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Assignment #1

1.

When considering some of the most effective uses of data science to enhance the performance of a business, I often think of Facebook. Although I consider some of their practices immoral, especially because of the efficiency of their algorithms, it still stands to prove that if data analytics is applied correctly, an organization may benefit tremendously. For example, the success of Facebook and all their revenue is essentially grounded in their advertising services. The developers at Meta have essentially adopted incredibly efficient scripts that are capable of scrapping and compiling the personal information of their users, which in turn provides very accurate predictions of the types of advertisements they may be most willing to engage with. The success of their work is evident in Facebook's recent performance throughout the last decade. They have hurtled themselves into the place of one of the world's most frequented social media website and their effective data analytics practices are one of the reasons why.

<https://www.analyticssteps.com/blogs/how-facebook-uses-big-data-enhance-customer-experience>

<https://www.simplilearn.com/how-facebook-is-using-big-data-article>

2.

The recent Zillow fiasco thoroughly demonstrates that although algorithms and data science may be powerful tools, we should still strive to implement them correctly. Zillow had essentially decided to entrust house-flipping ventures in the hands of automated algorithms, that would theoretically execute and buy up homes whenever a potentially lucrative investment was found. However, Zillow soon found themselves in a difficult position. The house-buying programs regularly malfunctioned in response to black swan events such as Covid-19, and the

business soon found themselves automatically purchasing more properties than capital available to maintain them. As a result of this tragedy, nearly 2,000 employees were laid off and Zillow's stock price plummeted by 18%. Events such as these are important examples we must learn from, because although data science can be incredibly powerful, if its tools are not implemented correctly they can still severely backfire in ways that have serious real world consequences.

<https://www.wsj.com/articles/zillow-offers-real-estate-algorithm-homes-ibuyer-11637159261>

<https://insidebigdata.com/2021/12/13/the-500mm-debacle-at-zillow-offers-what-went-wrong-with-the-ai-models/>