Business Analytics for Leaders – Program Topics

The Business Analytics for Leaders program curriculum covers the following topics:

**Topic 1 | Introduction to Business Analytics and AI**
From the beginning, this program grounds your understanding of business analytics in the real world by citing actual business cases, not just theoretical applications. In this module we introduce the AI-centric operating model, and how to leverage its four components to achieve scale, scope, and innovation.

**Topic 2 | Descriptive Analytics: Accessing, Transforming, and Visualizing Data**
This module is all about data: how to access it, process it, transform it, and make it AI-ready. We will also introduce the concept of data visualization and learn some of the best practices for accomplishing it.

**Topic 3 | Predictive Analytics: Supervised Learning for Business (Part 1)**
In this module you will learn how to exploit patterns in historical data to forecast future events using predictive analytics, a key tool for identifying risks and opportunities. We will also examine the scope of supervised learning in business using several examples.

**Topic 4 | Predictive Analytics: Supervised Learning for Business (Part 2)**
Continuing our discussion of supervised learning and predictive analytics, in this module we introduce state-of-the-art AI techniques to enable data-driven decision-making.

**Topic 5 | Descriptive Analytics: Unsupervised Learning for Business**
In this module we switch to unsupervised learning, which can help you group and cluster data more effectively. The wide range of business applications includes everything from customer segmentation to detecting fraudulent transactions.

**Topic 6 | Prescriptive Analytics: Reinforcement Learning for Business**
Here we explore the ways that AI-centric businesses use reinforcement learning for recommender systems, web advertising, stock trading, healthcare, and many other applications. The computer performs a succession of trial-and-error interactions within a dynamic environment to try to determine which approach is best.

**Topic 7 | Prescriptive Analytics: Experimentation**
In this module we learn how businesses develop experimentation platforms that enable them to run many tests at high velocity, which in turn allows them to learn, adapt, innovate, and make sound business decisions even in times of uncertainty.

**Topic 8 | The Future of Big Data and AI**
We will first discuss some concerns associated with the use of machine learning in prescriptive analytics, and how this might affect our business strategies moving forward. We will then discuss data protection and privacy, which will continue to be an important consideration in the world of Big Data. We will not only present some best practices associated with data protection, but also outline steps for developing a more general data strategy.

**Capstone Project**
The two-month Business Analytics for Leaders: From Data to Decisions program culminates with a capstone project in which you solve a real-world business problem using an AI-centric operating model.