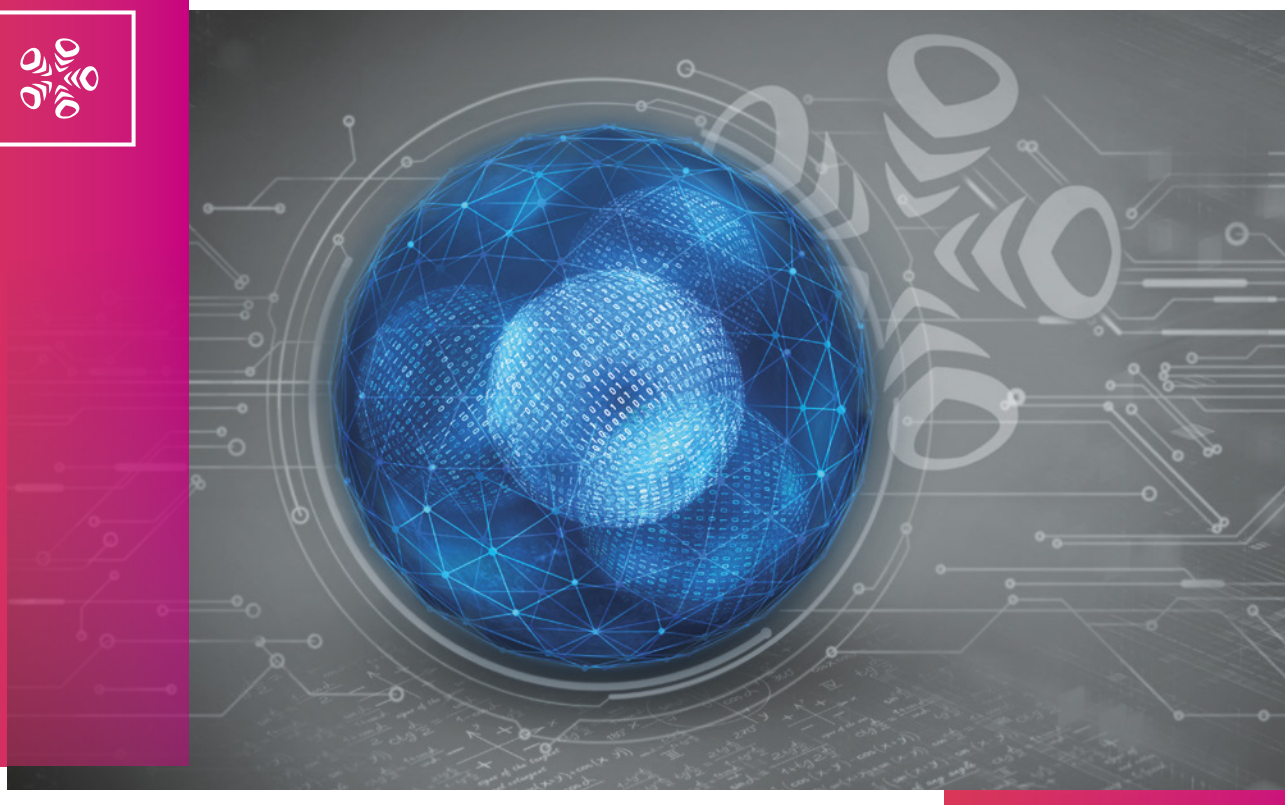

FULLY EXPLOIT THE VALUE OF YOUR DATA

AVL ADAS/AD Big Data and Analytics Platform

THE CHALLENGE

During the development, verification, and validation of complex automated driving functions, a huge amount of data is generated from road testing, vehicle and component testbeds, or from simulations. The measurement data gathered over several projects – and sometimes several years – can constitute a valuable asset, if the value can be exploited with the ability to analyze and query such a large data store in a highly interactive way, with low response time.

THE AVL SOLUTION

To address this challenge, AVL provides an open and seamless solution for Advanced Driver Assistance Systems (ADAS) and Automated Driving (AD) applications. The platform supports the analytics of classical time series data as well as object data, describing the environment model perceived by ADAS/AD sensors. A key feature is the automated and highly scalable execution of analytic scripts on a large set of measurements including time series and object data. With this feature a new key performance indicator (KPI) can be applied immediately on the entire historical data, residing in the data store.

The output of the automated analytics is fed to a meta-data store, where the results (e.g. detected events) enrich the original metadata of the test drive. This allows a user to interactively query the system. The queries can be expressed very intuitively, and multi-data source queries are a standard feature of the platform.

The user can navigate to the events of interest with a simple click and get a synchronized view showing the videos of the test drive (e.g. front and back camera), the time series captured on the vehicle bus, and the object data from different perspectives (e.g. bird-eye view).

THE ADDED VALUE

- Gain insights from one single source of truth for all ADAS testing data, independent from the source of creation
- Reduce the number of required test drives by finding relevant events in your existing data set
- Keep your benchmarks up-to-date by applying newly defined KPIs on your entire historical data set
- Improve your productivity by reducing the search time for the relevant data

SOLUTION OVERVIEW

Visualizations and Reporting

Web-based self-service tools for data visualization and reporting

Analyze and Drill Down

Deep dive with synchronous views of time series, object data, and videos harmonized with GPS visualizations

Search and Explore

Metadata, time series, events, KPIs, and aggregated data can be interactively queried with near real time response times

Data Ingest

Time series and object data are converted to analytics format and provided for visualization

Metadata is provided for search

Data Analytics

Large sets of time series and object data are processed in parallel on state-of-the-art platforms (Hadoop/Spark)

An abstraction layer eases analytics development

PLATFORM CAPABILITIES

- Cloud native platform components: scalability and resilience
- On-premises or cloud
- Intelligent features for all data types
- Integration and utilization of scalable analytics platforms
- Message-oriented middleware: near real time integration of diverse sources
- Observability: overview of activity in the platform with utilization and error tracking
- Security across the platform: from identity broker to attribute-based authorization

FIND OUT MORE

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