

ANALYTICAL THINKING BY GOOGLE

GETTING STARTED WITH GOOGLE'S DATA ANALYTICS

DATA ANALYSIS PROCESS

Google's six-step process for analyzing data - the whole course is created on the back of these steps.

1. Ask critical questions to define the problem!
2. Prepare your methodology. E.g. Qualitative or quantitative data, surveys, interviews, automatic data collection.
3. Process the data by collecting, cleaning and uploading data.
4. Analyze the results. What did you find out. Remember to document and create value from this stage.
5. Share the findings and discuss them critically with your team.
6. Act on the results. Work with leaders and talk about how you will move forwards.

ASK - PREPARE - PROCESS - ANALYZE - SHARE - ACT

DATA ANALYTICAL SKILLS

The following skills are strongly associated with solving problems based on facts:

1. Curiosity - be curious about the world, take risks and be innovative.
2. Understanding context - as in the context in which the problem you are trying to solve.
3. Technical mindset - it is defined here as breaking things down into smaller pieces and re-arrange them in order.
4. Data design - this is how you organize your information e.g. Databases.
5. Data strategy - management of people, processes and tools used in data analysis.

CURIOSITY WILL NOT KILL THE CAT

ANALYTICAL THINKING

Use the following approach when thinking analytically:

1. Visualize the problem using graphics, such as maps, graphs and images as these will make the information easier to process.
2. Have a strategic approach to thinking about the data; ask what is it that you hope to achieve and how will you get there?
3. Identify the problem and curate your questions to help describe and solve it.
4. Try to spot correlations between two or more pieces of data - look for relationships; be wary that correlation does not necessarily mean causation.
5. Finally you need to see the big picture, but be aware of the small details. Similar to solving a jigsaw. You know what the end product looks like, and that each individual piece plays its part.

THINK LIKE A ANALYTICAL MANIAC

COMMON QUESTIONS

Data analysts often ask the following common questions when analyzing data:

1. What is the root cause of the problem? To get to the root ask 'why?' five times, until you have dug all the way down. E.g. Why did enrollment drop? What caused families to leave?
2. Where are the gaps in our process? This gap analysis allows you to examine and evaluate how a process currently works so that you can calculate how to get where you need to be.
3. What did we not consider before? Look back at previous decisions, leaving no stone unturned!

GET OUT YOUR SHOVEL AND START DIGGING TO THE ROOT

All of my notes here have been adapted from the course 'Google Data Analytics Specialization' available on Coursera.

BRING YOUR DATA TO LIFE

Bring your data to life using different tools such as Excel, Tableau and Power BI.



Excel can be used for a wide range of tasks including data manipulation, basic analysis, creating formulas and functions, organizing and filtering data, and generating reports. Power BI, on the other hand, is a fantastic software for creating interactive data visualizations and dashboards, allowing data analysts to explore and present data in a more dynamic and engaging way. Lastly, Tableau is renowned for its powerful capabilities in advanced data visualization.

