

ADVANCE DATA ANALYSIS TECHNIQUE

Zanzibar - Tanzania
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\$5,500



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TRAINING CENTER



Introduction

Advance Data Analysis Technique Training Course builds the practical skills that modern analysts need to turn raw data into confident decisions. The programme moves beyond basic reporting and explores statistical modelling, predictive analytics, and data storytelling. Participants work with real datasets and industry-standard tools, so each technique connects directly to daily business problems. Furthermore, the course covers data quality, visualisation, and dashboard design in a structured sequence. As a result, learners leave with methods they can apply immediately to forecasting, performance measurement, and operational improvement.

Advance Data Analysis Technique Course Objectives

- Apply descriptive, diagnostic, predictive, and prescriptive analytics to business problems.
- Clean, transform, and validate large datasets using Power Query and SQL.
- Build regression, classification, and time-series forecasting models.
- Interpret statistical results and test hypotheses with confidence.
- Design clear dashboards and data visualisations in Power BI and Tableau.
- Use Python libraries such as Pandas, NumPy, and Scikit-learn for analysis.
- Detect outliers, biases, and data quality issues before reporting.
- Communicate findings through data storytelling and executive summaries.
- Automate recurring reports and reduce manual reporting effort.
- Support evidence-based decisions across departments and management levels.

Course Methodology

- Instructor-led sessions with live demonstrations on real datasets.
- Hands-on labs where participants analyse, model, and visualise data.
- Case studies drawn from finance, operations, marketing, and healthcare.

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- Group exercises that build dashboards and forecasting models.
- Guided discussions on interpreting results and avoiding common errors.
- Continuous feedback and a final applied project presentation.

Who Should Take This Course

- Data analysts and business analysts seeking advanced techniques.
- Business intelligence and reporting specialists.
- Managers and team leaders who rely on data for decisions.
- Finance, marketing, operations, and supply chain professionals.
- IT professionals moving into analytics roles.
- Researchers, engineers, and consultants working with quantitative data.

Advance Data Analysis Technique Course Outlines

Day 1: Foundations of Advanced Data Analysis

- The analytics maturity model and the four analytics types.
- Data collection methods, sampling, and source evaluation.
- Data cleaning workflows in Power Query and Excel.
- SQL fundamentals for filtering, joining, and aggregating data.
- Handling missing values, duplicates, and inconsistent formats.
- Descriptive statistics: mean, median, variance, and distribution.
- Data quality frameworks and validation checklists.

Day 2: Statistical Analysis and Hypothesis Testing

- Probability concepts and sampling distributions.



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- Confidence intervals and margin of error.
- Hypothesis testing: t-tests, chi-square, and ANOVA.
- Correlation analysis and interpreting coefficients.
- Regression foundations: simple and multiple linear models.
- Assumption checks, multicollinearity, and residual analysis.
- Reporting statistical findings for non-technical audiences.

Day 3: Predictive Modelling and Machine Learning

- Supervised versus unsupervised learning approaches.
- Feature engineering and variable selection.
- Classification models: logistic regression, decision trees, random forests.
- Model evaluation with accuracy, precision, recall, and ROC curves.
- Clustering with k-means for customer and segment analysis.
- Cross-validation and overfitting control.
- Building models in Python with Scikit-learn.

Day 4: Data Visualisation and Dashboard Design

- Principles of visual encoding and chart selection.
- Power BI and Tableau dashboard development.
- KPI design and performance metrics frameworks.
- Interactive filters, drill-downs, and slicers.
- Colour, layout, and accessibility best practices.
- Data storytelling: narrative structure and executive summaries.
- Publishing, refreshing, and governing dashboards.





Day 5: Time Series, Automation, and Applied Project

- Time series components: trend, seasonality, and noise.
- Forecasting methods: moving average, exponential smoothing, ARIMA.
- Forecast accuracy measures such as MAPE and RMSE.
- Automating reports with Power Query and Python scripts.
- Integrating analytics into business planning cycles.
- Capstone project: end-to-end analysis and presentation.
- Peer review and action planning for workplace application.

Conclusion

By successfully completing Advance Data Analysis Technique Training Course, participants will have acquired advanced skills in statistical analysis, predictive modelling, dashboard design, and data storytelling. They will be able to clean complex datasets, build forecasting models, and translate results into clear business recommendations. In addition, the programme strengthens analytical confidence and supports evidence-based decision-making across the organisation. Gentex Training Center delivers this course with practical labs and expert guidance that prepare participants for real analytical challenges.

FAQs for the Advance Data Analysis Technique course

Q1 What is the "Advance Data Analysis Technique" course about?

It is a five-day programme that teaches advanced methods for analysing data including statistics, predictive modelling, and visualisation and turning findings into practical business decisions.



Q2 What are the key benefits of the "Advance Data Analysis Technique" course?

Participants gain faster, more accurate analysis, stronger forecasting accuracy, clearer dashboards, reduced manual reporting, and greater influence in management discussions through reliable, evidence-based recommendations.

Q3 What skills will I gain from the "Advance Data Analysis Technique" course?

You will gain advanced statistical analysis, predictive modelling, data visualisation and dashboard design, and data storytelling and reporting skills.

Q4 What tools, methods, or standards are covered in the "Advance Data Analysis Technique" course?

The course covers SQL, Power Query, Power BI, Tableau, and Python libraries including Pandas and Scikit-learn, alongside regression analysis, ARIMA forecasting, hypothesis testing, and CRISP-DM methodology.

Q5 How is the "Advance Data Analysis Technique" course applied in real-world practice?

Participants apply the techniques to sales forecasting, customer segmentation, operational efficiency analysis, and KPI reporting using real datasets to build models and dashboards they can replicate in their own workplace.