



# MASTER IN DATA SCIENCE

## MID TERM ASSESSMENT

COURSE CODE : WQD7009

COURSE TITLE : Big Data Application and Analytics

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LECTURER : Dr Riyaz Ahamed Ariyaluran Habeeb Mohamed

## 1 Introduction

Google Cloud Data Analytics Certificate Path is one of the courses designed by Google to prepare individuals to become Cloud Data Analysts. It is a career where individuals help an organisation to collect, store and analyse data using cloud technologies. It is one of the high-demand jobs due to rapid change in the digital era. Cloud technologies are the ideal solution for an organisation to manage big data. It offers services that are fast, scalable and flexible. These services will help the organisation to make fast and accurate decisions. Due to the pay-as-you-go model, it allows the organisation to save costs.

(101 words)


## 2 Lessons Learned

In the first module, Introduction to Data Analytics in Google Cloud, I learned about the role and responsibilities of cloud data analysts. One of the most interesting parts was the explanation of the data lifecycle and its importance. The moderator uses a simple word to explain the six stages of the data lifecycle which are plan, capture, manage, analyze, archive and destroy. I learned that every team has its own responsibilities for each stage. Also, it showed that the data lifecycle is important to keep the team on track to achieve the project goals. I also gained insights into the differences between traditional and cloud computing infrastructures. This knowledge is valuable for my future career as I begin to understand why organizations often choose cloud computing over traditional systems. Its flexibility, scalability, and pay-as-you-go model make it more efficient and cost-effective. These features allow organisations to adapt quickly to changing demand, which is important in today's digital era. The hands-on lab and the quizzes allowed me to apply what I learned and reflect on the videos that I've watched. I can retake the quizzes to improve my understanding. One of the challenges in this module was during the activity to design a data lifecycle plan and also the strategies to handle data requests parts as I had no prior experience in this area. However, it was a valuable activity as it will definitely help in my future career as a Cloud Data Analyst.

In the Data Management and Storage in the Cloud module, I learned that there are two common system to store data which are relational databases and NoSQL database. This is important for my future career because it showed the importance to familiarize myself with different programming languages and data management systems. Also, I learned the difference between data warehouses and data lakes. While both have their pros and cons, it is interesting to know that we can use both in a single data management systems. This practice is valuable in real-world scenarios for building efficient data storage and analytics pipelines. This module has a lot of lab exercises compared to module 1, which is good as I can improve my SQL knowledge. While I had some familiarity with earlier labs that focused on BigQuery, working with Dataplex required extra effort to understand and adapt to its features. It was a new experience but pushed me to expand my skills. One of the most interesting topics in the module was data partitioning. I don't believe that I heard of this concept in the class before. By doing partitioning in data, we can divide large datasets into smaller, more manageable partitions. This method not only speeds up queries but also reduces costs as it optimizes storage usage. Overall, this module was packed with practical knowledge and tools that I can apply in both my academic projects and my future career.

(481 words)

### 3 Evidence



Recommended

## Beginner: Google Cloud Data Analytics Certificate


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Course One



COMPLETION BADGE

### 01 Introduction to Data Analytics in Google Cloud

📖 Course

🕒 18 hours

📈 Introductory


+500 pts

This is the first of five courses in the Google Cloud Data Analytics Certificate. In this course, you'll define the field of cloud data analysis and describe roles and responsibilities of a cloud data analyst as they relate to data...

✓ Course complete

Google Cloud

Data Analytics Certificate  
Course Two



COMPLETION BADGE

### 02 Data Management and Storage in the Cloud

📖 Course

🕒 26 hours 15 minutes

📈 Introductory

+500 pts

This is the second of five courses in the Google Cloud Data Analytics Certificate. In this course, you'll explore how data is structured and organized. You'll gain hands-on experience with the data lakehouse architecture and cloud components like BigQuery, Google...

✓ Course complete

### 01 Introduction to Data Analytics in Google Cloud

Course
 18 hours
 Introductory
 +500 pts

This is the first of five courses in the Google Cloud Data Analytics Certificate. In this course, you'll define the field of cloud data analysis and describe roles and responsibilities of a cloud data analyst as they relate to data...

Course complete

### 02 Data Management and Storage in the Cloud

Course
 26 hours 15 minutes
 Introductory
 +500 pts

This is the second of five courses in the Google Cloud Data Analytics Certificate. In this course, you'll explore how data is structured and organized. You'll gain hands-on experience with the data lakehouse architecture and cloud components like BigQuery, Google...

Course complete

### 03 Data Transformation in the Cloud

Course
 18 hours
 Introductory
 +500 pts

This is the third of five courses in the Google Cloud Data Analytics Certificate. In this course, you'll begin by getting an overview of the data journey, from collection to insights. You'll then learn how to use SQL to transform...

[→ Start course](#)

### 04 The Power of Storytelling: How to Visualize Data in the Cloud

Course
 27 hours
 Introductory
 +500 pts

20% complete

This is the fourth of five courses in the Google Cloud Data Analytics Certificate. In this course, you'll focus on developing skills in the five key stages of visualizing data in the cloud: storytelling, planning, exploring data, building visualizations, and...

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### 05 Put It All Together: Prepare for a Cloud Data Analyst Job

Course
 12 hours
 Introductory
 +500 pts

This is the fifth of five courses in the Google Cloud Data Analytics Certificate. In this course, you'll combine and apply the foundational knowledge and skills from courses 1-4 in a hands-on Capstone project that focuses on the full data...

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## Beginner: Google Cloud Data Analytics Certificate

Achievement

Completing the Beginner: Google Cloud Data Analytics Certificate allows you to access new opportunities to increase your expertise.

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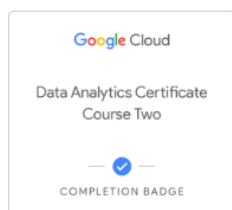
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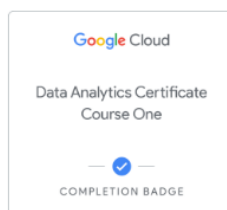
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