and other Azure services.
- Collaborate with data analysts and stakeholders to enable advanced analytics, machine learning workflows, and generative AI on the Databricks Data Intelligence Platform.
- Implement data governance, security, and compliance best practices using Unity Catalog, Azure Purview, and Entra ID integrations.
- Optimize performance and costs using Photon engine, autoscaling clusters, and serverless compute options in Azure Databricks.
- Orchestrate workflows with Azure Data Factory pipelines, Lakeflow Jobs, Delta Live Tables (or equivalent declarative pipelines), and integrate with CI/CD using Azure DevOps.
- Monitor, troubleshoot, and resolve issues in production data pipelines, ensuring high availability and data quality.
- Contribute to best practices for data engineering on Azure.
- To work in accordance with the Delivery Authority policies, procedures and safety requirements and demonstrate alignment with our values and behaviours

KEY COMPETENCIES

The successful candidate will be able to demonstrate the following key competencies:

- Bachelor's degree in Computer Science or a related field.
- Preferred Microsoft Certified: Azure Data Engineer Associate or Databricks certifications
- 7+ years of experience in data engineering, with at least 3 years hands-on with Azure Databricks.
- Proficiency in PySpark, Spark SQL, Python/Scala and SQL for data transformation.
- Strong experience with Azure Data Factory for pipeline orchestration and ETL/ELT processes.
- Expertise in Azure SQL environments, including Azure SQL Database and data modeling.
- Strong experience with Delta Lake, Unity Catalog and building lakehouse architectures.
- Familiarity with the Azure ecosystem: Azure Data Lake Storage, Power BI and Microsoft Fabric.
- Experience with version control (Git), CI/CD pipelines and infrastructure as code (Terraform).
- Excellent problem-solving skills and ability to work in a collaborative, fast-paced environment