



IT204: Data Driven Technologies: Applications and Case Studies

Training Description:

This training course offers a comprehensive exploration of data-driven technologies, focusing on their practical applications through real-world case studies. Participants will delve into the fundamentals of data analysis, machine learning, and artificial intelligence, gaining hands-on experience through practical exercises and industry-specific examples. By the end of the course, participants will be equipped with the knowledge and skills to leverage data-driven approaches effectively across various domains.

Training Objectives:

By the end of the training, participants will be able to:

- ✓ Understand the core concepts and principles of data-driven technologies
- ✓ Explore practical applications of data analysis, machine learning, and artificial intelligence through case studies
- ✓ Develop proficiency in data collection, preprocessing, analysis, and interpretation
- ✓ Gain hands-on experience through interactive exercises and industry-relevant projects
- ✓ Learn best practices for implementing data-driven solutions and addressing ethical considerations
- ✓ Enhance communication skills for effectively conveying insights derived from data

Training Designed for:

This course is intended for Data analysts and data scientists aiming to broaden their understanding of practical implementations, Business leaders and decision-makers interested in harnessing data insights for strategic planning and decision-making, Software developers and engineers looking to integrate data-driven solutions into their projects, professionals pursuing degrees in fields related to data science, computer science, business analytics, or engineering.

Training Requirement:

"Hand's on practical sessions, equipment and software will be applied during the course if required and as per the client's request."

This training course is available upon request in English or Arabic, virtual online live or face to face public/inhouse. Content, location and duration can be adapted to your specific wishes. It is therefore possible to focus on specific modules of the training course as per client's learning needs and objectives. Further, it should be forwarded to us a month prior to the course dates.

Training Program:

DAY ONE:

❖ Foundations of Data-Driven Technologies

- Introduction to data-driven technologies and their significance in modern contexts
- Overview of data analysis techniques and tools
- Case studies highlighting the transformative impact of data-driven approaches in diverse industries
- Practical session: Basic data analysis using Python/R

DAY TWO:

❖ Data Collection and Preprocessing

- Methods for data acquisition, storage, and preprocessing
- Techniques for cleaning, transforming, and handling missing data
- Case study: Data collection and preprocessing challenges in real-world scenarios
- Hands-on exercise: Data preprocessing using pandas/dplyr

DAY THREE:

❖ Machine Learning Essentials

- Introduction to machine learning algorithms: supervised and unsupervised learning
- Model evaluation, validation, and selection methodologies
- Case studies demonstrating machine learning applications in business, healthcare, and other domains
- Practical session: Implementing supervised learning algorithms using scikit-learn/caret

DAY FOUR:

❖ Advanced Machine Learning Techniques

- Exploring advanced machine learning concepts: ensemble methods, deep learning, and natural language processing
- Ethical considerations in machine learning and AI
- Case study: Advanced machine learning applications in industry-specific contexts
- Hands-on exercise: Building deep learning models with TensorFlow/Keras

DAY FIVE::

❖ Data Visualization and Interpretation

- Importance of data visualization in conveying insights and supporting decision-making
- Principles of effective data visualization design
- Case study: Visualization techniques for communicating complex data relationships
- Practical session: Creating interactive data visualizations using matplotlib/seaborn/ggplot2

❖ Course Conclusion

❖ POST-ASSESSMENT and EVALUATION

Training Methodology:

This interactive training course includes the following training methodologies as a percentage of the total tuition hours:

- 30% Lectures, Concepts, Role Play
- 70% Workshops & Work Presentations, Techniques, Based on Case Studies & Practical Exercises, Gamification, Software & General Discussions
- Pre and Post Test

Training Certificate(s):

CMCT Internationally recognized certificate(s) will be issued to each participant who completed the course.

Training Fees:

As per the course location - This rate includes participant's manual, hand-outs, buffet lunch, coffee/tea on arrival, morning & afternoon of each day.

Note: The 5% VAT (Value Added Tax), will be effective starting 01st of January 2018 as per the new regulation from the UAE Government. The VAT applies for all quotation both for local and abroad.

Training Timings:

Daily Timings:

07:45 - 08:00	Morning Coffee / Tea
08:00 - 10:00	First Session
10:00 - 10:20	Recess (Coffee/Tea/Snacks)
10:20 - 12:20	Second Session
12:20 - 13:00	Recess (Prayer Break & Lunch)
13:00 - 14:00	Last Session

For training registrations or in-house enquiries, please contact:

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