

Big Data in Practice

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Big Data in Practice, By Bernard Marr, published by John Wiley & Sons Ltd, United Kingdom, 2016.
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Big Data in Practice, by Bernard Marr, argues for a new openness towards data and advocates for an insightful peep into the world of Big Data. It is amazing how lifeless machines can generate insights. It shows how individuals, organization, and a country can step down from the hubris of human power of reasoning, and cleverly leave it to the power of the machine. Openness to data, with powerful tools that look at data from multiple angles can throw surprises. This could lead to individual excellence in sports, business excellence, addressing terrorism, enhancing farm output, predicting natural calamities, achieving social objectives in education, health. These contributions make it worthwhile as showcased with forty five different cases in this book by Bernard Marr. The nature of data we create everyday is introduced to the reader in the initial part of the book.

- By 2020, it is predicted that 1.7 MB of new data will be created every second for every human being on the planet.
- Every single minute we currently upload three hundred hours of video in youtube and share three million videos on Facebook.

This book challenges the myth that Big Data is only associated with big businesses and big expenses. Bernard Marr gives examples of how even small businesses use big data smartly to make a real difference. Marr brings in instances of simple things that we use in everyday life and its contribution in creating data that instantly connects the reader to the book. The author is renowned for his work in Big Data Analytics and has worked for firms like Accenture, SAP, Shell, Toyota, T Mobile, and Tetley.

The latter part of the book details how the forty five companies used Big Data to change their business completely. Of the forty five, five cases have been discussed below on Walmart, Amazon, Pendleton & Son, Facebook and Ralph Lauren.

Walmart is the biggest retailer in brick and mortar with twenty thousand stores in twenty eight countries. In 2004, when hurricane Sandy hit the United States, Walmart found unexpected insights when they studied their sales data. They expected sales would soar for supplies such as flashlights and emergency equipment. Surprisingly statistics showed that strawberry pop tarts (strawberry filling in pastry crust) did extremely well. Pop tarts are from the brand Kellogg's, they are pre-bake toast's that do not need refrigeration and can be eaten without being warmed. When hurricane France's path was discovered in 2012, they sent extra supplies of pop tarts and pop tarts as learnt from Walmart's previous learning did extremely well again. Pop tarts have shown increased sales for thirty two years in a row as of 2014. This product acted as a succor for the hurricane victims. In 2011, Walmart established Walmartlabs, a data café which can analyze data in twenty minutes which would otherwise take couple of weeks. Walmart's objective was to quickly track the trends that emerge from data analysis and utilize those trends for business gains. Finding the right talent to identify patterns and trends from data analysis was not easy. To overcome this they ran

website challenges seeking prospects who could create a model that was a close match to Walmart's model or better, for recruitment as a solution.

From the biggest retailer in the world to the biggest e-retailer in the world, Amazon originally had the idea of being an online book store. Amazon has made a phenomenal move to become the world's biggest e-retailer. This has been built on the "recommendation engine" technology, which predicts what customers want, when they want it and offer choices for the same. The problem is when customers are presented with way too many options can suffer from data rich–insight poor phobia, which consumers go through with infinite options to select and purchase from. Consumers later regret the choice they made because they find a better option after the purchase. Amazon does this very effectively by looking at consumers' information and browsing habits. They fine tune the recommendation engine and offer choices by looking at what people with similar choices would want. Amazon today can boast of a quarter of a billion customers out of 7.5 billion people all over the world. They make a calculated prediction of consumer's income level by looking at the demographic data and looking at their reviews and feedback. Amazon uses SSL software to ensure sensitive data is being stored in an encrypted format.

Closely linked to shopping online is the power of social media. Social media helps receive advice on various products and services through blogs, posts, messages, comments and tweets. With this social media has brought dawn to a new era. Facebook (FB) is the biggest social platform for masses. Millions of people use it to stay in touch and to interact with brands to make purchase decisions. FB currently has more than 1.5 billion active customers who access their account every month and this data supersedes that of anyone else's. Like most of social networks and search engines it is free of cost to the end user. The company primarily makes money by companies who register to pay for access to Facebook's data. Traditionally advertisements are placed in a prominent place where customers might see them. It is a hit and miss approach. While huge multinationals can afford to do this, small businesses might have to look at budget, monetary constraints. This makes advertisements on Facebook pages become effective and also a place where one can meet customers with varied preferences easily. They use open source tools for documentation and run mySql databases. Facebook's selling strategy has always been the fact that they took privacy seriously.

From the big giants in retailing and social media, an interesting example about how small businesses could effectively use big data came from Pendleton & Son Butchers. Tom Pendleton is a local butcher based in North West London since 1996. They have maintained a good reputation and steady customer base for years. However in 2014 a super market opened on the same street and their business was hit. Mr. Pendleton's son, Aaron suggested holding on to the failing business while getting in touch with a big data analyst. The analyst suggested a small sensor be placed on the window display of the shop, which could sense the footfalls across the window. This helped in two ways, firstly this could give information as to how many stopped by to see the promotional display and how many of them were actually converted into a sale. Analyzing this data they were able to put up innovative displays and newer recipes. By this the sale started picking up and they could analyze what kind of displays really worked with passersby. Further, they made a surprising discovery from the data that since there were two night clubs down the street and a lot of people would pass by their shop from nine in the evening to midnight, to which Aaron suggested that they keep some burgers available which would work as additional sales. Aaron also figured out the trending recipes and latest favorites using Google trends. This completely turned around their business.

The author also spoke about how big data has a role to play in the fashion industry. Ralph Lauren is well known name in the fashion industry that has a niche market all over the world. Ralph Lauren wanted to be a part of the increasingly popular wearable technology as Internet of Things (IoT) has taken off with introduction of devices like the Fitbit and the Apple Watch. Ralph Lauren recently introduced something called as polo tech shirt. What does it do? It captures data about one's body and the way it works, and it works out on a pattern that can emerge to ensure the right kind of fitness program is designed. It tells us

about the calories burnt or required to stay healthy. All of this is used in iTunes app on the user's phone, through a credit card sized Bluetooth transmitter.

Big data as a term overemphasizes the size of the data. However big data can be much more like smart data. Today there is an opportunity to ensure that in the future big data will and should have the capability to provide solutions in real time. Of course, data in itself is not highly valuable. The value is in the analysis done on raw data and how the data is turned into information and eventually turned into knowledge. The value is also in how organizations use data and turn their organization into a company that relies on insights derived from data analysis for their decision-making. This book provides real life interesting examples of how brands, products and services that we use everyday maneuver data. It also gives clarity on how we as consumers contribute and play a role in data making. With simple language and interesting instances the book is highly recommended as a must read for anyone who wants insights into big data.