When it comes to decision-making, data is key.

There are two kinds of data that we'll talk about,

1. Quantitative and,
2. Qualitative.

**Quantitative data:**

Quantitative data is all about the specific and objective measures of numerical facts.

This can often be the

* what,
* how many, and
* how often

about a problem.

In other words, things you can measure, like how many commuters take the train to work every week.

**Qualitative data:**

Qualitative data describes subjective or explanatory measures of qualities and characteristics or things that can't be measured with numerical data, like your hair color.

Qualitative data is great for **helping us answer** **why** questions.

For example, why people might like a certain snack food more than others.

With quantitative data, we can see numbers visualized as charts or graphs.

Qualitative data can then give us a more high-level understanding of why the numbers are the way they are.

This is important because it helps us add context to a problem.

As a data analyst, you'll be using both quantitative and qualitative analysis, depending on your business task.

Reviews are a great example of this. Think about a time you used reviews to decide whether you wanted to buy something or go somewhere. These reviews might have told you how many people dislike that thing and why.

Businesses read these reviews too, but they use the data in different ways.

Let's look at an example of a business using data from customer reviews to see qualitative and quantitative data in action.

Now, say a local ice cream shop has started using their online reviews to engage with their customers and build their brand. These reviews give the ice cream shop insights into their customers' experiences, which they can use to inform their decision-making.

The owner notices that their rating has been going down. He sees that lately his shop has been receiving more negative reviews.

He wants to know why, so he starts asking questions.

First are measurable questions.

* How many negative reviews are there?
* What's the average rating?
* How many of these reviews use the same keywords?

These questions generate quantitative data, numerical results that help confirm their customers aren't satisfied. This data might lead them to ask different questions.

* Why are customers unsatisfied?
* How can we improve their experience?
* These are questions that lead to qualitative data.

After looking through the reviews, the ice cream shop owner sees a pattern, 17 of negative reviews use the word "frustrated." That's **quantitative** data.

Now we can start collecting **qualitative** data by asking why this word is being repeated?

He finds that customers are frustrated because the shop is running out of popular flavors before the end of the day. Knowing this, the ice cream shop can change its weekly order to make sure it has enough of what the customers want.

With both quantitative and qualitative data, the ice cream shop owner was able to figure out his customers were unhappy and understand why. Having both types of data made it possible for him to make the right changes and improve his business.