

DATA SCIENCE OVERVIEW | TECHNOLOGIES, TOOLS, AND ROLES IN THE DATA-DRIVEN ENTERPRISE

Course Code: 8779

Gain a baseline understanding of the core concepts, tools, and roles in Data Science.

This foundation-level level course introduces the multi-disciplinary Data Science team to the many evolving and related terms. It includes a focus on Big Data, Data Science, Predictive Analytics, Artificial Intelligence, Data Mining, and Data Warehousing. You'll also explore the current state of the art and science, the major components of a modern data science infrastructure, team roles and responsibilities, and level-setting of possible outcomes for your investment.

This course provides a high-level view of current data science related technologies, concepts, strategies, skillsets, initiatives and supporting tools in common business enterprise practices. This goal of this course is to provide you with a baseline understanding of core concepts.

Learn more about this topic. View the recorded webinar [AI + Coronavirus + DI: Using Technology to Restart Your Business Safely](#)

What You'll Learn

Join an engaging learning environment, where you'll explore:

- Foundations: Grids & Virtualization; SOA, ESB/EMB and the Cloud
- The Hadoop Ecosystem: HDFS, Resource Navigators, MapReduce, Spark, and Distributions
- Big Data, NOSQL, and ETL
- ETL: Exchange, Transform, Load
- Handling Data and a Survey of Useful tools
- Enterprise Integration Patterns and Message Busses
- Developing in Hadoop Ecosystem: R, Python, Java, Scala, Pig, and BPMN

- Artificial Intelligence and Business Systems
- Who's on the Team? Roles and Functions in Data Science
- Growing your Infrastructure

This is a seminar-style course that combines engaging expert lectures, pertinent skills, tool demonstrations, and group discussions.

Who Needs to Attend

Business Analysts, Data Analysts, Data Architects, Database Administrators, Network Administrators (Grid), Developers, Technical Manager, or anyone else in the data science realm who needs to have a baseline understanding of the core areas of modern Data Science technologies, practices, and tools.

Prerequisites

Attendees should have:

- Exposure to Enterprise Information Technology
- Familiarity with Relational Databases

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VIRTUAL CLASSROOM LIVE

\$1,294 CAD

1 Day

Virtual Classroom Live Outline

Foundations

- Grids and Virtualization
- Service-Oriented Architecture
- Enterprise Service Bus
- Enterprise Message Bus
- The Cloud

The Hadoop Ecosystem

- HDFS: Hadoop Distributed File System
- Resource Negotiators: YARN, Mesos, and Spark; ZooKeeper
- Hadoop Map/Reduce
- Spark
- Hadoop Ecosystem Distributions: Cloudera, Hortonworks, OpenSource

Big Data, NOSQL, and ETL

- Big Data vs. RDBMS
- NOSQL: Not Only SQL
- Relational Databases: Oracle, MariaDB, DB/2, SQL Server, PostgreSQL
- Key/Value Databases: JBoss Infinispan, Terracotta, Dynamo, Voldemort
- Columnar Databases: Cassandra, HBase, BigTable
- Document Databases: MongoDB, CouchDB/CouchBase
- Graph Databases: Giraph, Neo4J, GraphX
- Apache Hive

- Common Data Formats
- Leveraging SQL and SQL variants

ETL: Exchange, Transform, Load

- Data Ingestion, Transformation, and Loading
- Exporting Data
- Sqoop, Flume, Informatica, and other tools

Enterprise Integration Patterns and Message Busses

- Enterprise Integration Patterns: Apache Camel and Spring Integration
- Enterprise Message Busses: Apache Kafka, ActiveMQ, and other tools

Developing in Hadoop Ecosystem

- Languages: R, Python, Java, Scala, Pig, and BPMN
- Libraries and Frameworks
- Development, Testing, and Deployment

Artificial Intelligence and Business Systems

- Artificial Intelligence: Myths, Legends, and Reality
- The Math
- Statistics
- Probability
- Clustering Algorithms, Mahout, MLLib, SciKit, and Madlib
- Business Rule Systems: Drools, JRules, Pegasus

The Team

- Agile Data Science
- NOSQL Data Architects and Administrators
- Developers
- Grid Administrators
- Business and Data Analysts
- Management
- Evolving your Team
- Growing your Infrastructure

Sep 12 - 12, 2025 | 10:00 AM - 6:00 PM EST

Oct 24 - 24, 2025 | 10:00 AM - 6:00 PM EST

Dec 5 - 5, 2025 | 10:00 AM - 6:00 PM EST



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PRIVATE GROUP TRAINING

1 Day

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