

Position Description

Position title:	Senior Data Engineer
Reports to:	Data Insights Manager
Direct reports:	Nil
Date:	September 2020

Organisational Context

Transport Certification Australia is a national organisation that provides assurance services relating to transport technologies and data to enable improved public purpose outcomes from road transport.

Priority outcome areas enabled by TCA services include improved road safety, transport efficiency, freight productivity, asset management and sustainability.

TCA provides four broad categories of service:

- Assurance
 - Certification of service providers, telematics applications and data
 - Type approval of devices and systems, including telematics and on-board mass systems
 - Auditing of service providers, applications, and data
- Administration
 - Administration of the National Telematics Framework, including its rules, specifications, agreements, and digital infrastructure
 - Support for applications, schemes, and other initiatives on behalf of key stakeholders
- Analysis and reporting
 - Standardised and ad-hoc data analysis, reporting and data provision to support compliance, policy, planning, investment, and operational decision making
 - Managing the Telematics Analytics Platform to support user access to data and reporting services
- Advice
 - Provision of authoritative information and advice on current and emerging transport technologies and data, and associated services

TCA promotes a culture of professionalism, innovation, and integrity, with a commitment to accountability, quality, and excellence in the delivery of all TCA programs and services.

We recognise the unique skills and abilities of each individual, who come from a wide range of disciplines and backgrounds. We support our people through ongoing development and learning opportunities and create a supportive team environment for all our staff. We strive to be an employer of choice.

The TCA office is based in Melbourne.

The Role

Purpose of the Role

The Senior Data Engineer will have the responsibility and accountability for providing data engineering services within the Data Insights team. Working in a small team, the Senior Data Engineer will develop and maintain systems to support the ongoing development of spatio-temporal insights for TCA, its members and other government agencies.

The role will also provide an important support function to the administration of the audit program, focusing on TCA certified service providers.

The works will be undertaken in a project driven environment with a strong focus on adherence to quality systems.

Major Responsibilities / Accountabilities

The Senior Data Engineer will be required to develop and maintain efficient, scalable, efficient and robust pipelines using a variety of different tools and packages. Key responsibilities include:

- Assisting with the development and maintenance of TCA's telematics and spatio-temporal Insights capability to provide; troubleshooting, recommendations and the implementation of functional and performance enhancements
- Ensuring services are optimally configured and aligned to best practices
- Working closely with internal and external customers to understand and document their data requirements
- Management and development of data; ingestion, manipulation, transformation and orchestration pipelines
- Documenting analysis, findings and recommendations in a structured manner that is easily understood by a broad audience
- Assisting in the publication of technical reports and papers
- Managing multiple competing priorities in a changing environment
- Liaison and technical assistance for internal staff, members and other stakeholders as required
- Applying professional and technical expertise to resolve technical issues, and to prepare and edit reports, submissions, papers and correspondence as directed
- Assisting with testing and audit activities as part of the TCA audit function
- Developing and maintaining documentation of process and procedures to support the introduction of new initiatives
- Exercising diligence when making decisions, adhering to the requirements outlined in the Delegations of Authority
- Maintaining and adhering to Quality Systems processes and procedures

Key Stakeholder Interfaces

Internal

- Data Insights Manager
- Data Insights Analyst
- Senior GIS Engineer
- Operations Division
- Strategy and Delivery Division

External

- Australian Governments
- Road Managers and regulators

The Person

Qualifications, Knowledge and Experience

Mandatory:

- A tertiary qualification in computer engineering
- Data engineering experience
- Demonstrated experience using Hadoop, Spark, Databricks Delta Lake, JSON, MSSQL, Scala, Python and ArcGIS Enterprise in an Azure cloud environment
- Experience with spatio-temporal systems development and maintenance
- Excellent written and oral communication skills

Desirable:

- Experience using; GeoMesa, H3 geocoding, Java, MapInfo, Tableau, PowerBI and RapidMiner in a Big Data environment
- Experience applying project and service management (e.g. ITIL) methods and practices
- Knowledge of Heavy Vehicle transport planning principles and an understanding of the responsibilities of road authorities and transport operators

Personal Qualities

- Demonstrated interest in the use of data to inform public policy
- Demonstrated willingness to learn and take responsibility for one's own personal development
- Demonstrated willingness to make decisions, take initiative and originate action
- Ability to deal with ambiguity, successfully adapting to changing demands and conditions
- Comfort working in an environment which is constantly evolving
- Demonstrated ethical behaviour