

# Data Science for Executives

## | 2023 |

### PROGRAM OVERVIEW

The Data Science for Executives program is designed to equip leaders with the knowledge and skills to identify and prioritize data science opportunities in their organizations. The course covers essential concepts, terminology and real-world case studies from industry to illustrate the potential of data science in driving business success. Students will learn to develop an actionable plan for data governance, evaluate the feasibility of data opportunities, prioritize data projects using ROI, and understand key questions to ask about data science products. By the end of the training, they will be able to articulate data science projects from business scenarios, measure the success of a data science project and create a plan for their organization to become more data-driven.

### SYLLABUS DESCRIPTION



#### Trends and best practices

The course provides an overview of current trends and best practices in data science, with a focus on understanding the present state of the field and its relevance to the participant's company. It covers topics such as data governance, data maturity, and strategies for staying competitive in the field.

#### Data-driven culture

The course covers the importance of a data-driven culture in organizations, including how to measure value from data projects, data governance and the data maturity spectrum.



#### Machine learning

The course provides an in-depth understanding of machine learning, including common algorithms and practical solutions, and provides guidance on how to prioritize and evaluate data science projects from both a technical and business perspective.

## SYLLABUS DETAILS

### Module 1: Current and Future Trends of Data Science

- Understand the present state of the latest data science trends and in the context of participant's company data transformation.
- Learn about emergent trends and how to keep a competitive edge.
- Highlight trends in retail, supply chain and ecommerce.
- Review current data strategy and future initiatives.
- Introduce specific data terminology.

### Module 2: Data and Model-Driven Organizations

- Understand what data culture means in an organization.
- Primer on measuring value from data projects.
- Data governance and the data maturity spectrum.
- Review data maturity assessment results.

### Module 3: Demystifying Machine Learning

- Describe common language in data and AI landscapes.
- Data products, deliverables and the development workflow.
- Learn about common algorithms and practical solutions.

### Module 4: Articulating data science projects business scenarios

- Scientific thinking and degree of belief in data science.
- Describe essential machine learning terminology.
- Explore testable business opportunities from diverse scenarios.

### Module 5: Prioritizing data science projects

- Describe common variables for measuring ROI.
- SMART goals and measuring data projects.
- WSJF - Weighted Shortest Job first methods.

- Specific use case for WSJF.

## **Module 6:** Evaluating projects from model and business perspectives

- Confounding factors.
- Base models and the importance of benchmarks.
- Understand confounding factors and performance.
- Business metrics and evaluation metrics.

## **Module 7:** The data science project lifecycle by example

- Describe the landscape of process models in data science.
- Describe the process model and the benefits.
- Exemplify the process model with the running example.
- Technical communication, storytelling.

## **Module 8:** Next steps and calls to action

- Reiterate the most important blockers with respect to data culture.
- Discuss technological solutions to improve data culture.
- Exercise - Set reasonable goals that help move data practices forward in business adoptions and reinforce change management.

¡Thank you!

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