Use data analytics skills in a business scenario

As you've been learning, data analysts have inherent analytical skills, whether they know it or not. In other words, the interests that have led you to pursue a career as a data analyst create a foundation that you will build on throughout your career. To review, these skills are:

- Curiosity
- Understanding of context
- Technical mindset
- Data design
- Data strategy

It's important to recognize these skills and begin applying them to all sorts of situations. In this reading, you'll do that through a case study based on a fictitious film production company, Mega-Pik International.

Scenario: Use data to create better movies

The movies Mega-Pik has released recently aren't having the impact they used to. Five of their last six releases barely broke even at the box office, and the sixth film lost a lot of money. The lead executives at Mega-Pik have noticed that their competitors went through a similar slump, but recovered when they started producing remakes of past successes and marketing them to a new audience.

Mega-Pik is interested in following this trend. They want to do this based on data-driven strategies, so they hire your analytics company to help them make popular movies again. Specifically, they ask for exploratory data analysis (EDA) to help them understand what audiences have liked in the past and determine if the successes of those films can be replicated.

You and your team develop the following objectives for Mega-Pik's EDA:

- Identify key factors that contribute to a movie's opening weekend success.
- Understand the relationship between a movie's budget and its revenue.
- Determine which genres are most successful.

The right dataset

Your company collects, cleans, and organizes the following relevant information into a dataset:

- Movie name
- Release date
- Opening night revenue
- Opening weekend revenue
- Budget (cost to create)
- Marketing costs
- Ratings
- Genre

Use your skills

Now you'll examine how inherent data analysis skills can help you guide Mega-Pik to make data-driven decisions about which movies to produce.

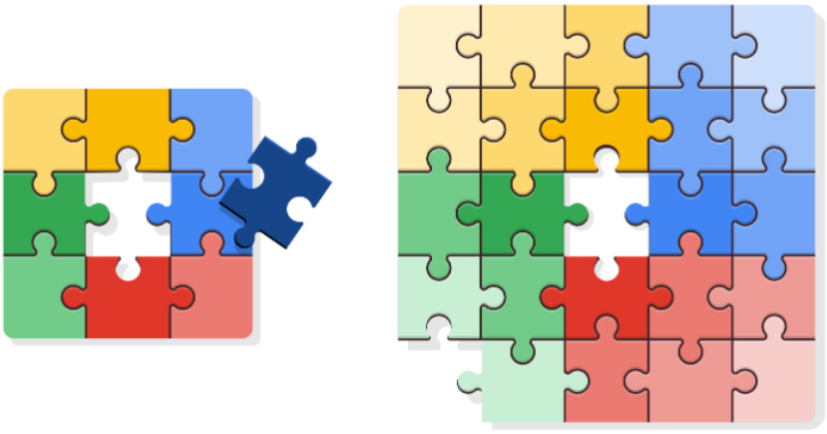
Curiosity

If you worked for the company performing this data analysis, what kinds of questions would you ask based on the data and how it relates to the objectives of the EDA? Curiosity is critical here, because it will help you come up with questions you can answer

For example, you might wonder if there's a relationship between a movie's budget and the revenue it generates on opening night or over the opening weekend. You might also be curious about combining columns to make new metrics, such as which genres tend to perform better on opening weekend—both overall and in the seasons in which the movies were released. You might even ask if there should be additional columns of data that you don't already have, such as audience demographics.

Curiosity is a skill that drives analysts to discover just how much information they can coax out of the data in expected or unexpected ways. Keep in mind that curiosity isn't the only skill that compels analysts to ask probing questions about their data.

