A single view of the customer - Transport

The Problem

The client was seeking to access, multiple sources of data whilst overlaying specific algorithms to make judgement-based decisions on the safety of their vehicles, their drivers, the travelling conditions, and the safety of the broader community, all in real time. The chosen system, needed to be scalable throughout a large fleet of vehicles and geographic regions, along with providing fully accurate data.

The Solution

BiTQ were engaged in this process to facilitate the collation of multiple sources of differing data, into a single overview for the analysis to take place. The client was able to use this view to make intelligent, informed, fast decision on the safety of their driver and course correct where needed. By integrating with mobile based data sources, the client was able despatch the necessary local resource as required. This collaboration of data, information and people, ensured that the safety of drivers and public were optimised.

The Outcome

The client has been able to access millions of pieces of individual data, across varying sources and ultimately, create a safer working infrastructure for both their employees and the broader community. This has all been completed, whilst reducing the overall running cost of the truly scalable software.
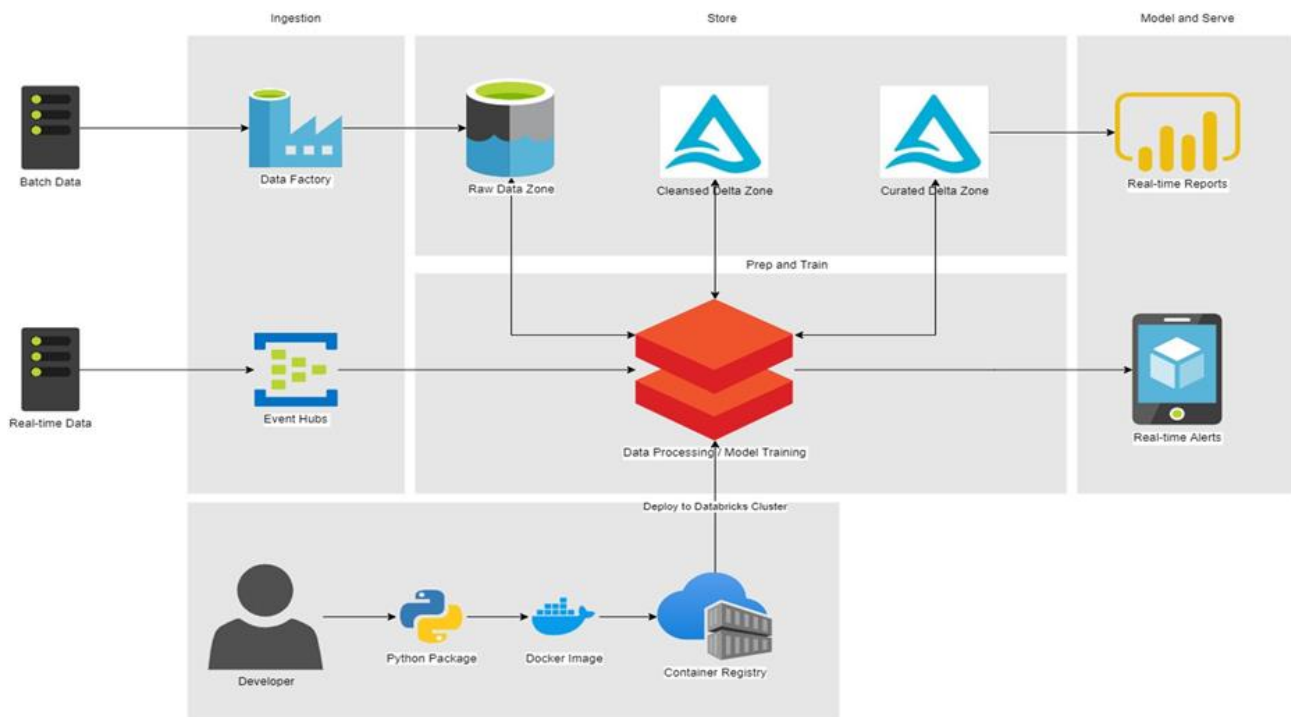
An Australian wide company with offices in Brisbane, Canberra, Gold Coast and growing.

Technical Details

BiTQ, in a collaboration with our business partners, Databricks, designed and implemented a big data solution that was both flexible and scalable. For the storage layer, a delta lake was implemented as it is a low-cost storage solution that can store up to petabytes of both structured and unstructured data. Furthermore, the delta lake architecture brings the reliability of a database into the traditional data lake significantly reducing costs without impacting query performance.

For the data processing layer, it was determined that Databricks would be the best solution to support both the real-time processing needs as well as data science workloads. In addition, Databricks will efficiently scale computer resources to improve processing times.

Finally, BiTQ designed and implemented a full development and release process using Azure DevOps and Azure Pipelines. This allowed developers to work in an isolated environment and then deploy changes that had been tested and approved by business stakeholders.