Now, it's time to explore the data ecosystem, find out where data analytics fits into that system, and go over some common misconceptions you might run into in the field of data analytics.

To put it simply, an ecosystem is a group of elements that interact with one

another. Ecosystems can be large, like the jungle in a tropical rainforest

or the Australian outback. Or, tiny, like tadpoles in a puddle, or bacteria on your skin.

And just like the kangaroos and koala bears in the Australian outback,

**data lives inside its own ecosystem too**.

Data ecosystems are made up of various elements that interact with one another

in order to produce, manage, store, organize, analyze, and share data.

These elements include hardware and software tools, and the people who use them.

Data can also be found in something called the cloud.

**The cloud is a place** to keep data online, rather than on a computer hard drive.

So instead of storing data somewhere inside your organization's network, that data is accessed over the internet.

So the cloud is just a term we use to describe the virtual location.

The cloud plays a big part in the data ecosystem, and as a data analyst, it's

your job to harness the power of that data ecosystem, find the right information,

and provide the team with analysis that helps them make smart decisions.

For example, you could tap into your retail store's database, which is an ecosystem filled with customer names, addresses, previous purchases, and customer reviews.

As a data analyst, you could use this information to predict what these

customers will buy in the future, and make sure the store has the products and stock when they're needed.

As another example,

let's think about a data ecosystem used by a human resources department.

This ecosystem would include information like postings from job websites, stats on the current labor market, employment rates, and social media data on prospective employees.

A data analyst could use this information to help their team recruit new workers

and improve employee engagement and retention rates.

Okay, now let's talk about some **common misconceptions** you might come across.

* **First is the difference between data scientists and data analysts**.

It's easy to confuse the two, but what they do is actually very different.

* **Data science** is defined as creating new ways of modeling and understanding the unknown by using raw data.

Here's a good way to think about it.

**Data scientists create new questions using data, while analysts find answers to existing questions by creating insights from data sources**.

There are also many words and phrases you'll hear throughout this course, that are easy to get mixed up. For example,

* **data analysis and data analytics sound the same, but they're actually very different things**.

Let's start with analysis.

You've already learned that data analysis is the collection, transformation, and organization of data in order to draw conclusions, make predictions, and drive informed decision-making.

* **Data analytics** in the simplest terms is the science of data.

It's a very broad concept that encompasses everything from the job of managing and

using data to the tools and methods that data workers use each and every day.

**So when you think about data, data analysis and the data ecosystem, it's important to understand that all of these things fit under the data analytics umbrella.**