Understanding context

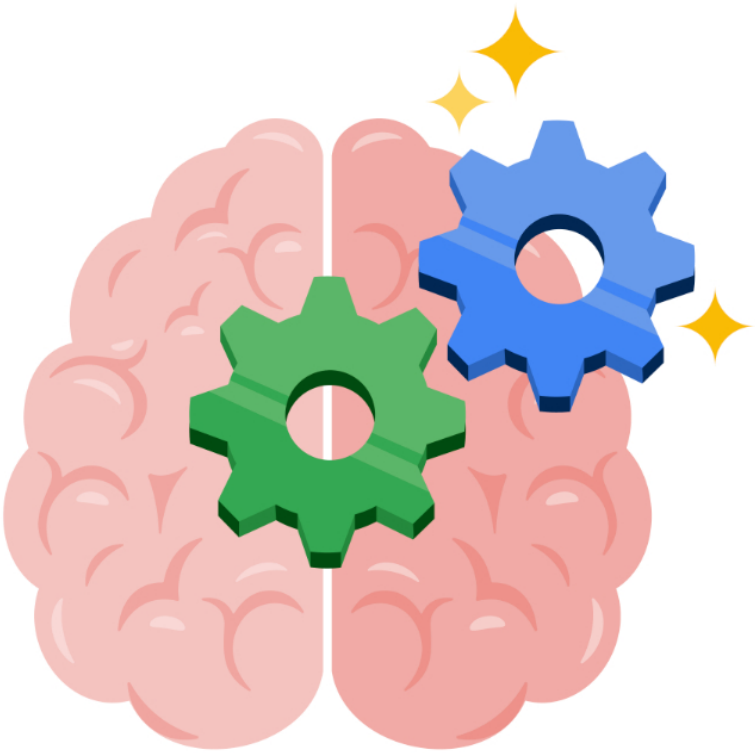


Context is crucial for any kind of meaningful data analysis. By contextualizing data, you start to understand why the data shows what it does. Factors including the time of year a movie is released, holidays, and competing events can all have an effect on revenue, which is the gauge Mega-Pik uses to determine success. Audience demographics such as age, gender, education, and income levels can help you understand who is going to the movies. This context might clarify which genres or storylines are most interesting to movie-goers.

Analysts determine context by looking for patterns or anomalies in a dataset. It also helps to understand the entertainment industry, which provides a whole other set of contextual clues. For example, family films typically generate more revenue when children are on vacation from school. This provides important context about the relationship between genre and revenue over a short timeframe. To understand the relationship between family films and revenue, you might have to search over a time period of more than one year to avoid inaccurate conclusions based on school schedule. Further the "season" in which children are on vacation from school differs by country, which is another contextual clue you have to take into account. An accurate analysis of this data needs to come from cross-referencing all of the various contexts, including external data or historical trends.

Understanding context helps you solve problems by narrowing down variables that are most likely to influence the outcome, which in turn enables you to come up with more meaningful insights.

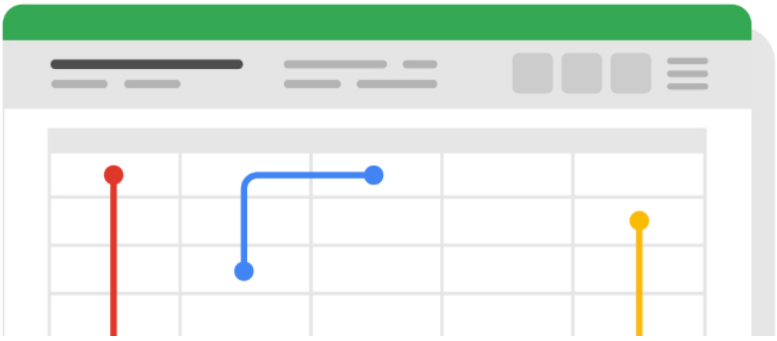
Technical mindset

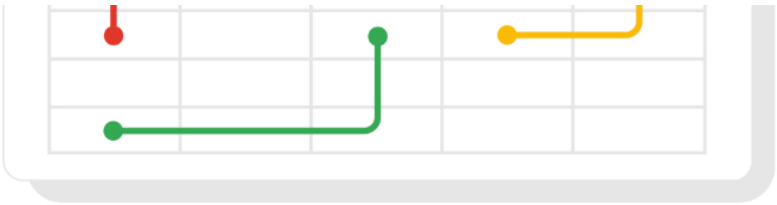


As you have discovered, having a technical mindset means approaching problems (and datasets) in a systematic and logical manner. This starts with the way you clean, organize, and prepare your data. It can also guide the tools or software you use to break down data and help you identify and fix incorrect data that can skew your analysis.

