BLACKBIRD FOR TRAINING

# Fundamentals of Data Analysis

8 – 12 November 2027
Prague (Czech Republic)



# Fundamentals of Data Analysis

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## Introduction

In today's fast-paced world, where decisions are increasingly driven by data, learning data analysis has become a strategic necessity for any organization seeking excellence and competitiveness. It is no longer limited to statisticians or IT teams—executives, managers, and professionals across departments now need to master the fundamentals of data analysis for beginners.

This program is designed to provide participants with a practical understanding of data analysis concepts and essential tools to extract insights that support decision-making in key sectors such as oil and gas, banking and financial services, telecommunications, government, marketing, and sales.

The real value lies in the ability to interpret data and turn it into meaningful stories and actionable insights, enabling organizations to improve operational efficiency, boost productivity, and achieve measurable outcomes.

## Course Objectives

- Understand the basic concepts of data analysis.
- Learn about the most common tools and techniques used in data analysis.
- Apply practical steps to explore and clean data.
- Build skills in using tables, charts, and visualizations.
- Practice analyzing real-life case studies and connecting them to business scenarios.
- Develop the ability to interpret results and present recommendations.
- Strengthen critical thinking when working with data.
- Gain foundational skills that prepare you for advanced levels of data analysis.

## Course Outlines

### Day 1: Introduction to Data Analysis

- Defining data analysis and its importance in modern organizations.
- Exploring the data lifecycle from collection to decision-making.
- Understanding types of data quantitative, qualitative, structured, unstructured.
- Differentiating between descriptive, predictive, and prescriptive analysis.
- Overview of commonly used tools such as spreadsheets and dashboards.
- Practical applications of data analysis in public and private sectors.



## Day 2: Tools and Strategies for Data Exploration

- Learning methods for exploring datasets.
- Using pivot tables to identify patterns.
- Creating simple charts to visualize trends.
- Introducing measures of central tendency and variability.
- Case studies on reading financial or operational datasets.
- Hands-on exercise: exploring a sample dataset.

## Day 3: Data Cleaning and Preparation

- Recognizing common errors in datasets and how to fix them.
- Identifying and handling missing values.
- Detecting outliers and understanding their impact.
- Formatting and standardizing data for accuracy.
- Using formulas and basic functions to clean data.
- Practical exercise: transforming raw data into a clean dataset.

## Day 4: Applied Analysis and Visualizations

- Applying descriptive analysis on real-world datasets.
- Creating advanced charts such as scatter plots and histograms.
- Building interactive dashboards for monitoring performance.
- Understanding the importance of data storytelling.
- Practical activity: preparing shareable visual reports.
- Discussing the role of visualizations in supporting strategic decisions.

## Day 5: Presenting Results and Data-Driven Decisions

- Techniques for presenting results to decision-makers.
- Writing evidence-based analytical reports.
- Using data to back up actionable recommendations.
- Reviewing case studies from various industries.
- Final project assessment for participants.
- Comprehensive review of the tools and concepts learned.



## Why Attend This Course: Wins & Losses!

- Gain a strong foundation in data analysis from the ground up.
- Learn user-friendly tools applicable in daily work.
- Connect theoretical knowledge with practical business cases.
- Enhance decision-making based on evidence.
- Improve efficiency and reduce errors in data handling.
- Apply newly acquired skills across multiple sectors.
- Support professional growth and prepare for advanced training.
- Strengthen collaboration with data and technical teams.

## Conclusion

The Data Analysis for Beginners course is a strategic starting point for professionals and organizations that recognize data as the backbone of decision-making in today's world. By combining theory with hands-on practice, participants gain a solid understanding of data analysis concepts and practical tools to address daily challenges. Graduates of this course will be able to transform raw data into actionable insights, driving productivity, efficiency, and stronger organizational performance.

**Whether your goal is to advance your career or improve your institution's results, this program offers the foundation needed to progress toward advanced data analysis and strategic data management.**

