Statistical Communications

INTRODUCTION

- This Statistical Communications training course will provide delegates with the knowledge and understanding on how to provide meaning of statistical data through context. Any statistical methods have the purpose to provide the researchers with the ways to gather and collect the data, ways to analyze the data to make the sense of the data itself. As such, the role of context is critical and the importance of context is among the things that distinguish statistics from mathematics. Communication of statistical results and statistical problems derives from the importance of context, and the adequate analysis of context and its interpretation is the ultimate desired outcome of statistics.
- "No working journalist can afford to be numerically illiterate, any more than he or she can afford to write sloppy, grammatically incorrect prose", says Steve Harrison in his journalism.co.uk post "How to: Get to grips with numbers as a journalist". As the data today is omnipresent, promoting the flow of information sources that can enrich discussion and deliberation on a wide range of issues and provide "scientific" basis for the conclusions, data can also be misinterpreted and misrepresented, and therefore abused with big consequences, either for the public making them believe in the false story, or for the journalists, as they can lose their credibility, or in many cases both negative outcomes. This Statistical Communications training course is designed to teach the delegates to avoid the pitfalls and have the data science supporting them instead of working against them.

This training course will highlight:

- Importance of Adequate Methods of Data Gathering and Analysis for the Journalists
- How to Identify and Avoid Bias in Data?
- Understand the Adequate Methods of Communicating Statistics through the Media
- Identification of the Context from the Data, Context Analysis, Confirmation and Presentation
- Effective Social Media Communication
- Telling a Story through Data: Dashboards, Graphs, Charts and Infographics

OBJECTIVES

- This Statistical Communications training course focuses on achieving the understanding of statistical tools and methods used for data analysis, in depth understanding of ways to determine and analyze the context within the data, as well as how to present the data in the media in the most effective form, using modern tools and techniques.

  At the end of this training course, you will learn to:

- Understand data gathering techniques
- Learn how to determine adequate sample size
- Acquire the knowledge to make the data meaningful
- Harness the power of data science and its strengths and dangers
- Communicate the context of the data through powerful and captivating visual presentations
- Determining Effective Social Media Communication methods
- Learn to Develop Communication Strategy for Census

TRAINING METHODOLOGY

- This Statistical Communications training course uses modern adult learning techniques and it will be presented through the mix of theory, hands on practice, case studies and guided workshops to prepare the delegates for their real life challenges.

ORGANISATIONAL IMPACT

- The news and media companies will gain, through the training of their employees, full understanding of the power of data science, ways to avoid traps of statistics bias, and the ways to recognize and present the context of the gathered and analyzed data. The companies will acquire:
- Knowledge of data collection tools and techniques-free and commercial software
- Data science methods and data representation methods
- Ways to successfully and efficiently communicate the results of data analysis
- Understanding how to avoid the risk of unverified and misleading claims based on data analysis
- Preforming sampling, census and acquisition of data from social media platforms
- Experience of data communication through the social media networks

PERSONAL IMPACT

- Analyze the adequacy of data gathering and analysis
- Perform statistical analysis of gathered data themselves using available software tools
- Recognize and present the context of the data
- Effectively communicate results of statistical analysis through social media using infographics and other methods
- Understand and apply Social Media Analytics Strategy

WHO SHOULD ATTEND?

- This Statistical Communications training course is created with the people in the journalism in mind, however it is quite beneficial for everyone who is involved in presentation, reporting and marketing based on data science and data analytics.

  This training course is suitable to a wide range of professionals but will greatly benefit:

- Journalists
- Editors
- Digital Marketing Analysis
- Media Analysts
- Reporters
- Presenters, etc.

Course Outline

Introduction to Statistics and Data Science

- Role of Statistics
- Statistics Glossary: Standard Terms and Modern Trends (Big Data, IoT, Deep learning. AI)
- Statistics for Journalism
- Census, Sample and Determination of Sample Size
- Bias
- Basic Statistics using Excel
- Basic Statistics using R

Making Data Meaningful

- Data Collection
- Data Analysis
- Pattern Recognition
- Interpretation and Representation of Data
- Using Graphs and Charts for Determining Patterns and Context in the Data
- Exercise: Determining patterns and correlation in datasets using Excel
- Exercise: Determining patterns and correlation in datasets using R

Communicating statistics

- Communication Basics
- Statistical Communication – types of data and overview
- Communicating Numbers with Print Media and Electronic Media
- Creating Graphs, Charts and Infographics
- Importance of communication strategy for statistics analysis presentation
- Exercise: Creating Charts, Graphs and Infographics

Harnessing the Power of Social Media

- Social Media as news medium of tomorrow
- Effective Social Media Communication
- Communicating Statistics with Social Media
- Presenting Statistics through Word Cloud
- Developing Communication Strategy for Census through Social Media

Harnessing Media: Types of media and connecting points

- Types of Social Media
- Pooling Data and Interpretation
- Search Algorithms for Social Media
- Exercise: Using R for twitter Sentiment Analysis
- Common Pitfalls and Dangers for Media in using Statistics
- Advanced Infographics
- Friendly Coders: Using HTML5 and Canvas for State of the Art Infographics