aractech

Global Learning for Operational Leaders

DATA MANAGEMENT AND BUSINESS INTELLIGENCE | DMBI-012

Foundations of Data and Models Regression Analytics

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Course content

Why Attend

Organizations today rely heavily on data to guide decisions, improve performance, and predict future outcomes. Understanding how to structure data and build reliable statistical models is a critical skill across all industries.

This course provides a strong foundation in data handling and regression modeling, enabling participants to interpret relationships between variables, build predictive models, and make evidence-based decisions using structured analytical methods.

Course Methodology

• Step-by-step explanation of key statistical concepts

• Practical exercises using structured datasets

• Guided model building and interpretation sessions

• Interactive discussions to reinforce learning

• Focus on real-world analytical thinking and application

Course Objectives

• Understand the fundamentals of data types and structures

• Apply basic statistical techniques for data analysis

• Build and interpret simple and multiple regression models

• Identify relationships between variables in datasets

• Evaluate model performance and accuracy

• Use regression outputs to support decision-making

Target Audience

• This course is suitable for:

• Data Analysts and Junior Data Scientists

• Business Analysts

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Course outline

Detailed course outline

Day-by-day outline for Foundations of Data and Models Regression Analytics.

Day 1 - Introduction to Data and Statistical Foundations

• Understanding data types (categorical, numerical, structured)

• Data collection and preparation basics

• Descriptive statistics (mean, median, variance, etc.)

• Data visualization fundamentals

• Correlation and relationship between variables

• Introduction to analytical thinking

Day 2 - Introduction to Regression Analysis

• Concept of regression modeling

• Simple linear regression

• Relationship between dependent and independent variables

• Interpreting slope and intercept

• Error terms and model fit

• Practical exercises using sample data

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Day 3 - Multiple Regression Analysis

• Expanding to multiple variables

• Building multiple regression models

• Understanding coefficients and variable impact

• Multicollinearity concept (intro level)

• Model interpretation techniques

• Hands-on regression modeling practice

Day 4 - Model Evaluation and Performance

• Measuring model accuracy (R^2 and error metrics)

• Residual analysis and interpretation

• Detecting model weaknesses

• Overfitting and underfitting concepts

• Improving model reliability

• Basic validation techniques

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Day 5 - Practical Applications of Regression Modeling

• Applying regression to real-world datasets

• Forecasting and prediction basics

• Using regression outputs for decision-making

• Common pitfalls in data analysis

• Best practices in reporting results

• Final practical exercise and review

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Seminar dates

Available seminar dates

Live dates and pricing for Foundations of Data and Models Regression Analytics generated from the course details page.

Date	Location	Format	Fee
11 - 15 May 2026	Munich	Classroom	**€2,415**
8 - 12 June 2026	Amsterdam	Classroom	**€2,975**
6 - 10 July 2026	London	Classroom	**€2,940**
10 - 14 August 2026	Munich	Classroom	**€2,415**
14 - 18 September 2026	Vienna	Classroom	**€2,975**
5 - 9 October 2026	Barcelona	Classroom	**€2,695**
16 - 20 November 2026	Paris	Classroom	**€3,150**

Live online option	Online delivery is available at €1,250.