

Case Study: Voice of Customer

Applied Topics: QTM: Data Analytics

Background

You have been contracted Hasbro, a multinational conglomerate specializing in toys, board games, and media. Hasbro's eCommerce division does a significant amount of business on *Amazon.com*. Over the past two quarters, executives have become increasingly nervous about the quality of the products competing with Hasbro products in the toys and games category on Amazon. Anecdotal reports from family members and friends of the executives have been trickling in, many of which have alleged:

- The toys and games category is so diluted with products that are nearly indistinguishable from Hasbro products that it's hard to know what is what, and even harder to find the right merchandise when seeking it.
- Many of the products in the category are of such a poor quality that they pose health threats to their children.
- Some Amazon products claim to be Hasbro products online, but when they are received they are clearly counterfeit.

This could be a huge problem for Hasbro, because it hurts their brand image, resulting in multifaceted compliance and marketing issues. However, the executives are potentially frazzled by the mere fact that these stories are coming from their families and friends—the sentiment may not be based in reality.

At the same time, the executive leadership team is looking for new product opportunities in the category. They believe that by employing advanced analytics techniques, they can get ahead of the market by learning what products are becoming more popular over time, or by discerning what products please customers the most. It may even be possible, they believe, to discover product lines they should divest from by listening to the "voice of the customer" for issues in the supply chain and product positioning.

The VP of Product has asked you, to develop an application to make some headway on these problems. Your charge is to conduct an analysis that helps them tackle some of these issues; the VP of Product is not very sophisticated and, given how busy she is, she wasn't very clear on what you should prioritize. It is up to you to use your time wisely and focus your analysis on the most compelling business opportunities. If you knock it out of the park, your team could win a multi-year contract!

The deliverable the client expects is a deck that summarizes the results in the form of a case. The deck should include:

- Introduction / Executive Summary (3min)
- Business Question and Hypotheses (3min)
- Data and Method (2min)
- Findings (3min)
- Discussion (5min)
- Recommendation (3min)
- References and Appendices, if any (not presented)

Data

One of your data engineers, Jeff, was able to scrape Amazon.com's toys and games category for reviews. The file is titled "toys_and_games.json.zip," and is included as part of the files in this case. Since the file came formatted as JSON, it's not clear what the structured variables are, but Jeff was sure to note that "it should be self-explanatory."