



Reimagine the future of Retail.

With the exponential growth of data, there's a huge underlying potential to apply AI techniques and tools to transform data into actionable insights.

There's probably more in your data than what meets the eye.

Our Solutions for Retail.

Data Science can be applied in Retail in order to help companies achieve sales objectives while at the same time reduce costs. From the ability to increase demand forecasting accuracy to sales tracking and inventory management, it is possible to leverage on internal and external data for better performing models.

+500M€
of markets adressed

Our team is carefully curated to be able to assist in your data problems.

There's probably more in your
data than what **meets the eye.**

CASE STUDY #01

Beverages Forecast Model

The Problem

There's a huge need for forecasts on different areas across retail companies. Most forecasts today only encompass past sales and there are a multitude of factors that have an impact on the demand for your products.

Additionally, retailers normally have a ton of different SKUs that need an accurate forecast to (1) prevent product spoiling or (2) ill timed distribution. How can an accurate forecast be achieved if each product also has its own demand characteristics?

Actually, it's possible to extract patterns from complex sales patterns and add other factors (e.g., holidays, marketing effects, weather data) that help explain a product's demand through machine learning algorithms. One of our projects revolved around solving a problem for a beverage company that wanted to improve their as-is forecasting process, which was produced by several members of the sales and logistics team.



Used Snowflake and Azure blob Storage as data infrastructure.

The Project

What

Forecasting Model for several SKUs across different regions in Europe.

Why

Improve accuracy of current forecasting process (between 67% and 77%).

How

Forecasting Model using Prophet (Open Source Library) taking into account past sales, important holidays, weather and important sports games.

Achieved Results

With this model, we've achieved an increase of around 15 p.p. (on average) of current forecasting processes for our customer. This helped to implement JIT (just-in-time) processes and achieve better efficiency for the organization, overall. Currently, the company uses the forecasting systems to plan the months ahead with less uncertainty.

89%

accuracy of forecasting for different SKUs (beverages) and regions.

Pricing and Promotion Mix Recommendation

The Problem

Most retail companies set prices and promotions based on historical data and/or reactive strategies (e.g., reacting to competition campaigns). These types of strategies lead to the question of how retailers can add intelligence to their pricing strategy and make sure that they meet the needs of their customers?

To answer this question as to Recommendation of Pricing and Promotion Mixes, we've built several machine learning models to predict how prices influence the future sellout of your SKUs and how you can ensure that you pick the right

price point and promotion mix to guarantee an excellent market share position and keep a good profitability.

Using past data from sales and prices, we are able to capture trends that will be important to estimate how the future sellout will move with different prices. Also, these models will give a good price elasticity framework that allows you to understand how and when you demand moves with pricing.



10 Models over 10 different SKUs.

The Project

What

Pricing Machine Learning Models to build the best price and promotion mix per SKU.

Why

Improve current adhoc price setting.

How

Tree-Based Models with Simulated Price taking into account past sales, other product prices and competitors data.

Achieved Results

With this framework, we've achieved an increase of 2% in profitability while keeping market share. This was crucial to keep profitability metrics aligned with the target while ensuring that the product is still selling to target markets. Currently, the company uses the framework to plan the prices for each month in retailers.

70% Accuracy in Model
using price prediction.

Brand Affinity and Penetration

The Problem

Retailers are faced with numerous challenges when launching new brands or SKUs. Multiple factors can explain the success or failure of a product's sales through time. With limited resources, how can retailers use data to target their marketing and sales efforts on their product launches to ensure which markets it should fit?

To solve this problem, at DareData, we have built models that help to understand which POS or Regions are relevant for a specific product based on real demand. Our model clusters similar stores and understands how those clusters react to different products with different characteristics.

The Project

What

Nearest Neighbor Model that ranks stores according to their likelihood of demand for a product.

Why

Understand which stores or regions retailers should target to push for a new product.

How

Clustering and Classifying Customers according to their SKU affinity using a Nearest Neighbor algorithm.

Achieved Results

By using the characteristics of stores, demographic and past sales data, we are able to understand which stores are more likely to have a demand for new products. The good thing is that the same algorithm can also be used for specific products that are more niche - such as premium or white-label products.

+10% Sales Uplift

CASE STUDY #04

Shelf Space Optimization

The Problem

Certain brands and SKUs are hungry for shelf space, while others are so ingrained in consumers' minds that they are not dependent on their visibility.

Nevertheless, most retailers use simple rules to allocate current shelf space to their products, instead of relying on AI. Typically retailers give more shelf space to products that sell more, not stepping out of the comfort zone and not achieving optimal profitability and sales.

We've built several models that let you simulate different sales and profitability scenarios given different shelf configurations. These models are adapted to each store, because each store has its own set of characteristics and typical demand.

The Project

What

Predictive Model that uses shelf space as input and predicts volume sold with a given configuration.

Why

Calibrate shelf space to achieve maximum sales and profitability.

How

Deep Learning Model using past sales data, product and store characteristics that predicts the volume sold for any number of possible "shelf configurations".

Achieved Results

Our customers were able to achieve category growth of roughly 3% when designing a different shelf configuration recommended by our models. Our models not only take into account past sales but also understand why certain products work best in certain stores.

Using these machine learning models you will be able to achieve optimum profitability for your store and fit your shelf to your consumers' needs.



About DareData & How We Can Help

About DareData


DareData Engineering is an expert Data & AI technology consulting company. We have contributed to high value-added initiatives across diverse industries and sectors from design and concept stages to large-scale implementation and operation using the latest cloud and open-source technologies. We value talent, agility, and the ability to execute as part of what makes us different.

We are an asset in the upcoming challenges involving the digital transformation of organizations.

Get in touch to talk about your organization's plans for the technological future:

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