Vehicle Data & Services: Data Insights

Our Vehicle Data & Services (VDS): Data Insights offering provides the platform, toolkit and expertise that OEMs and Tier 1s need to leverage the value of machine learning models and data insights. By structuring the vast amounts of ingested data and introducing advanced data management and engineering strategies, we drastically simplify working with big data, reducing the time- and cost for the development of data-driven applications and insights.

The challenge

Today's car buyers are less concerned about a vehicle's performance or what sound the engine makes. Instead, their focus has turned towards autonomous capabilities, intelligent safety features and user experiences beyond planning their route from A to B. However, compared to other consumer technologies, vehicles currently lack the same intelligence that the market is calling for. We help automakers and their key partners with challenges that include:

- Solving data challenges in your business – such as access to trustworthy data and the ability to extract valuable insights from it

- The lack of in-house data science skills or resources to handle exponentially expanding data volumes

- The need to accelerate the development of intelligent features and applications, from ideation to deployment

Our solution

Our VDS: Data Insights offering enables and accelerates the data-driven journey of OEMs and Tier 1s, using a unique combination of automotive and data science expertise to transform and augment data insights capabilities.

Through the creation of a unified data ecosystem, standardized interfaces can be exposed to data sources, vehicles, partners and developers, while our data engineering and analytics capabilities enable the extraction of insights from ingested data.

These insights can then be applied to personalize user experiences, accurately forecast demand, improve vehicle performance, enhance brand loyalty and much more.

Why work with us?

- Enable and accelerate the data-driven transformation with a unique combination of automotive and data science expertise

- Perceive, understand and act on data in real-time/near real-time by leveraging our data engineering and analytics capabilities

- Use more accurate data insights to make better R&D decisions, improve demand forecasting, speed up developer feedback time, better manage supply chains, quickly act on customer feedback and improve customer experience

- Train machine learning models with a scalable ecosystem of tools, hardware and processes

- Store, explore, label and qualify clean data from multiple departments and third parties to reveal correlations and use joined-up insights across functions and requirements

- Integrate software lifecycle management to enable compliance, cost control and regulatory audit trails

What makes us different?

- Proven ability to support the transformation to software-defined vehicles – a journey that can be accelerated and complemented by our Data Insights services

- A lean delivery model that enables a fast start and speed-to-market, with domain experts available from around the globe

- A safe and trusted pair of hands with a proven track record with our key customers across consultancy, advisory, data engineering, scaling solutions, design, specification and implementation

- The unique combination of expert technical, automotive-specific knowledge and an in-depth understanding of automotive data and what it represents

Luxoft
A DXC Technology Company

Our Customers

Predictive Maintenance – London Buses & Vantage Power

The Challenge

Transport capacity and pollution are an ever-growing problem in cities around the world. To address this, the London Buses, a subsidiary of Transport for London, has turned to Vantage Power for a solution. Vantage Power designs technologies that connect and electrify powertrains for heavy-duty vehicles, incorporating their own lithium-ion battery pack.

In turn, Vantage Power needed an agile solution that would allow its current and future clients to put their vehicles on the market faster. To do this, it required a holistic way for tracking the vehicle control software for monitoring lithium-ion battery and powertrain systems, and for analyzing the data.

The Solution

Together with Vantage Power, Luxoft created VPVision – an innovative telemetry platform for vehicle data collection and supervision. Our solution brings data analytics to each connected vehicle, providing Vantage Power customers with a real-time overview and status of each vehicle's powertrain components, including batteries, control systems, engines, motors, and electric generators.

The Results

With Luxoft's solution, Vantage Power achieved the following:

- Automatic collection, processing, storage, and presentation of real-time vehicle data via the cloud
- Real-time geolocation visualization and two-way communication between fleet managers and drivers
- Monitoring vehicle speed, engine health and battery-pack-level diagnostics
- Predictive maintenance, insights and reporting for over 6,000 data points from each vehicle available to both operators and the OEMs
- Real-time alerts for routine maintenance to reduce downtime to a minimum
- Fleet-wide, geolocated utilization analysis in terms of vehicle idle time

Technologies

- AWS Services (e. g., Lambda, Sagemaker, IoT Core, Greengrass, and IoT Analytics).
- Elasticsearch/OpenSearch, Airflow, Kibana.
- C++, Python, Jupyter
- GitHub, Jenkins, Conan, Artifactory, Docker Kubernetes
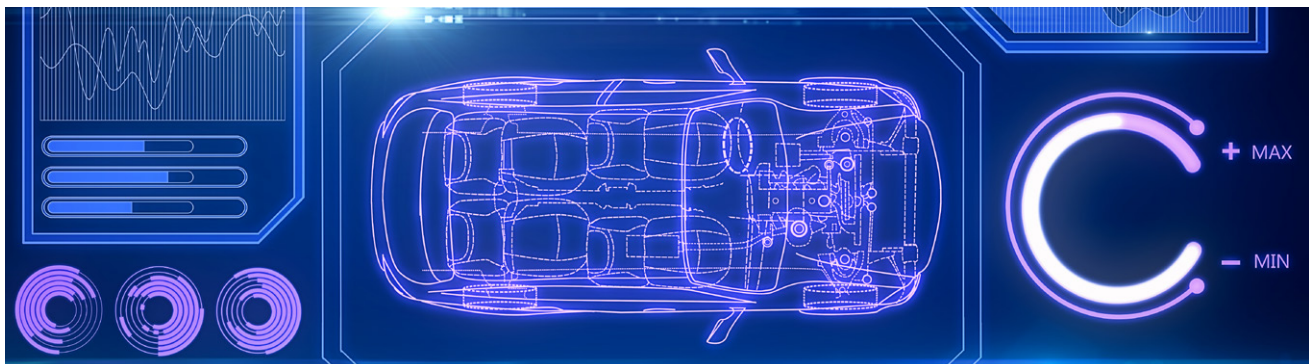
C⍟ntinental⚞

Connected Vehicles Platform – Continental AG.

The Challenge

Automotive manufacturers are transitioning into software-centric businesses focused on speeding up the development of connected and shared vehicles, autonomous driving, and electrification technologies.

To address those trends and to support its customers, Continental decided to build a connected vehicle platform that enables the exchange of data and information between in-vehicle edge components and powerful compute resources in the cloud, providing a framework for creating transformative vehicle architectures and software.

The Solution

The Continental Automotive Edge (CAEdge) modular hardware and software framework was developed together with Luxoft to enable the connectivity between vehicles and the cloud, allowing manufacturers and OEMs to develop, test and deploy software, sensorics and big data analytics solutions more efficiently and securely.

The Results

With CAEdge, Continental achieved the following:

- A state-of-the-art digital twin software framework for closed-loop and open-loop simulations and data generation
- A flexible, managed service for data ingestion in cloud and on-premise infrastructures
- A cloud-based platform for the management and the generation of simulated autonomous driving data

Technologies

- AWS Services (e. g. EC2, CDK, Lambda)
- Elasticsearch/OpenSearch, Airflow, Kibana, PowerBI
- C++, Python, CUDA, ROS
- GitHub, Jenkins, Conan, Artifactory, Docker Kubernetes
- OpenAPI, Swagger

For more information contact:

Mattias Hellerstedt

+46 709 954 624
mattias.hellerstedt@dxc.com

Luxoft

A DXC Technology Company

luxoft.com