XALTIUS
Towards Higher Excellence

Be the Data Owner!

Data Collection and Analysis

It is through data collection that any sector, business or management has the quality information they need to make informed decisions from further analysis, study, and research.

www.xaltiusacademy.com

Start your data science journey with us.

No prerequisites are required to attend this course.

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A short course in 16 hours.

What You'll Learn

Data collection is a process by which data is gathered and measured. All this must be done before high-quality research can begin and answers to lingering questions can be found. Data collection is usually done with software, and there are many different data collection procedures, strategies, and techniques.

So why is data collection important? It is through data collection that a business or management has the quality information they need to make informed decisions from further analysis, study, and research. Without data collection, companies would stumble around in the dark using outdated methods to make their decisions. Data collection instead allows them to stay on top of trends, provide answers to problems, and analyze new insights to great effect.

Learn how you can mange your data efficiently.

About the Course

These are the key takeaways that participants will gain:

- Identifying data sources
- Perspectives of survey life cycle
- Modes of data collection
- Qualitative data collection methods
- How to handle missing data
- Data mining techniques
- How to perform data modelling and evaluation
- Available data mining tools

It's about your goals & your future!

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Course Outline

Module 1: Data Collection and Quality Framework

This module provides a general framework that allows participants not only understand each step required for a successful data collection and analysis, but also help to identify errors associated with different data sources. Participants will learn some metrics to quantify each potential error and can describe the quality of a data source.

- Research Designs and Data Sources
- Measurements and Analysis Plan
- Quality of Data
- Survey Life Cycle

Module 2: Modes of Data Collection

The module reviews a range of survey data collection methods that are both interview-based (face-to-face and telephone) and self-administered (paper questionnaires that are mailed and those that are implemented online, i.e., as web surveys). Mixed mode designs are also covered as well as several hybrid modes for collecting sensitive information.

- Classic Modes of Survey Data Collection
- Interviewers and Interviewing
- Emerging Modes, new Data Sources

Module 3: Qualitative Data Collection Methods

This module presents a detailed overview of qualitative methods of data collection, including observation, interviews, and focus group discussions. We will start with an in-depth overview of each method, explore how to plan for data collection, including developing data collection guides, and discuss techniques for managing data collection.

- Observation Techniques
- Interviews Designs
- Focus Room Discussions
- Transcription

Module 4: Sampling and Handling Missing Data

This module covers the steps used in weighting sample surveys, including methods for adjusting for nonresponse. Alternative techniques for imputing values for missing items will be discussed.

- Sampling as a Research Tool
- Randomization
- General Steps in Weighting
- Imputing for Missing Items

Module 5: Data Mining and Analysis

In this module participants will learn how data mining can potentially find useful patterns from huge data sets. The insights derived from Data Mining are used for marketing, fraud detection, scientific discovery, etc.

- Data Mining Implementation Process
- Data Preparation and Transformation
- Data Modelling and Evaluation
- Data Mining Process
- Data Mining Techniques
- Applications of Data Mining

Module 6: Data Mining and Business Intelligence Tools

Based on the nature of data, there is a need for business to decide which tool is suitable to handle the data. In this module participants will learn what all tools are available in the market.

- Introduction to Data Mining Tools
- Business Intelligence Tools
- Gartner Analysis Report
- Comparison among BI Tools

Join us & launch your career in data science.

It's time to upskill for the Industry 4.0

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