Introduction to Data and Data Science

Big Data Real-life Examples

All right! So... Where do we find big data? The answer is in increasingly more industries and companies. Here are a few notable examples.

As one of the largest online communities, ‘Facebook’ keeps track of its user’s names, personal data, photos, videos, recorded messages and so on. This means their data has a lot of variety. And with over 2 billion users worldwide, the volume of data stored on their servers is tremendous. Facebook requires real-time reporting of the aggregated, anonymized voice of its users, and it applies many analytical tools for its mobile applications. This means the company is investing in boosting its real-time data processing powers, increasing the velocity of its data set.

Great stuff!

Now, where else can we find ‘big data’?

Let’s take financial trading data for example. What happens when we record the stock price every 5 seconds? Or every single second? We get a dataset that is incredibly voluminous, requiring significantly more memory, disk space and various techniques to extract meaningful information from it. Data like this would be also considered ‘big data’.

We hope these examples clarify the use of big data in the real world.

Catch you later!

Machine Learning (ML) Real-life Examples

Right! So... How does machine learning fit into the world of data science?

One example is the financial sector and banks in particular. They have ginormous datasets of credit card transactions. Unfortunately, banks are facing issues with fraud daily. They are tasked with preventing fraudsters from acquiring customer data and in order to keep customer’s funds safe they use machine learning algorithms. They take past data, and because they can tell the computer which transactions in their history were legitimate, and which were found to be fraudulent, they can label the data as such.

So, through supervised learning, they train models that detect fraudulent activity. When these models detect even the slightest probability of theft, they flag the transactions, and prevent the fraud in real time!

Although no one in the sector has reached a perfect solution, the impact of machine learning algorithms has been ground-breaking.

Another example of using supervised machine learning with labelled data can be found in client retention. A focus of any business, be it a global supermarket chain or an online clothing shop, is to retain its customers. But the larger a business grows, the harder it is to keep track of customer trends.

A local corner shop owner will recognize and get to know their most loyal customers. They will offer them exclusive discounts to thank them for their custom and by doing so, keep them returning. On a larger scale, companies can use machine learning and past labelled data to automate the practice. And with this they can know which customers may purchase goods from them. This means the store can offer discounts and a 'personal touch' in an efficient way, minimizing marketing costs and maximizing profits.

With this video we close the two biggest rows of our infographic, having explained the main techniques used for working with data and data science, and their application. See you in the next section!

Introduction to Excel

The Secret to Faster Scrolling in Excel

In this section of the course, we are showing useful tips which aim to facilitate your work in Excel. The topic of this extract is fast scrolling through Excel sheets.

When working with a vast amount of data, it is crucial to move fast within the sheet without losing precious time in order to scroll manually. The Excel shortcut for fast scrolling is Control plus one of the Arrow keys. This command takes you to the last non-blank cell.

Let's provide an example.

Here, we have a table which contains 15,000 rows. Is there a fast way to go to the end of the table? Currently I'm in cell D4. By holding the Control key and pressing the down arrow, I find myself instantly in row 15121, which is the last non-blank cell.

This command allows you to go in every direction—downwards, upwards, to the right and to the left. If we want to select the cells, we have to hold Shift as well, in a manner that we will be pressing Control, Shift and an arrow key at the same time.

See? This allows me to quickly select large ranges of cells and work efficiently. This is how you can scroll fast and quickly select large cell ranges.

Thanks for watching.

Create Easily Printable Excel Documents

Hello everybody, let's have a quick demonstration on how to set a print area.

Very often we need to print our work in Excel. Therefore, it is key to produce printable documents. We need to learn how to organize our documents, imagining that someone will print them out at some point.

In order to do that we have to organize well all the sheets and the information flows. Once this is done, we can go ahead and select which parts of each sheet should be printed out and which parts of the sheet shouldn't be printed.

Let's assign a printable area for the sheet which we have here. First, I'll select the area that should be printed. Then I'll go to the menu bar and select "Page Layout," where we have the "Print Area" menu. I'll click on it and select "Set Print Area."

See how Excel put a border to the print area of our sheet? If we print it, only the selected area will be printed.

This is how you can set a print area. Thank you for watching this video.