Remember that problems aren't always technical, but a technical mindset is the skill that you use to break down any complex issue into manageable parts. Focusing on implementing a process, regardless of what that looks like, is a great first step to exercising your technical mindset.

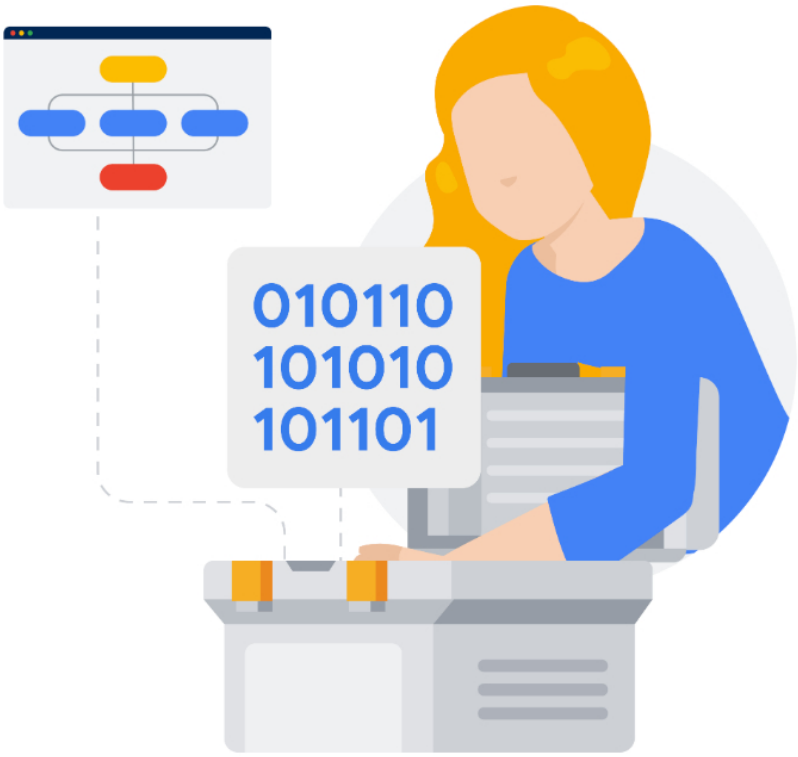
Data design





The skill of data design is an extension of your technical mindset. It deals with how information is organized. Suppose the dataset here is presented in a spreadsheet. You would be able to shift the cells to organize the data to find different patterns. For example, you might organize the data by revenue and then by genre, which could reveal that comedies are more profitable than dramas. Basically, how you choose to structure your data makes analysis easier and more insightful.

Data strategy



Data strategy is the management of the people, processes, and tools used in data analysis. In this scenario, think of it as the approach you use to analyze your dataset. One element might be the tools you use. If Mega-Pik wants a relatively simple dashboard, you might use Google Sheets or Excel because there are only a few columns of data. On the other hand, if Mega-Pik wants a dashboard where information updates every time new data comes in, you'd need a robust tool like Tableau.

The data strategy you select should be based on the dataset and the deliverables. Think about a data strategy as a kind of resource allocation—the tools, time, and effort that you put into a project will vary based on what you need to accomplish. One strategy you might use for this case study is to prioritize any analyses that would directly affect the next quarter's revenue. The way you allocate resources can lead you to quicker, more actionable insights.

Key takeaways

Your inherent analytical skills are essential for conducting data analysis and will be even more critical when you combine them with the tools and techniques from this program. Understanding how to use these skills in business scenarios is the first step toward developing them further and using them effectively in your career.

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