7/31/25, 2:00 PM about:blank

## Lesson summary

### **Module 1 Lesson 2: From Requirements to Collection**



#### Congratulations! You have completed this lesson. At this point in the course, you know:

- Data Requirements stage tasks include identifying the correct and necessary data content, data formats, and data sources for the specific analytical
  approach.
- During the Data Collection stage, expert data scientists meticulously revise data requirements and make critical decisions regarding the quantity and quality of data.



# Data Requirement and Collection

Data is an ingredient; Ensuring the Right Ingredients

This stage of the data science methodology emphasizes the criticality of identifying, sourcing, understanding, and preparing the necessary data for analysis.



DATA REQUIREMENTS



DATA COLLECTION



DATA INTEGRATION



DATA
UNDERSTANDING



Initial data collection assessed for requirement fulfillment. Revise requirements based on availability, quality, and content 2

Requires knowing
the source or where
to find needed data
elements, Data
acquisition
strategies and
deferred decisions
ont unavailable data.

3

DBAs / programmers extract, merge data from diverse sources. Eliminate redundant data, prep for data understanding. Automate database processes for efficiency and speed.



Use statistics and visualization for data assessment. Identify data gaps, plan missing data to be filled or substituted. Prepare data for next analysis stages.



**DATA SCIENCE METHODOLOGY** 



• Data scientists apply descriptive statistics and visualization techniques to thoroughly assess the content, quality, and initial insights gained from the collected data, identify gaps, and determine if new data is needed or to substitute existing data.

#### Author(s)

<u>Dr. Pooja</u> <u>Patsy R. Kravitz</u>

about:blank 1/2

7/31/25, 2:00 PM about:blank

© IBM Corporation 2023. All rights reserved.

about:blank 2/2