



GlassesUSATM
.com

**GlassesUSA.com deploys a
deep learning algorithm to
adapt its recommendations
to each shopper**



Leading eyewear retailer experiments with self-training recommendation model and achieves an 87% increase in revenue

Summary

Ten years ago, the founders of GlassesUSA.com set out to provide high-quality prescription eyewear at a more reasonable price point than others in the market. A decade later, the company cut out the middleman within the manufacturing process and is now the world's largest online eyewear retailer, offering a variety of prescription glasses, sunglasses, contact lenses, and more to consumers in over 92 countries. Today, with a customer-centric philosophy at the heart of how it operates, GlassesUSA.com personalizes to perfection, using data to inform how the brand serves a diverse base of customers with different tastes, preferences, and optical needs. But after years of optimizing its digital experiences, the eCommerce team was ready to move beyond recommending additional products of interest to those predicted to drive engagement. And after running a test against its traditional machine learning-based recommendations on the homepage, discovered Dynamic Yield's sophisticated deep learning algorithm was able to yield a 68% uplift in purchases and an 87% increase in revenue, all from a single widget.

Results

87%

increase in revenue and 68% increase in purchases after deploying a deep learning strategy in a single homepage recommendation widget against a traditional collaborative filtering strategy

45%

increase in add-to-cart rate from using the deep learning algorithm to drive shoppers further down the funnel, which immediately matches them with the products they are looking for

“With Dynamic Yield, we no longer have to manually choose a recommendation strategy for our homepage recommendations. Its deep learning algorithm automatically determines the right subset of parameters for each user based on their behavior, where they are in the customer journey, as well as trends seen across the site, making it superior to any other strategy available – not only in terms of output, but also time saved.”

Nadav Yekutieli, Head of Data at GlassesUSA.com

Challenge

Home to private label brands as well as over 60 designer names, GlassesUSA.com understands the difficulty of finding the perfect pair of eyewear among thousands of styles available in its catalog. Prioritizing ease of discovery, recommendations are a major component of its eCommerce site, running across various pages to better facilitate the buying process, including the homepage, which represents the initial point of entry for most online shoppers. Looking to maximize the performance of its product recommendations there, the team required a solution that could:

- Self-train quickly to recommend the most accurate items based on its extensive product catalog as well as trends seen across the site
- Take into consideration not just historical behavior, but also activity within the session to showcase items shoppers are most likely to engage with or buy
- Continue to learn with each bit of new data ingested into the model to ensure recommendation results are continuously optimized over time

That's when the team began running deep learning recommendations with Dynamic Yield.

Execution

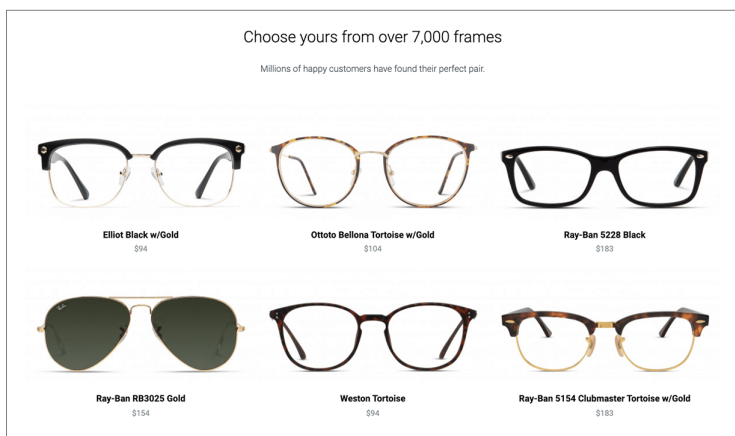
Dynamically recommended products predicted to drive action per individual with an advanced deep learning algorithm

Representing the very top of the funnel in the customer journey, GlassesUSA.com decided to revisit an area just below the fold where it had historically displayed a recommendation widget showcasing up to six different products. Hoping to extract as much value out of this front-and-center placement, the eCommerce team hypothesized that if it could provide recommendations more heavily tailored to the individual upon entry to this page, it could not only improve add-to-cart rates, but increase purchases and revenue overall. After all, a classic collaborative filtering strategy that showcases items of interest based on what other similar users have interacted with can be highly effective, but the recommendations are not truly personalized.

After hearing about how Dynamic Yield's deep learning recommendations could not only mine the past behavior of users but also their in-session activity, GlassesUSA.com set up an experiment to test the strategy against collaborative filtering in its homepage widget for all desktop traffic.

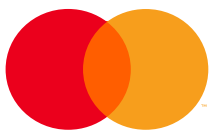
Automatically configured per site, product feed, and individual, the team made but a few minor tweaks to the strategy before quickly seeing impressive results, most notably a 45% increase in add-to-cart rate, a 68.1% increase in purchases, and an 87.6% uplift in revenue attributed to the deep learning-based recommendations. And after running a similar test on mobile, the advanced algorithm proved yet again to be the strongest performer when compared to the control, with the team at GlassesUSA.com making deep learning the sole strategy for its popular homepage widget on this channel.

Homepage recommendation widget displaying six, personalized product suggestions using the deep learning algorithm



Key Takeaway

On its mission to match customers with the best possible eyewear at affordable prices, GlassesUSA.com recognized it had to move beyond serving similar or complementary items to those that are truly personalized to the user. The company's willingness to push the boundaries of customer experience delivery led them to experiment with Dynamic Yield's deep learning recommendation technology to better anticipate customer needs and automatically predict the products each individual is most likely to engage with, even at the very top of the funnel. The results of its initial homepage tests, both on desktop and mobile, have already proven a significant impact on the team's ability to drive meaningful action, with the advanced algorithm generating a 68% uplift in purchases and 87% increase in revenue.



dynamic yield

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