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Learning Style: On Demand

Technology:

Difficulty: Intermediate

Course Duration: 3 Hours

Data Science Research Methods: Python Edition

About this Course:

Data scientists are often trained in the analysis of data. However, the goal of data science is to produce a good understanding of some problem or idea and build useful models on this understanding. Because of the principle of “garbage in, garbage out,” it is vital that a data scientist know how to evaluate the quality of

information that comes into a data analysis. This is especially the case when data are collected specifically for some analysis (e.g., a survey).

In this course, you will learn the fundamentals of the research process—from developing a good question to designing good data collection strategies to putting results in context. Although a data scientist may often play a key part in data analysis, the entire research process must work cohesively for valid insights to be gleaned.

Developed as a powerful and flexible language used in everything from Data Science to cutting-edge and scalable Artificial Intelligence solutions, Python has become an essential tool for doing Data Science and Machine Learning. With this edition of Data Science Research Methods, all of the labs are done with Python, while the videos are language-agnostic. If you prefer your Data Science to be done with R, please see Data Science Research Methods: R Edition.

Course Objectives:

- Data analysis and inference
- Data science research design
- Experimental data analysis and modeling

Audience:

- Data Analyst
- Programmers

Prerequisite:

- A basic knowledge of math
- Some programming experience – Python is preferred.
- A willingness to learn through self-paced study.

Course Outline:

This Course Includes:

- Course Introduction
- How to Write a Research Question
- Collecting Data
- Data Preprocessing and Feature Engineering