Data Science for Data Engineers

COURSES INCLUDE

- Big Data Modeling and Management Systems
- Data Warehouse Concepts, Design, and Data Integration
- Relational Database Support for Data Warehouses
- Functional Programming Principles in Scala
- Google Cloud Platform Fundamentals: Core Infrastructure

This Course Collection features courses from UC San Diego, University of Colorado, École Polytechnique Fédérale de Lausanne, and Google Cloud.

Who this is for
Aspiring data engineers with a quantitative background who want to manage the nitty gritty of their company's data lakes.
Big Data Modeling and Management Systems

DESCRIPTION

Once you've identified a big data issue to analyze, how do you collect, store and organize your data using Big Data solutions? In this course, you will experience various data genres and management tools appropriate for each. You will be able to describe the reasons behind the evolving plethora of new big data platforms from the perspective of big data management systems and analytical tools.

TOPICS

★ Introduction to Big Data Modeling and Management
★ Big Data Modeling
★ Big Data Modeling (Part 2)
★ Working With Data Models
Data Warehouse Concepts, Design, and Data Integration

DESCRIPTION

This is the second course in the Data Warehousing for Business Intelligence specialization. Ideally, the courses should be taken in sequence. In this course, you will learn exciting concepts and skills for designing data warehouses and creating data integration workflows.

TOPICS

- Data Warehouse Concepts and Architectures
- Multidimensional Data Representation and Manipulation
- Data Warehouse Design Practices and Methodologies
- Data Integration Concepts, Processes, and Techniques

SKILLS ACQUIRED

- Pentaho
- Data Integration
- Extract, Transform, Load
- Data Modeling
- Data Warehousing

SPECIALIZATION

Data Warehousing for Business Intelligence

RATING

4.4 out of 5 stars

TIME

~18.2 hours total
3.6 hours per week

TAUGHT BY

Michael Mannino
Information Systems Program
Relational Database Support for Data Warehouses

DESCRIPTION
Relational Database Support for Data Warehouses is the third course in the Data Warehousing for Business Intelligence specialization. In this course, you’ll use analytical elements of SQL for answering business intelligence questions. You’ll learn features of relational database management systems for managing summary data commonly used in business intelligence reporting.

TOPICS
★ DBMS Extensions and Example Data Warehouses
★ SQL Subtotal Operators
★ SQL Analytic Functions
★ Materialized View Processing and Design

SKILLS ACQUIRED
- SQL
- Data Warehousing
- Materialized View
- Big Data
- Apache Hadoop

SPECIALIZATION
Data Warehousing for Business Intelligence

RATING
4.6 out of 5 stars

TIME
~16.8 hours total
3.4 hours per week

TAUGHT BY
Michael Mannino
Information Systems Program
DATA SCIENCE FOR DATA ENGINEERS

École Polytechnique Fédérale de Lausanne

FUNCTIONAL PROGRAMMING PRINCIPLES IN SCALA

DESCRIPTION

Functional programming is becoming increasingly widespread in industry. This trend is driven by the adoption of Scala as the main programming language for many applications. Scala fuses functional and object-oriented programming in a practical package. It interoperates seamlessly with both Java and Javascript.

TOPICS

- Getting Started + Functions & Evaluation
- Higher Order Functions
- Data and Abstraction
- Types and Pattern Matching

SPECIALIZATION

FUNCTIONAL PROGRAMMING IN SCALA

RATING

4.8 out of 5 stars

TIME

- 22.4 hours total
- 3.7 hours per week

TAUGHT BY

Martin Odersky
Professor of Computer Science
Google Cloud Platform Fundamentals: Core Infrastructure

DESCRIPTION
This course introduces you to important concepts and terminology for working with Google Cloud Platform (GCP). You learn about, and compare, many of the computing and storage services available in Google Cloud Platform, including Google App Engine, Google Compute Engine, and Google Container Engine.

TOPICS
- Welcome to GCP Fundamentals: Core Infrastructure
- Module 1: Introduction to Google Cloud Platform
- Lab: Free trial
- Module 2: Getting Started with Google Cloud Platform

SKILLS ACQUIRED
- Google Cloud Platform
- Google App Engine
- Google Compute Engine
- Cloud Computing
- Bigquery

SPECIALIZATION
Architecting with Google Cloud Platform

RATING
4.7 out of 5 stars

TIME
- 9 hours total
- 9 hours per week

TAUGHT BY
Google Cloud Training