

Course 4 overview

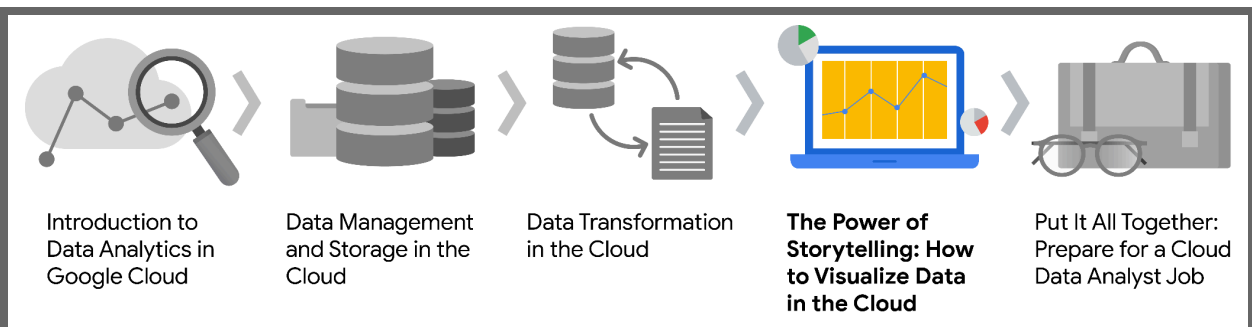
to Course 4

Hello and welcome to **The Power of Storytelling: How to Visualize Data in the Cloud**, the fourth course in the Google Cloud Data Analytics Certificate.

In this course, you'll develop a greater understanding of why visualizing data in the cloud is critical to understanding data and influencing business decisions. You'll also learn about data storytelling, and how to captivate your audience using insights gained from the cloud. This includes using the basics of user experience (UX) and user interface (UI) to create compelling communications. Then, you'll get a comprehensive overview of how to translate a data story to create a visualization plan that meets business needs. You'll also learn how to collaborate with stakeholders to translate their requests into actionable visualizations. Next, you'll get hands-on experience with a visualization tool called Looker to help you learn about dimensions, measures, and modeling data. Then, you'll explore the developer environment, and get hands-on experience writing dashboards with code. You'll also practice modeling dimensions and measures, and learn how to use a data modeling language to address complex business needs.

Certificate program progress

The Google Cloud Data Analytics Certificate program has five courses. **The Power of Storytelling: How to Visualize Data in the Cloud** is the fourth course.



1. Introduction to Data Analytics in Google Cloud — In this course, you'll explore the foundations of cloud data analysis practices. Then, you'll learn more about the roles and responsibilities of a cloud data analyst, including data acquisition, storage, processing, and visualization.
2. Data Management and Storage in the Cloud — In this course, you'll learn more about how data is structured and organized. You'll also gain hands-on experience with data lakehouse architecture and cloud components like BigQuery, Google Cloud Storage, and DataProc to learn how to efficiently store, analyze, and process large datasets.
3. Data Transformation in the Cloud — In this course, you'll use data discovery and profiling methods to examine data quality and validity. You'll also use data mapping to establish relationships between different data sources, and explore transformation using various methods. Then, you'll apply data governance and security best practices to keep PII data safe, and learn how to implement a data transformation strategy for an organization.
4. **The Power of Storytelling: How to Visualize Data in the Cloud** (current course) — In this course, you'll develop skills in the five key stages of visualizing data in the cloud: storytelling, planning, exploring data, building visualizations, and collaborating with data. Then, you'll explore UI/UX skills to wireframe interactive and impactful, cloud-native visualizations. You'll also work with cloud-native data visualization tools to explore data sets, create reports, and build dashboards that drive decisions and foster collaboration.
5. Put It All Together: Prepare for a Cloud Data Analyst Job — In this course, you'll combine and apply the foundational knowledge and skills from previous courses to create a capstone project that focuses on the full data lifecycle. You'll also practice using cloud-based tools to acquire, store, process, analyze, visualize, and communicate data insights effectively. Then, you'll update your résumé and practice interview techniques to prepare to apply and interview for jobs.

Course 4 content

Each course in this certificate program is broken into modules. You can complete courses at your own pace, but the modular breakdown is designed to help you finish the entire Google Cloud Data Analytics Certificate in about 3-6 months if you complete about 1-2 modules per week.

What's to come? Here's a quick overview of the skills you'll learn in each module of this course.

Module 1: Introduction to the power of storytelling: How to visualize data in the cloud

In this module, you'll learn how to articulate the importance of data visualization and storytelling in cloud data analysis, and how to describe the key components of a cloud visualization workflow. Then, you'll learn how to identify the unique concerns of creating visualizations in the cloud environment, so that you can demonstrate effective communication and presentation skills. You'll also explore dashboard design, and learn how to define basic UI/UX principles and their applications.

Module 2: Methods for visualization planning and design

In this module, you'll learn about the steps to planning and designing visualizations. You'll also explore different data visualization techniques for different types of data and analysis goals. This will help you translate stakeholder requests and create effective dashboards and reports. Then, you'll learn how to summarize key takeaways, and how to effectively communicate insights through storytelling, design mockups, and wireframes. You'll even create your own wireframe!

Module 3: Access, explore, and report on data in the cloud

In this module, you'll explore the role of cloud-native data tools in the data analysis workflow to access, explore, and analyze data. Then, you'll learn how data is fetched from cloud-based platforms, systems, and products for use in analysis. You'll also learn how to define dimensions and measures, so that you can apply this knowledge when modeling data for use in visualizations. Finally, you'll visualize data as a chart, and create a report to perform ad hoc analysis.

Module 4: Enterprise business analytics

In this module, you'll explore the needs of enterprise business users and create a dashboard to meet those needs. Then, you'll learn more about the role of cloud-native data visualization, and how to use dashboard tools to access, explore, and analyze data. Next, you'll build on your knowledge of dimensions and measures to identify how their relationship is used to analyze data. You'll also gain deeper insights by learning how to drill down on data.

Module 5: Explore the developer environment

In this module, you'll be immersed in a modeling language called LookML. Then, you'll learn how to use the IDE environment to write code to model data, and how IDE is used to build semantic models. As you explore LookML, you'll learn how to implement derived tables, model

dimensions, and measures, and how to use LookML to meet business needs. You'll also learn about Git version control, and how it's used to record changes and manage files.

What to expect

Each course offers many types of learning opportunities:

- **Videos** led by Google instructors teach new concepts, introduce the use of relevant tools, offer career support, and provide inspirational personal stories.
- **Readings** build on the topics discussed in the videos, introduce related concepts, share useful resources, and describe case studies.
- **Activities** and **labs** give you hands-on practice in applying the skills you're learning and allow you to assess your own work by comparing it to a completed example.
- **Glossaries** provide a list of key terms for you to review to prepare for quizzes.
- **Practice quizzes** allow you to check your understanding of key concepts, and provide you with valuable feedback.
- **Graded quizzes** allow you to demonstrate your understanding of the main concepts of a course. You must score 80% or higher on each graded quiz to obtain a certificate. You can take a graded quiz multiple times to achieve a passing score.

Note: Some learning item types may not be included in every course.

Tips for success

- It's strongly recommended that you go through the items in each lesson in the order they appear because new information and concepts build on previous knowledge.
- Participate in all learning opportunities to gain as much knowledge and experience as possible.
- If something is confusing, don't hesitate to replay a video, review a reading, or repeat an activity.
- When you encounter useful links in this course, bookmark them so you can refer to the information later for study or review.