Introduction to Offshore Decommissioning Data Analysis Techniques

Date	Venues	($)Fees	Book your seat
14 Jan -18 Jan 2024	Kuala Lumpur	3300	Register Now

Introduction

Corporate ethos which demands continual improvement in work place efficiencies and reduced operating, maintenance, support service and administration costs means that managers, analysts and their advisors are faced with ever-challenging analytical problems and performance targets. To make decisions which result in improved business performance it is vital to base decision making on appropriate analysis and interpretation of numerical data.

Objectives

This training seminar aims to provide those involved in analysing numerical data with the understanding and practical capabilities needed to convert data into information via appropriate analysis, and then to represent these results in ways that can be readily communicated to others in the organisation.

Objectives include:

- To provide delegates with both an understanding and practical experience of a range of the more common analytical techniques and representation methods for numerical data
- To give delegates the ability to recognize which types of analysis are best suited to particular types of problems
- To give delegates sufficient background and theoretical knowledge to be able to judge when an applied technique will likely lead to incorrect conclusions
- To provide delegates with a working vocabulary of analytical terms to enable them to converse with people who are experts in the areas of data analysis, statistics and probability, and to be able to read and comprehend common textbooks and journal articles in this field
- To introduce some basic statistical methods and concepts
- To explore the use of Excel 2010 or 2013 for data analysis and the capabilities of the Data Analysis Tool Pack

It should be noted that the course does not cover the subjects of data acquisition, databases, data management, data warehousing or the analysis of text-based information.

Training Methodology

The course adopts a problem-based learning approach, in which delegates are presented with a series of real numerical data analysis problems drawn from the widest possible range of applications – from engineering to finance and from logistics to quality control.

Each problem presents and exemplifies the need for a different data analysis approach. For reasons of time constraint, it will not be possible to develop solutions during the course to all of the problems posed. Nevertheless, all delegates will be given comprehensive solutions to all of the problems, to take away with them at the end of the course, as future learning resources.

The course is entirely applications-oriented, minimizing the time spent on the mathematics of analysis and maximizing the time spent on the use of practical methods in Excel, along with the understanding why such methods work.

Delegates will spend almost all of the time exploring Excel's data analysis and representation functionality, including the Data Analysis Tool Pack, to investigate the totally realistic data analysis problems.

Organizational Impact

Organisations that are able to make optimum decisions will enhance their ability to compete on the global stage. The participants on this course, and therefore the teams that they work within will, as a result of their training, be better positioned to influence the organisation with recommendations based on objective data analysis that in turn produce a higher performing business.

Individuals exposed to this training will develop new insights into the use of Excel and the field of data analysis, and they will learn why the best companies in the world see data analysis as being essential to delivering the right quality products and services at the lowest costs.

Personal Impact

Participants will gain an understanding and practical experience of a range of the more common analytical techniques and data representation methods, which have direct relevance to a wide range of issues. The ability to recognize which types of analysis are best suited to particular types of issue will be addressed, and delegates will be given sufficient background and theoretical knowledge to be able to judge when an applied technique will likely lead to incorrect conclusions.

Who Should Attend?

The course has been designed for professionals whose jobs involve the manipulation, representation, interpretation and/or analysis of data. Familiarity with a PC and in particular with Microsoft Excel (2003, 2007, 2010 or 2013) is assumed.

The course involves extensive computer-based data analysis using Excel 2010 and therefore delegates will be expected to be numerate and to enjoy working with numerical data on a computer.

SEMINAR OUTLINE

The Basics

- Sources of data, data sampling, data accuracy, data completeness, simple representations, dealing with practical issues.

Fundamental Statistics

- Mean, average, median, mode, rank, variance, covariance, standard deviation, “lies, more lies and statistics”, compensations for small sample sizes, descriptive statistics, insensitive measures.

Basics of Data Mining and Representation

- Single, two and multi-dimensional data visualisation, trend analysis, how to decide what it is that you want to see, box and whisker charts, common pitfalls and problems.

Data Comparison

- Correlation analysis, the auto-correlation function, practical considerations of data set dimensionality,

multivariate and non-linear correlation.

Histograms and Frequency of Occurrence

- Histograms, Pareto analysis (sorted histogram), cumulative percentage analysis, the law of diminishing return, percentile analysis.

Frequency Analysis

- The Fourier transform, periodic and a-periodic data, inverse transformation, practical implications of sample rate, dynamic range and amplitude resolution.

Regression Analysis and Curve Fitting

- Linear and non-linear regression, order; best fit; minimum variance, maximum likelihood, least squares fits, curve fitting theory, linear, exponential and polynomial curve fits, predictive methods.

Probability and Confidence

- Probability theory, properties of distributions, expected values, setting confidence limits, risk and uncertainty, ANOVA (Analysis of Variance).

Some More Advanced Ideas

- Pivot tables, the Data Analysis Tool Pack, internet-based analysis tools, macros, dynamic spreadsheets, sensitivity analysis.

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