# 4.2 Exercises – Can Data Help Retail?

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Abstract

Data Science can help gain more insight want customers want to buy. retailers can turn insights from big data into profitable margins by developing insight-driven plans, investing in big data talent, and investing in existing employees. Over the past five years companies have invested billions to get the most-talented data scientists to set up shop, amass zettabytes of material, and run it through their deduction machines to find signals in the unfathomable volume of noise. It’s working—to a point. Data has begun to change our relationship to fields as varied as language translation, retail, health care, and basketball (Berinato, 2020).

Data can help the retail industry

Data will help the retail industry now more than ever. Retailers are hungry for a better understanding of the future of retail and consumer products. But there is no simple answer, as the forces affecting the sector and thereby shaping the future are incredibly complicated and affect various sectors, companies, markets, and products differently. To pretend that there is a singular future or answer is data (The future is coming ... but still one day at a time).

The retail industry has been amassing marketing data for decades. As early as 1923, Arthur C. Nielsen, Sr. created a company solely dedicated to marketing research and buying behavior. Now known as ACNielsen, it was one of the first to the frontier of consumer data analytics (Data Science in the Retail Industry).

The Pros and Cons

**Advantages**

The vast majority of companies say that the benefits of big data are substantial. In the NewVantage Partners survey, 73.2 percent of executives said that they had seen measurable business results from their efforts. In addition, "Those executives who responded 'no' believe that it is too early to tell what impact these investments will have on their firm." (Big Data Pros and Cons)

**Pros:**

Better decision-making

Increased productivity

Reduce costs

Improved customer service

Fraud detection

Increased revenue

Increased agility

Greater innovation

Faster speed to market

**Disadvantages**

On the other side of the equation, many companies have also reported significant challenges when implementing big data analytics initiatives. Reported disadvantages of big data include the following (Big Data Pros and Cons):

**Cons:**

Need for talent

Data quality

Need for cultural change

Compliance

Cybersecurity risks

Rapid change

Hardware needs

Costs

Difficulty integrating legacy systems

The Retailer’s Statistic

Retail and e-commerce both generate a surprisingly large amount of data in recent years. But without the proper tools in place, most of this data illustrates what you already know. I want to point out a few common uses of data science in retail (How data science can improve retail). There are quite a few more that we could discuss, but not every company is ready for them. What I mean is that they are trying to skip steps that need to be done before we start completely automating processes. At Appsilon, we help companies at any level of data science maturity take the next step.

Conclusion

There is no doubt that data science, machine learning, and predictive analytics combined with Big Data will become an even more fundamental part of both online and traditional retail in the coming years. All retail organizations will use it, but only the successful ones will have an effective data production plan that yields the most effective insights into their business that gives them an edge over the competition (*How data science can improve retail*).

Reference

The future is coming ... but still one day at a time. (n.d.). Retrieved September 28, 2020, from https://www2.deloitte.com/us/en/insights/industry/retail-distribution/retail-and-consumer-products-predictions.html

(The future is coming ... but still one day at a time)

Berinato, S. (2020, April 02). Data Science and the Art of Persuasion. Retrieved September 28, 2020, from https://hbr.org/2019/01/data-science-and-the-art-of-persuasion

(Berinato, 2020)

How data science can improve retail. (n.d.). Retrieved September 28, 2020, from https://www.kdnuggets.com/2018/02/data-science-improve-retail.html

(How data science can improve retail)

Big Data Pros and Cons. (n.d.). Retrieved September 28, 2020, from https://www.datamation.com/big-data/big-data-pros-and-cons.html

(Big Data Pros and Cons)

Data Science in the Retail Industry. (n.d.). Retrieved September 28, 2020, from https://www.mastersindatascience.org/industry/retail/

(Data Science in the Retail Industry)