Assignment #1

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**Data-Driven Use Case:**

As the retail industry continues to accelerate its expansion, we should try to find the best use cases of big data in the retail industry. Retailers need to provide favorable conditions internally so that people can make decisions "quickly and accurately". The only way to achieve this goal is to make use of big data, make the best plans and decisions, gain a deeper understanding of customers, and tap hidden trends to show new possibilities.

Take Walmart as an example. Nowadays, customers interact with businesses through multiple ways, such as mobile devices, social media, stores, e-commerce sites. Therefore, deeper data driven is essential. Although the data we need to aggregated and analyzed will be complexity and the type of the data will be increased, we can get lots of information to find the most valuable customers, their motivation to consume more goods and their behavior model. Then we can not only gain more customers, but also increase customer loyalty.

For in the store Walmart, we can analyze the data sources such as the POS system and in-store sensors. We can also collect data from the receipt of customers, to obtain customers' tendency to purchase which products at what time period. In addition, we can do some questionnaire to collect basic personal information of customers to discover their needs, interests, and purchasing desires.

For on-line Walmart, we can analyze the data source of customers’ purchase and browsing history. Based on customers’ browsing history, recommend relevant and suitable products to them, so that they can more easily make purchase decisions or buy directly.

**Hypothetical Relevant Data Sets and Business Units or Groups Might Work With:**

|  |  |
| --- | --- |
| Data sets | Business units or group |
| In store POS system data source | In store cashier management department |
| On-line browsing data | Network maintenance manager group |

(I’m not sure about the business units or group because I’m not that familiar with the organizational structure of the retail industry. I think there should have such department responsible for the related item.)

**Block factors and how to mitigate:**

1. For in store, customers may not provide real ideas during the questionnaire, which may cause errors in the accuracy of the data collected. We can mitigate that by providing anonymously questionnaire.
2. For online sales, it may be impossible to observe the browsing history of all customers, for some privacy reasons or customer didn’t share their browsing by some internet settings. I haven't figured out how to mitigate such issue temporarily.