scribble Data

CASE STUDY

Accelerated ML Engineering for an E-commerce company

Scribble Data - E-commerce Case Study

This e-commerce customer is one of India's largest players in the apparel space, focused on both international and local merchandise in children's fashion.

As a growing business, they have several opportunities to make data model-driven decisions, to meet a number of business objectives, including lowering cost of customer acquisition and increasing their lifetime value.

They worked with Scribble Data to build their data intelligence platform (DIP), that would enable the nimble development and deployment of multiple such data apps, all of which were closely tied to their bottomline.

Scribble Data used the Enrich platform as the foundation for the customer's Data Intelligence Platform, on which multiple datasets were continuously computed, and surfaced to data consumers (marketing, pricing, supply chain teams, among others) as well as to train and feed ML models. Two of these models are discussed below:

PLP Sort:

The Product Listing Page, or PLP, is fundamental to the customer's business - it determines the assortment of products that customers get to see. Show your worst products, and lose the sale. Show only your best ones, and run the risk of them cannibalizing the rest of the product catalog. The challenge was not in the finding of a balance between the two ends of the spectrum, but rather, building an underlying set of computations that would provide the customer with 'levers' that they could then play with, as their business objectives evolved.

Scribble's Enrich platform is used to compute various second and third order features (derived variables) that accounted for user behavior (clickstream), product catalog, and inventory levels, to give the customer a path to deploying multiple PLP paths as the business objectives evolved. The PLP sorting was structured based on the customer's search history, ordering and reordering pattern, with the help of selected features of the Scribble Enrich platform, and drove the display of the optimal selection of products to end-users of this e-commerce customer.

Reordering:

The business orders items into their warehouse from a number of suppliers. Because this is money coming out of their bottomline, it's important that they make the absolute best bets that data will let them on what new items to order, the quantity, as well as what to stop reordering. As ordering is driven by the purchase process and by experience, and reordering is based on sales velocity, the customer needed an ML model to optimize re-ordering by factoring in a number of constraints, such as vendor contracts, discounts offered on bulk indenting, delivery times, stockouts, time-to-replenishment, among several others.

A continuously computed persona of each customer, across 100s of attributes was developed. Similarly, a number of attributes were developed for each product in the catalog. These were then fine-tuned to assemble a nimble collection of features used for both preliminary problem framing as well as training the model. These features needed to evolve quickly as the data scientists as well as the ordering team evolved newer ideas to improve the solution solution.

Result:

These were just **two out of 35 different use cases** that the customer used Enrich to solve. The customer saw a **full return on their investment in Enrich within just three months from a single use case** on pricing their various SKUs optimally.

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