Executive Summary

Art Peck and Moving Gap to The Big Data Model

In 2017, Gap struggled to maintain its position in the fashion market. To address this, CEO Art Peck shifted from relying on a single Creative Director to utilizing Big Data to guide decisions across multiple teams. His goal was to leverage data-driven insights to predict consumer behavior and tailor marketing strategies, a move he called "Product 3.0." By focusing on data-driven decisions, Peck aimed to help Gap regain its standing and compete with fast fashion brands like Zara and H&M. We have utilized various Big Data techniques to help align Gap and its brands to make data-driven decisions.

Predicting Customer Behavior and Fashion Through Google Trends

Google Trends is a platform that allows us to see what users are searching for across various time periods. For predicting what items customers are looking for, we can pull clothing item searches to see what items are being most represented. From there, you could either see what items have been trending recently, or throughout the whole year. To go further, searches could be localized to brand specific clothing (Gap jeans, Banana Republic shirts, Old Navy sweaters, etc.), along with overall searches of the brand names themselves (including if competitors are trending with these searches). Summarizing all these into line graphs for over-time visualization along with heat maps to show how related certain searches are correlated to each other would allow Gap, Old Navy, and Banana Republic to decide which products their development team should focus on for future launches.

Scraping Reviews/Ratings to Understand Demand and Public Opinion

By using web scraping techniques to collect reviews and ratings from third-party sites, Gap can access real-time consumer feedback and understand product performance across brands. We focused on Amazon, finding the most purchased item was the Boy's Logo Hoodie Sweatshirt, while the least liked was the Women's Heritage Bootcut Jogger. Such insights help Gap determine which products succeed and which need improvement. Additionally, tracking reviews from third-party distributors like Amazon or Walmart helps assess their effectiveness, addressing a key concern from the case. Visualizations also revealed poorly performing competitor products, highlighting potential opportunities for Gap.

Using Regression for Marketing/Promotion

In addition to demand, we can utilize the scraped data to build regression models to map out the impact of pricing and ratings on demand, and how pricing affects ratings. The first analysis, our regression model tells us that neither pricing nor ratings are significant enough to affect demand (number of reviews). However, when we look at how pricing affects ratings, we do see that lowering pricing does raise our ratings, thus making pricing important to customer satisfaction. Gap can use this to set up an A/B test for promotions to see what type of pricing marketing would work best for ratings, along with adding more factors to the first regression to help push demand.

Sentiment Analysis from NYT Articles

While promotion management is an important part of marketing, understanding what users feel about each brand is important for brand image/storytelling. Gap can utilize sentiment analysis from NYT APIs and Azure Text Analysis APIs to see sentiment scores of recent conversations

about Gap and its other brands. We ran analysis on each of the 3 main brands and found that while most articles seemed to be scored negatively over positively in final sentiment, competitors like Zara are ratioed more negatively than positively (78% vs 75% for Old Navy). Comparing ratios to competitors can see how consumer sentiment aligns with the current brands, while noting the total number of recent articles can denote how prevalent the company is in the news, can help the marketing team decide how best to realign the branding accordingly.

Bridging the Human Emotion Gap for Marketing

Big Data offers valuable tools for all three brands, from budget-friendly Old Navy to upscale Banana Republic. However, some elements still require a creative touch. Just as sentiment analysis may struggle to interpret human emotions, data alone cannot replace brand storytelling or the artistry of an ad campaign. While Peck can rely heavily on data, creative minds are needed to bridge the gap between data insights and human emotion. Each brand requires an artistic approach to ensure that data-driven strategies are effectively combined with captivating campaigns. Together, this combination positions Gap for a stronger return to mainstream success.