### **Lesson summary**

#### **Module 1 Lesson 1: From Problem to Approach**



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

- Foundational methodology, a cyclical, iterative data science methodology developed by John Rollins, consists of 10 stages, starting with Business Understanding and ending with Feedback.
- The primary goal of the Business Understanding stage is to understand the business problem and determine the data needed to answer the core business question.



# **Business Understanding**

# Understanding the Question



• During the Analytic Approach stage, you can choose from descriptive, diagnostic, predictive, and prescriptive analytic approaches, whether to use machine learning with clustering associations.

**DATA SCIENCE METHODOLOGY** 



# **Analytic Approach**

# Determine Appropriate Approach

The second stage of the data science methodology involves selecting the analytic approach in the context of business requirements.



**PATTERN** 



**APPROACH** 



OUESTION TYPES



MACHINE LEARNING



Identifying what type of patterns will be needed to address the question most effectively.



Different types of patterns and relationships in data require different approaches to effectively address the questions being asked



Descriptive:

**Current Status** Diagnostic:

Statistical Analysis

Predictive:

Forecasting

Prescriptive: Recommendations



Machine Learning enables computers to learn without explicit programming and identify patterns in data that might otherwise not be accessible



TEM DATA SCIENCE METHODOLOGY



· Decision tree classification is a predictive analytics approach that's easy for non-data scientists to implement

#### Author(s)

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

### Changelog

Version Changed by Change Description Patsy R. Kravitz Initial version created 2023-08-09 0.1 2023-08-13 0.2 Dr. Pooja Inforgraphic included

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