Next Best Purchase Recommendations Technical Overview

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Next Best Purchase recommendations showcase of Bluecore's retail focus combined with the unique nature of the data we collect can achieve. They aim to solve the ultimate retail-marketing question "how does one drive the next purchase?", more specifically what products should be shown to a customer to achieve that goal.

To properly answer that question we leverage the following data that are native to our system:
- A real-time understanding of the product catalog
- Customer site behavior and the state of the products at the time of interaction
- What content and recommendations were shown in emails/ads and whether these marketing messages generated engagement/revenue

We are continually evolving the underlying models driving these recommendations based on our continual testing, leading us to explore several areas of Machine Learning including matrix factorization based recommender systems, graph based algorithms, reinforcement learning, and deep learning.

The models we build leverage the collective historical customer behavior to understand how customers and products relate to one-another and how site behavior correlates with the products ultimately purchased to make a decision on what products to recommend and, most importantly, leverage the feedback of what was shown and whether customers engaged with the email to continuously refine these recommendations. This ensures that we are continuously exploring better models that drive more engagement and that those live continuously improve by learning from the engagement feedback.