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Transforming Insurance Services with 170 Billion Miles of Data from Connected Cars

"We are utilizing the power of IoT and data analytics to transform the insurance industry and improve the customer safety and experience."

— Gianfranco Giannella, COO, Octo Telematics

Octo Telematics is the leading global provider of telematics and data analytics solutions for the auto insurance industry.

Challenge

By collecting and analyzing data from connected cars, Octo Telematics gives insurers insights to more effectively assess driver risk, deliver crash and claim services, and manage customer relationships. "We utilize every type of data—contextual data, driving data, behavioral data, and crash data—to forecast driving habits, improve crash notifications and response, evaluate crash dynamics, and detect fraud," said Gianfranco Giannella, COO, Octo Telematics.

As Octo Telematics grew, executives sought to replace a custom-made data platform with a more next generation, flexible data management platform. "We wanted to rapidly expand the footprint of our services," said Giannella. "We needed a platform that would support a growing volume of telematics and IoT data and enable us to prototype services and products much faster."

Solution

Octo Telematics today powers its **telematics Internet of Things (IoT) solution** with **Cloudera Enterprise**. The platform stores, processes, and analyzes data on more than 170 billion miles of driving and approximately 400,000 severe crashes from five million connected cars. In all, Octo adds over 11 billion new data points from connected cars daily to the platform. Internal and external data sources, such as traffic and weather data, are also incorporated to provide additional context.

Using **machine learning**, the company can make more accurate predictions and risk models. "The same behavior, such as a certain acceleration pattern can be normal in certain weather or traffic conditions, but not in others," said Giannella. "The granularity and self-learning capabilities of our algorithms provides context to improve risk forecasting and crash reconstruction."

Additionally, modelers can quickly test new ideas, try different modeling techniques, and refine models on the fly to produce the best results—using data volumes never before possible. "We can experiment and introduce new products to market at a faster pace," said Giannella. "Our target is to reduce our innovation cycle time by 50 percent."

Implementation

Octo Telematics runs its applications on Cloudera both in the **cloud** and on-premise. "We are in the business of providing Platform-as-a-Service solutions to our customers, and cloud is an essential piece of this," said Giannella. "However, sometimes for technology or regulatory reasons, we also need on-premise services."

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Key Highlights

Industry
- Insurance

Location
- Headquarters: London, United Kingdom

Business Applications Supported
- Usage-based Insurance
- Stolen Vehicle Tracking
- Claims Analysis
- Crash Analytics

Impact
- Delivers industry leading driver scoring models, pricing algorithms, crash alerts and claims reconstruction to improve insurer services and reduce costs
- Decreases claims management process from weeks to one hour
- Supports goal to reduce innovation cycle times by 50 percent
- Doubled business volumes

Data Sources
- Connected cars

Solution
- Modern Data Platform: Cloudera Enterprise
- Workloads: Analytic Database, Data Science & Engineering, Operational Database
- Components: Apache HBase, Apache Impala (incubating)

Big Data Scale
- 11 billion data points analyzed daily from five million connected cars

Results

The insights gained help insurers deliver a completely different customer experience. "We are utilizing the power of IoT and data analytics to transform the insurance industry and improve the customer safety and experience," said Giannella. "For example, in the case of an accident, because the technology understands the type and severity of the impact, if the policyholder can't pick up the phone, the insurer can contact authorities to get help. Additionally, the technology can help reduce the time to manage the entire claim process from weeks to one hour. This includes analyzing liability, assessing damages, and steering the car to a repair shop."

For Octo Telematics, these capabilities translate into greater business success. "Since we've gone with Cloudera, we have doubled the volume of our business," said Giannella.

About Cloudera

Cloudera delivers the modern platform for machine learning and advanced analytics built on the latest open source technologies. The world's leading organizations trust Cloudera to help solve their most challenging business problems by efficiently capturing, storing, processing and analyzing vast amounts of data. Learn more at cloudera.com.

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