Customer Case Study

Sellpoints

databricks™

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Summary

- Sellpoints is a leading provider of e-commerce sales solutions that needed a robust big data pipeline and machine learning capabilities to productize a game-changing offering called "premarketing."

- Infrastructure complexities and the lack of machine learning capabilities prevented the Sellpoints team from putting "premarketing" into production, stalling scalable productization for six months.

- Databricks enabled Sellpoints to productize premarketing in six weeks.

Benefits Summary

- Sellpoints productized the premarketing offering, improving the ad spend ROI by threefold compared to competitive offerings.

- Reduced the time and effort required to deliver actionable insights to the business team while lowering costs.

- Improved productivity of the engineering and data science team by eliminating the time spent on DevOps and maintaining open source software.

Background

Sellpoints is a leading provider of e-commerce sales solutions, dedicated to increasing online sales for brands and retailers. Its platform serves up relevant and engaging content to shoppers at the point-of-sale on a retail website for brands, driving them to make more purchases.

The Sellpoints platform utilizes predictive analytics to measure how consumers are engaging with a product online and what they have purchased. This intelligence is then applied to identify qualified shoppers, run targeted advertising campaigns, and drive prospective shoppers to make a purchase. The use of predictive analytics is a game-changing differentiator in Sellpoints' offering because it provides measurably higher ROI on ad spend for Sellpoints' customers.

Challenge

The Sellpoints offering generates data at an incredible rate of over one billion events per day. To productize a critical new product offering utilizing next-generation predictive analytics called "premarketing," Sellpoints needed to build a big data pipeline to aggregate all of its data, analyze performance on the fly, and build accurate machine learning models. However, the inherent complexities of building fast and reliable big data pipelines for machine learning prevented Sellpoints from turning the premarketing concept into reality.

The Sellpoints team initially tried to deploy Apache® Spark™ over Apache Hadoop™ to tackle the immensity of the data. However, these earlier attempts ultimately failed because of critical flaws with legacy platforms - lacking in native support for Spark, too difficult to operationalize, or not meeting performance requirements. More importantly, the companies behind these solutions also did not have the Spark technical expertise to support Sellpoints when issues emerged.

Infrastructure is only one facet of the many challenges Sellpoints had to solve. The Sellpoints data science team also needed ways to harness the aggregated data to develop accurate machine learning models. Typical big data infrastructure solutions do not offer any features to help data scientists with the difficult process of training,

testing, and refining models at scale, leaving them to struggle with primitive toolsets and reducing their productivity.

Earlier attempts to implement the big data pipeline also failed to deliver higher productivity for the business team at Sellpoints. The business team had to rely on expensive and overly complex BI tools to interpret the output from their data pipeline. This meant that Sellpoints had to invest in additional software, and the data science team had to devote time to building dashboards for business users on top of their day-to-day responsibilities.

Solution

Sellpoints implemented Databricks to build its entire data ingest pipeline with Apache Spark in a matter of six weeks. The Databricks cluster manager enables Sellpoints to easily launch, scale, and maintain Spark clusters in its Virtual Private Network (VPN) in Amazon Web Services (AWS) without any DevOps. Databricks also natively supports data ingest from AWS S3, allowing Sellpoints' engineering team to build a robust data pipeline to ingest all of its data effortlessly.

Databricks enables data scientists at Sellpoints to build accurate predictive models using Spark MLlib clustering and pattern matching libraries. Databricks' simple cluster management interface enables machine learning specialists without any big data DevOps expertise to launch and scale Spark clusters for feature extraction in a self-service manner. The integrated workspace also provides visualization tools that enables users to quickly fine-tune models, making the development process much faster.

The data science team at Sellpoints also used the Databricks notebooks as a quick, easy, and cost-effective way to present data to business users without technical expertise. Instead of exporting data to a BI tool and spend the time to build a presentation, data scientists can simply turn the notebooks they've used to perform the analysis into a dashboard with a few clicks.

"Databricks radically streamlined data-driven decision making at Sellpoints with the Databricks Dashboards functionality. This feature enables us to go from data to insights using a single simple-to-use platform instead of relying on multiple handoffs between complex"

– Benny Blum
 VP of Product & Data, Sellpoints

Benefits

With Databricks, Sellpoints gained powerful big data ETL and machine learning capabilities to complete the implementation of the critical premarketing offering. Launching premarketing is critical to Sellpoints' success; the sophisticated machine learning models productized with Databricks enabled Sellpoints to boost ad spend ROI from 3:1 to 10:1 for its customers.

Because of the maintenance-free and easy-to-use attributes of Databricks, engineers and data scientists at Sellpoints no longer have to spend any time in building, patching, and supporting open source big data infrastructure. This has freed up a significant amount of their time from DevOps, boosting their productivity and enabling them to focus on their core work.

Last, the built-in dashboarding capability of the Databricks platform has lowered barriers to access data for the entire Sellpoints business team. Instead of spending tens of thousands of dollars on complex BI software, Sellpoints can simply rely on the dashboards created directly from Databricks notebooks. The ability to deliver insights from raw data in a single platform has improved the agility of the entire Sellpoints business while reducing costs.

"Productizing new predictive analytics features in our product using big data was not feasible until Databricks came along and provided us with the ability to build a fast and reliable data pipeline without the typical technology and operational roadblocks."

– Benny Blum
VP of Product & Data, Sellpoints

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