



Certified Data Science Practitioner (CDSP)

Course ID #: 7000-681-ZZ-Z

Hours: 35

Course Content

Course Description:

For a business to thrive in our data-driven world, it must treat data as one of its most important assets. Data is crucial for understanding where the business is and where it's headed. Not only can data reveal insights, it can also inform—by guiding decisions and influencing day-to-day operations. This calls for a robust workforce of professionals who can analyze, understand, manipulate, and present data within an effective and repeatable process framework. In other words, the business world needs data science practitioners. This course will enable you to bring value to the business by putting data science concepts into practice. This course includes hands on activities for each topic area.

Course Objectives:

In this course, you will implement data science techniques to address business issues.

You will:

- Use data science principles to address business issues.
- Apply the extract, transform, and load (ETL) process to prepare datasets.
- Use multiple techniques to analyze data and extract valuable insights.
- Design a machine learning approach to address business issues.
- Train, tune, and evaluate classification models.
- Train, tune, and evaluate regression and forecasting models.
- Train, tune, and evaluate clustering models.
- Finalize a data science project by presenting models to an audience, putting models into production, and monitoring model performance.

Prerequisites:

To ensure your success in this course, you should have at least a high-level understanding of fundamental data science concepts, including, but not limited to: types of data, data science roles, the overall data science lifecycle, and the benefits and challenges of data science. You can obtain this level of knowledge by taking the DSBIZ (Data Science for Business Professionals) course.

You should also have experience with high-level programming languages like Python. It is recommended that you complete our Introduction to Python course.

In addition to programming, you should also have experience working with databases, including querying languages like SQL. It is recommended that you complete our SQL Level 1 and Level 2 courses if you do not possess the experience currently.



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Target Audience:

This course is designed for business professionals who leverage data to address business issues. The typical student in this course will have several years of experience with computing technology, including some aptitude in computer programming.

However, there is not necessarily a single organizational role that this course targets. A prospective student might be a programmer looking to expand their knowledge of how to guide business decisions by collecting, wrangling, analyzing, and manipulating data through code; or a data analyst with a background in applied math and statistics who wants to take their skills to the next level; or any number of other data driven situations.

Ultimately, the target student is someone who wants to learn how to extract insights more effectively from their work and leverage that insight in addressing business issues, thereby bringing greater value to the business.

This course is also designed to assist students in preparing for the Certified Data Science Practitioner (CDSP) (Exam DSP-110) certification.

Topics:

Lesson 1: Addressing Business Issues with Data Science

- Topic A: Initiate a Data Science Project
- Topic B: Formulate a Data Science Problem

Lesson 2: Extracting, Transforming, and Loading Data

- Topic A: Extract Data
- Topic B: Transform Data
- Topic C: Load Data

Lesson 3: Analyzing Data

- Topic A: Examine Data
- Topic B: Explore the Underlying Distribution of Data
- Topic C: Use Visualizations to Analyze Data
- Topic D: Preprocess Data

Lesson 4: Designing a Machine Learning Approach

- Topic A: Identify Machine Learning Concepts
- Topic B: Test a Hypothesis

Lesson 5: Developing Classification Models

- Topic A: Train and Tune Classification Models
- Topic B: Evaluate Classification Models

Lesson 6: Developing Regression Models

- Topic A: Train and Tune Regression Models
- Topic B: Evaluate Regression Models



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Lesson 7: Developing Clustering Models

- Topic A: Train and Tune Clustering Models
- Topic B: Evaluate Clustering Models

Lesson 8: Finalizing a Data Science Project

- Topic A: Communicate Results to Stakeholders
- Topic B: Demonstrate Models in a Web App
- Topic C: Implement and Test Production Pipelines

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www.tcworkshop.com or calling us at 800-639-3535