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DATA SCIENCE AND ITS PROSPECTS

Recent polls have revealed the problem of numerous people being overwhelmed with information. Our society is drowning in a flood of information brought on by the frenzied pace of technological change. Our age is said to be the Age of Distraction, in which the frenzied pace of technological change makes it difficult if not impossible to focus and concentrate on challenging books and texts. Our attention capacity is also constantly challenged by the relentless production and flow of information. Information anxiety expressed through the idiom of Information Overload is frequently represented as the normal state of affairs of life in the 21st century. So, qualified specialists are needed to process huge amounts of data collected and updated every day. That's when data scientists come into place.

Data science is the field of study that combines domain expertise, programming skills, and knowledge of mathematics and statistics to extract meaningful insights from data [1]. Data science practitioners apply machine learning algorithms to numbers, text, images, video, audio and others to produce artificial intelligence (AI) systems designed to perform complex tasks, ordinarily requiring human intelligence. These systems proceed to generating insights to be transformed into tangible business value by analysts.

Data science enables businesses to process huge amounts of structured and unstructured big data to detect patterns, allowing companies to increase efficiencies, manage costs, identify new market opportunities, and boost their market advantage. Asking a personal assistant like Alexa or Siri for a recommendation demands data science. So does operating a self-driving car, using a search engine that provides useful results, or talking to a chatbot for customer service. These are all real-life applications for data science.

It should be stated that the amount of existing data grows exponentially, with around 40 zettabytes of data being predicted to exist by 2025. In fact, internet users generate about 2.5 quintillion bytes of data every day. By 2025, every person on Earth will generate about 146,880 GB of data every day, and by 2030, that will increase to 165 zettabytes every year [2].

The facts mentioned above lead us to the assumption that there is a huge amount of work in data science—much left to uncover. According to The Guardian, in 2012 only about 0.5 percent of all data was analyzed.

Simple data analysis can interpret data from a single source, or a limited amount of data. However, data science tools are critical to understanding big data and data from multiple sources in a meaningful way. A look at some of the specific data science applications in business illustrate this point and provide a compelling introduction to data science.

Data science and analytics come together when data science is applied in a business setting. Data science helps businesses better understand the specific needs customers have based on existing data such as the customer's age, purchase history, past browsing history, income, and other demographics. Moreover, a data scientist can train searching models and product recommendations more effectively.

As the field evolves, we expect to see several trends shaping the future of data science. First, more data science tasks in the life-cycle are likely to become automated. This change will be driven by pressure to increase ROI (return on investment) as more businesses invest in machine learning and AI [3]. With more data science processes automated, more data will be usable to more people in more verticals - and AI and machine learning should progress more quickly, too.

Another shift may come in the form of data science resources that are more accessible to more people. Data scientists typically have very specific skill sets. However, demand for both people who can competently complete data science tasks and professionals to guide AI and ML (machine learning)

initiatives in particular is exploding. This growth is driving a trend towards citizen science in the vertical.

This is especially likely in niche business areas that demand high levels of domain or industry knowledge. As in other scientific disciplines, more complex operations may be reserved for data scientists with more specific training, but less rarefied tasks will move towards accessibility. It will be interesting to see how many more verticals where data science is used will open up as automation paves the way.

To conclude, it's obligatory to say, that overlooking data science is a huge mistake not only for businesses but also for ordinary people, as the sheer amounts of benefits obtained can drastically improve every aspect of our live including wealth and health.

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