

COURSE: Data Science with R and SQL Server

Introducing the language, statistics, data mining, and machine learning with R and using R in SQL Server and Microsoft BI stack.

R is the most popular environment and language for statistical analyses, data mining, and machine learning.

Managed and scalable version of R runs in SQL Server, Power BI, and Azure ML. The main topic of the course is the R language. However, the course also shows how to use the languages and tools available in MS BI suite for data science applications, including Python, T-SQL, Power BI, Azure ML, and Excel. The labs focus on R; the demos also show the code in other languages.

Summary

Duration: 4 days/ 32 hours

Level: 300*

Delivery method: In class

Language: English

* The difficulty level is consistent with the widely accepted scale of technical difficulty of training on Microsoft Corp

AUDIENCE:

- Data Scientists, Data Analysts and Data Engineers
- BI Developers who need to learn advanced analytics

AFTER THE TRAINING ATTENDEES WILL BE ABLE TO:

- Program with R from the scratch
- Understand a lifecycle of a data science project
- Perform the data overview and do the most tedious task in a project, the data preparation task
- Understand and use more advanced methods for researching linear dependencies
- Do feature selection, starting with the basics of matrix calculations
- Perform more advanced data mining and machine learning analyses, including supervised and unsupervised learning
- Get familiar with forecasting, text mining, and reinforcement learning. Finally, the attendees also learn how to use the R code in SQL Server, Azure ML, and Power BI

TOPICS:

Module 1. Introducing data science and R

Module 2. Introducing Python

Module 3. Data overview

Module 4. Data preparation

Module 5. Associations between two variables and visualizations of associations

Module 6. Feature selection and matrix operations

Module 7. Unsupervised learning

Module 8. Supervised learning

Module 9. Modern topics

Module 10. R in SQL Server and MS BI