Session Plan (What is Data Science - Module2&3) - (Online)				
Topics	**Objectives**	**Methodology & ROPES model**	**Description**	**Duration**
Recap & Introduction	Recap the previous session (Module 2) and introduce objectives for Module 3	PPT Recap and Introduction	Instructor reviews key points from Module 2 (Big Data, Cloud Computing) and introduces the objectives for Module 3.	15 mins
Big Data & Digital Transformation	Explain how Big Data drives digital transformation	PPT Presentation Module2−Slides 3−5Module 2 - Slides 3-5Module2−Slides3−5	Instructor discusses how Big Data transforms industries, using examples like Netflix and the Houston Rockets.	15 mins
Cloud Computing for Data Science	Understand cloud computing and its impact on data science	PPT Presentation Module2−Slides 6−11Module 2 - Slides 6-11Module2−Slides6−11	Instructor explains cloud computing, deployment models, and how it benefits data science collaboration and processing.	15 mins

Hadoop & Big Data Processing Tools	Introduction to Big Data processing tools like Hadoop, Spark, and Hive	PPT Presentation Module2−Slides 20−24Module 2 - Slides 20-24Module2−Slides20−24	Instructor explains how Hadoop and other Big Data processing tools manage large datasets and perform real-time analytics.	15 mins
Understanding Data Structures	Explain structured, semi-structured, and unstructured data	PPT Presentation Module3−Slides 3−4Module 3 - Slides 3-4Module3−Slides3−4	Instructor defines and explains the types of data structures used in data science, giving examples of each.	20 mins
Activity	Group activity to discuss real-world examples of Big Data, Hadoop, and data structures	Group discussion or breakout rooms	Participants discuss examples of Big Data applications, Hadoop use cases, and data structures they encounter in their work or studies.	15 mins
Break	Allow participants to rest and recharge.	Break	A 20-minute break for participants.	20 mins
Relational Databases and NoSQL	Compare relational databases and NoSQL systems	PPT Presentation Module3−Slides18−23Module 3 - Slides 18-23Module3−Slides18−23	Instructor introduces relational databases, NoSQL, and their key differences and advantages.	20 mins

ETL Process and Data Pipelines	Explain the ETL (Extract, Transform, Load) process and data pipelines	PPT Presentation Module3−Slides24−27Module 3 - Slides 24-27Module3−Slides24−27	Instructor walks through the ETL process, covering its components and how data pipelines work for data integration.	15 mins

Data Integration Platforms	Explore modern data integration tools and platforms	PPT Presentation Module3−Slides28−33Module 3 - Slides 28-33Module3−Slides28−33	Instructor introduces integration platforms and tools, including cloud-based solutions and batch processing.	15 mins

Activity	Q&A to reinforce learning	Interactive Q&A Module3−Slide34 Module 3 - Slide 34Module3−Slide34	Instructor engages participants by asking questions about the content to assess knowledge.	15 mins

Closure	Wrap up the session and summarize key takeaways	Activity (Mentimeter or Kahoot quiz)	Instructor summarizes key concepts using interactive tools.	10 mins