



Dynamic Pricing with Predictive Analytics

Smart Generation of Optimal Prices for Offline and Online Businesses

For any company selling products or services, whether online or in brick-and-mortar stores, setting the optimal price is everything. And it's a fine balance to find the equilibrium between what customers are willing to pay and what the business's profit margins can withstand. The big players have continually proved price optimization as a strategy critical to their success - Walmart reportedly changes its pricing more than 50,000 times per month, and they have the growth rate to show for it.

Dynamic pricing, a highly flexible approach to setting the cost for a product or service, is one way to find this optimal balance. But so far, dynamic pricing has only been used widely by major players in e-commerce and has unfortunately not spread far beyond that market. See how one company broke away from the norm of dynamic pricing and was able to bring this revolutionary predictive analytics technique to any business, whether offline or online.



Harnessing Data to Serve More Relevant Ads

Challenge

Long, Arduous Data Prep Caused Stale Pricing Recommendations

Pricemoov is a service that delivers optimal pricing suggestions and solutions to its customers by weighing the intrinsic value of the item, its seasonality, and the attributes of the customer himself through detailed segmentation. To do so, Pricemoov collects datasets from its customers that are updated daily through partitioning.

Pricemoov's challenge was that data originating from old SI systems, Oracle, or MySQL was dirty and required a full-time developer to perform long ETL steps in PHP for cleaning. Once cleaned, the datasets were painfully entered into a model, as they were custom-built pipelines. And once finished, the replication and deployment process for the next customer was taking weeks.

with this process and leaving tenured data scientists to focus on modeling rather than data prep and plumbing.

- Non-technical teams (like marketing) can build their skills and scale their efforts thanks to an intuitive, visual point-and-click interface. Longer term, the goal is to have them efficiently and independently leveraging website clickstreams and HDFS datasets.
- Better define a specific price per customer that evolves over time by melding data indicating demand with customers' willingness to pay.
- Deliver specific insight for local branches by quickly applying geo clustering.
- Quickly submit pricing options to local branches of brick-and-mortar stores, who can then choose to accept the options or not and can seamlessly share feedback to improve the model.

Results

Delivery of 10x More Models

After implementing Dataiku to scale their pricing optimization system and its surrounding processes, Pricemoov saw:

- A two week improvement in the speed at which they could produce pricing and forecast models.
- The creation of 10 times more scenarios.
- An improvement in staff performance and development, allowing new hires to prototype code in Jupyter notebooks and sales teams better sell the product.

“Dataiku has been pivotal in accelerating our growth by allowing us to scale our operations. With the success of this initial project, we’re looking forward to enhancing the work we’ve already done by going real time with API requests. This will further expand our customers’ opportunities when it comes to robust pricing options.”

About Our Customer

PriceMoov is a Plug and Play Yield Management solution. Founded in 2016, Pricemoov has been experiencing strong growth. Some of its users are car rentals services, but also airline companies and event organizers.

Industry

Software

Market

EMEA

Use Case

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Solution

Scaling Through Reproducible and Replicable Workflows

Pricemoov discovered Dataiku Data Science Studio (DSS), which has transformed their business by not only allowing them to run proof-of-concepts for potential customers on short notice thanks to significantly faster data cleaning processes and the ability to quickly replicate existing work, but also ultimately by enabling them to provide better pricing options overall.

The data department at Pricemoov now uses Dataiku to:

- Replicate existing workflows to get proof-of-concepts for potential customers up and running quickly.
- Significantly speed up data cleaning and exporting, leveraging the Dataiku's visual point-and-click interface to enable less experienced staff to assist



Project Overview

Technology



GMM - DBSCAN
Time Series Forecasting
Random Forest

Project Deployment



2 Months

Team



1 Data Scientist
1 Data Analyst



Pricemoov & Dataiku: Dynamic Pricing with Predictive Analytics

- > Machine learning enables the team to scale the pricing optimization system quickly.
- > Sales team better able to sell product with more granular pricing estimates over time.

GET STARTED