Enhancing Skills for Data Management, Security and Warehousing

Course Overview:

As the Big Data phenomenon appeared Organizations are relying more and more on adequate Data Analytics and Data Science to properly plan, prepare, and react to business challenges, as well as to innovate the way they are conducting their business and increase the level of service to their customers while at the same time reduce costs and streamline their processes. It has become so widespread that the term Industrial Revolution 4.0 become a household name.

With Big Data comes the challenge of data management, as just having the data does not suffice, Data Management is defined as an administrative process that includes acquiring, validating, storing, protecting, and processing required data to ensure the accessibility, reliability, and timeliness of the data for its users. This course focuses on the need to properly warehouse the data as in the era of big data, a wide variety of data warehousing and security solutions exist, and choosing the right approach is the most difficult decision the companies need to make

Course Objectives:

At the end of this course, the participants will be able to:

- Learn how to plan the steps in a data warehousing project
- Acquire the knowledge to determine why there is an escalating need for strategic information
- Get acquainted with the fundamental problem of data management and data warehousing
- Learn the strategies for data security
- Be able to determine what methods and tactics you should use in the Big Data era

Course Coverage:

Topic 1: Agile Enterprise Data Warehousing:

- Agile Manifesto
- The Scrum Method
- Extreme Programming Approach
- Lean Software Development
- Sources for Data Warehousing Standards

Topic 2: Data Security Strategies:

- How to determine if you can trust your data?
- ISO Standard ISO/IEC 17728
- EU General Data Protection Regulation (GDPR)
- Protecting the Data Warehouse
- The Lifecycle of a Dataset

Topic 3: Data Warehouse: The Building Blocks:

- Data Defining Features
- Data Warehouses and Data Marts
- Data Warehouse Components Overview
- Dimensional Analysis of Data
- Requirements as the Driving Force for Data Warehousing

Topic 4: Data Warehouse: Architecture and Infrastructure Requirements for Data Warehousing:

- Hardware and Operating Systems
- Database Software
- Automation of Warehousing Tasks
- Data Warehouse Architecture
- Business Conceptual Model
- Logical Data Model
- Physical Data Model

Topic 5: Data Management, Security, and Warehousing Implementation:

- Data Extraction, Transformation, and Loading
- Data Design and Data Preparation-data Dimensional Modeling
- Key Elements of Data Quality
- Matching Information with the User
- On-Line Analytical Processing (OLAP)
- Big Data Processing in Cloud Environments

Targeted Groups:

- Systems Analysts
- Programmers
- Data Analysts
- Database Administrators
- Project Leaders
- Software Engineers
- Managers
- Any Professional involved in Data Analytics