



FACE-TO-FACE
CLASSROOM TRAINING

Data Analysis Professional

Dates: September 22-24, 2024

Location: Kuwait City, Kuwait

L3RN

Radiating Knowledge

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L3ORON Institute

 **KFAS**
مؤسسة الكويت للتقدم العلمي
Kuwait Foundation for the Advancement of Sciences

Mohammad EL MEDAWAR



Mr. Mohammad El Medawar is a Microsoft Certified Trainer, expert training professional and consultant, and a speaker with 10+ years of experience in the Information Technology field. His areas of expertise are Data analysis and visualization, artificial intelligence, machine learning, infographics, mobile app development, accompanied by broad international exposure spanning across diverse cultural groups within MENA, and Asia.

Over the course of his career, Mr. El Medawar has delivered numerous training programs that varied in participants' size and complexity for various large regional organizations. He has spent his ten career years in delivering advanced IT topics, where he has helped subsidiaries of major global organizations implement solutions, develop IT strategies, optimize business processes, improve customer satisfaction through IT enabled solutions, and increasing availability through deploying multi-channel delivery of services. His focus has always been on technical strategy execution, managing the execution of strategic initiatives and major digital transformational efforts that improve customer and employee experience, processes and performance improvement and operational excellence while aligning with the overall organization strategy.

As an instructor, Mohammad El Medawar is registered trainer at Microsoft, and is affiliated with several other training organizations, he has conducted formal and certification courses on Data Analysis, Mi-

crosoft Office, Ethical Hacking, and IT enabled Transformation. In addition to that, he is a regular speaker at regional congresses on the topics of integrating trendy IT tools in ministries.

Mohammad El Medawar has a very strong academic background as he holds a Bachelor and a Master's degree in Computer Science, and holds several professional certifications as Microsoft Office Specialist Master, ICDL, IC3, PHP, Online Safety. In addition to that, he was chosen several times as a judge and mentor in the jury of the train the trainer courses.

Mohammad El Medawar holds several voluntary leadership roles after participating as a mentor and judge in numerous Startup Sprints and IT bootcamps.

His teaching style is based on the problem solving technique. He explains the problem that every employee is facing at work and the struggle that he faces, then he introduces the solution by explaining the topic. Mr. El Medawar truly believes in Einstein's quote that says "If you can't explain it simply, you don't understand it well enough"

Who We Are

LEORON is the leading corporate training and EdTech company in the EMEA region, with the most comprehensive learning and development solutions in all strategic corporate functions, including Corporate Finance, HR, Procurement and SCM, Technology, Quality, Operations and Engineering.

Through instructor-led sessions, in-company training, and coaching, our faculty of experts deliver over 1300+ programs annually, while 32,000+ professionals are equipped with up to date relevant education and the latest tech solutions across the EMEA region.

We help our valued clients with a wide range of services, including Training Needs Analysis, Competency Development and Assessment, and custom built e-Learning solutions that cater to specific industries and knowledge areas.

LEORON mission remains boosting competitiveness of our clients worldwide through continuous learning, while we strive to achieve our vision of becoming the best quality corporate training and EdTech Company in the EMEA and the world.



COURSE OVERVIEW

The Data Analysis Professional course is a comprehensive 5-day program designed to equip participants with the essential skills and knowledge needed to excel in data analysis. Through a combination of theory and hands-on practice, participants will learn to navigate the data analysis process, perform data preprocessing, explore data visually, conduct statistical analysis, utilize Python and Pandas for data manipulation, and gain insights into advanced topics like feature engineering and time series analysis. The course culminates in a practical project, ensuring participants can apply their skills effectively in real-world scenarios.



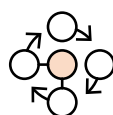
LEARNING OUTCOMES

- **Data Proficiency:** Acquire a solid understanding of different data types, preprocessing techniques, and data transformation methods to ensure data quality and reliability.
- **Exploratory Data Analysis (EDA):** Develop the ability to analyze data visually and statistically, identifying patterns, correlations, and anomalies for better decision-making.
- **Statistical Analysis:** Learn essential statistical concepts, hypothesis testing methods, and interpretation of results to make informed decisions backed by data-driven insights.
- **Python and Pandas Proficiency:** Gain hands-on experience in using Python and Pandas to load, clean, transform, and analyze data efficiently, enhancing analytical capabilities.
- **Advanced Techniques:** Explore advanced topics such as feature engineering, time series analysis, and introductory machine learning, enabling you to tackle complex data analysis tasks effectively.



WHO SHOULD ATTEND

- **Aspiring Data Analysts:** Individuals kickstart a career in data analysis and gain proficiency in foundational concepts and tools.
- **Business Professionals:** Managers and decision-makers seeking to enhance their ability to extract valuable insights from data to drive strategic choices.
- **Researchers and Academics:** Those aiming to bolster their data analysis skills for research, publication, or academic pursuits.
- **Data Enthusiasts:** Anyone with an interest in data analysis, regardless of background, who wants to harness the power of data for informed decision-making.



TRAINING METHODOLOGY

- **Lectures:** Instructors may use lectures to present course materials, including theories, concepts, and case studies.
- **Interactive Discussions:** Instructors may use interactive discussions to facilitate student engagement and promote the exchange of ideas and experiences among participants.
- **Practical Exercises:** Instructors may use practical exercises, such as case studies and simulations, to provide participants with opportunities to apply the course concepts and practice their skills.

DAY 1

Introduction to Data Analysis and Data Preprocessing

- Introduction to Data Analysis and its importance in decision-making
- Understanding the Data Analysis Process: From data collection to insights
- Exploring different types of data: Structured vs. Unstructured
- Data Preprocessing Techniques: Data Cleaning: Dealing with missing values and outliers
- Data Transformation: Normalization, standardization, and encoding categorical variables

Exploratory Data Analysis (EDA) Techniques

- The role of Exploratory Data Analysis in understanding data
- Univariate Analysis: Descriptive statistics, histograms, box plots
- Bivariate Analysis: Correlation, scatter plots, pair plots
- Multivariate Analysis: Heatmaps, correlation matrices
- Data Visualization with libraries like Matplotlib and Seaborn

DAY 2

Statistical Analysis and Hypothesis Testing

- Introduction to Statistical Analysis and its applications in data analysis
- Probability Distributions: Normal, binomial, and more
- Hypothesis Testing:
 - Null and alternative hypotheses
 - t-tests, chi-square tests, ANOVA
- Understanding p-values, significance levels, and confidence intervals

Data Analysis with Python and Pandas

- Introduction to Python for Data Analysis:
- Basics of Python programming
- Overview of Pandas library for data manipulation
- Data Loading and Cleaning with Pandas:
- Reading various data formats
- Handling missing data using Pandas
- Data Transformation and Aggregation:
- Grouping, merging, pivoting tables
- Case Study: Analyzing a real-world dataset using Pandas

DAY 3

Advanced Topics in Data Analysis

- Feature Engineering and Selection:
- Creating new features from existing data
- Selecting relevant features for analysis
- Time Series Analysis:
- Basics of time series data
- Seasonality, trends, and forecasting
- Introduction to Machine Learning for Data Analysis:
- Overview of supervised and unsupervised learning
- Using scikit-learn for simple machine learning tasks

! Laptop with MS Excel is required for participants attending this program

To Register Please Visit KFAS
Learn Platform:

<http://learn.kfas.org.kw>



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