SQREAM

GLOBAL FINANCIAL INSTITUTION UNLOCKS NEW INSIGHTS

SQREAM DB ENABLES PREVIOUSLY UNOBTAINABLE INSIGHTS ON LARGER AMOUNTS OF DATA FOR FRAUD DETECTION APPLIED AI TEAMS

COMPANY OVERVIEW

A multinational credit card and payment services provider serves over 10,000 transactions every minute. Since the introduction of its first credit card in the '60s, the company has been a trusted, innovative, and market-leading service provider to tens of millions of customers and retailers around the world.

THE CHALLENGE

In the financial services industry, the trust of customers is paramount. To protect their customers and retailers against fraud, the company's Data Science team needs to conduct long-term historical exploration and analytics on tremendous amounts of data.

The Data Science team was experiencing several challenges in the data preparation and feature generation stage of their AI pipeline on the shared Hadoop infrastructure they were using. Long-running queries were frequently interrupted or de-prioritized by other system users, and some complicated window function queries could not run at all.

A solution was required that would alleviate these challenges, while supporting the company's focus on maintaining their customers' trust with advanced AI fraud detection techniques.
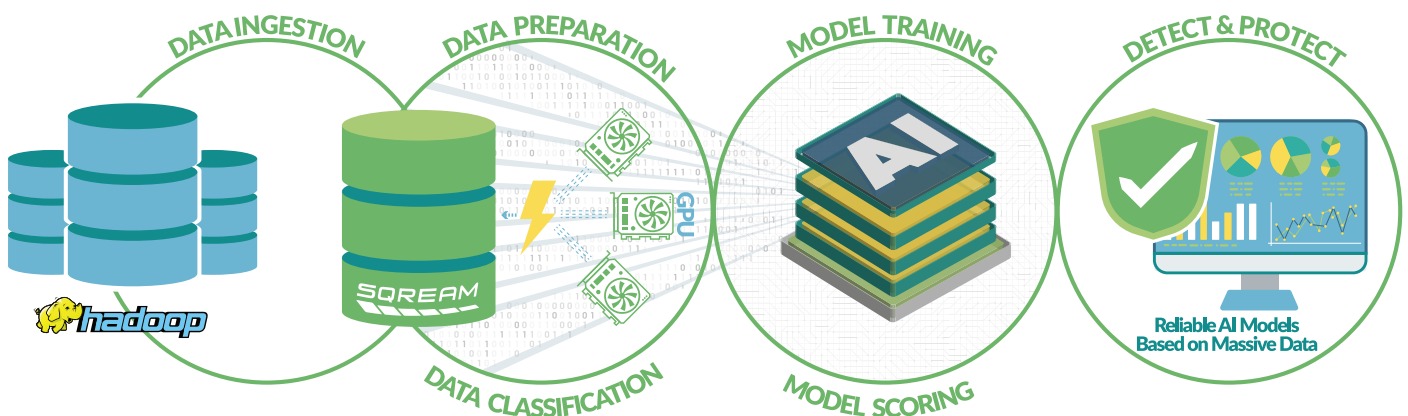
THE SOLUTION

After testing several solutions, the Data Science team integrated SQream DB into their Spark and Hadoop-based architecture to power accelerated mass-data analytics. The new architecture offloads important data to a SQream DB server, enabling the Data Science team to run advanced ad-hoc queries, prepare data, and generate a large number of features to feed the AI pipeline in a fraction of the time and resources.

- Complicated window function queries scanning hundreds of thousands of merchants, tens of millions of customers and billions of transactions were completed in less than an hour, where the previous system would take several hours.
- The team was able to run complex queries that were previously impossible using the Hadoop cluster.

- Having a dedicated system increased the Data Science team's productivity and freedom.
- SQream DB operated on a much smaller HW footprint - a Dell Server with 4 NVIDIA Tesla V100 16GB GPUs, coupled with a high-performance Excelero NVMe storage appliance, and generated better performance for advanced queries, 20x faster load performance, and 30% reduced disk use compared to the Spark and Hadoop-based solution.

With SQream DB in place, the Data Science team is now able to focus more on analytics and less on resources struggles, allowing them to better serve internal stakeholders with new insights. The team has broadened the timeframe of historical queries about credit card transactions from months to years, resulting in more accurate models for fraud prediction, protecting customers and retailers around the world.

DATA INGESTION   DATA PREPARATION   MODEL TRAINING   DETECT & PROTECT

hadoop   SQREAM   GPU   AI   Reliable AI Models Based on Massive Data

DATA CLASSIFICATION   MODEL SCORING

CUSTOMER'S RESPONSE

"We are always looking for new and better ways to analyze our huge data stores. SQream DB allows our Data Science team to generate the insights we need with a lean and performant addition to our existing Hadoop system."

SQream Technologies develops and markets SQream DB, a data analytics engine enabling unparalleled business intelligence from massive data stores. Global enterprises use SQream DB to analyze more data than ever before, while achieving improved performance, reduced footprint, significant cost savings and the ability to scale the amount of data they analyze to hundreds of terabytes and more.

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