InnoVision Executive Education

Data Analytics and Visualisation using Tableau

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Duration: 18 Hours
Learning Outcomes
Successful Participants of this module should be able to

I. Make a judicious selection of analytical tools appropriate to the problem at hand, informed by the knowledge of theory and based on experience. (LO1)

II. Express vague ideas graphically in a way that should allow users from all functions to extract advantages of the dashboards (LO2)

III. Develop Analytical and reasoning Skills in analyzing data and building effective dashboards keeping in mind the objective and user of the dashboard (LO3)

IV. Communicate statistics in a clear, organized, and inspiring way, using a variety of graphs in ways that are appropriate for the audience (LO4)

Brief Description of the module

Visual analytics is the science of combining interactive visual interfaces and information visualization techniques with automatic algorithms to support analytical reasoning through human-computer interaction. People use visual analytics tools and techniques to synthesize information and derive insight from massive, dynamic, ambiguous, and often conflicting data, and to communicate their findings effectively for decision-making. This module will serve as an introduction to the science and technology of visual analytics and will include lectures on both theoretical foundations and application methodologies.

This module is a foundation-level program catering to all employees, with no pre-requisite defined. The program will cover conceptual understanding of Business Analytics, Business intelligence Machine Learning, and Data Science. How analytics can give organization a competitive edge and how should you adapt Data-driven/Informed Decision making using various tools and techniques.

To begin with, participants will deal with how to explore data and build reports using Tableau – a popular Visual Analytics tool.

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Topics / SubtopicsLearning Outcome

I. Introduction to BusinessAnalytics, Business Intelligence Machine learning, Data Science Four types of Analytics with applications Theory to Practice

II. Identify the ongoing analytics needs of the organization and suggestacourse of action

III. How business analyticscan give the organization acompetitive edge

IV. Building Blocks of Visual Analytics

V. Storytelling with data Understand context, Choose effective visuals. Eliminate clutter

VI. Focus your audience's attentionTell the Story

VII. Introduction to Tableau

VIII. Data transformation withVizl concepts

IX. Connecting Tableau to a Data file - CSV file

X. Navigating Tableau

XI. Creating Calculated Fields

XII. Adding Colors

XIII. Adding Labels andFormatting

XIV. Working with DataExtracts in Tableau

XV. Working with TimeSeries

XVI. Understanding Aggregation, Granularity,and Level of Detail

XVII. Creating an Area Chart and

XVIII. Learning About Highlighting

XIX. Adding a Filter and QuickFilter

XX. Creating a Map

XXI. Workingwith Hierarchies

XXII. Creating a Scatter Plot

XXIII. Applying Filters to Multiple Worksheets

XXIV. Creating a Dashboard in Tableau

XXV. Adding an InteractiveAction – Filter

XXVI. Highlighting joining and BlendingData

XXVII. Understandinghow LEFT, RIGHT, INNER, and OUTER Joins Work

XXVIII. Joining Data v.s. Blending Data in Tableau

XXIX. Dual Axis Charts

XXX. Creating Calculated Fields in a Blend

Reference Books

I. **Tableau Your Data!, Fast and Easy Visual Analysis with Tableau Software**® By Daniel G.Murray and the Interworks BI Team, 2nd Edition 2016 Wiley Publications

II. **Storytelling with data a data visualization guide for business professionals By ColeNussbaumer Knaflic Wiley 2015**

III. **Business Analytics: The Science of Data-Driven Decision Making by Dinesh Kumar 2017Wiley Publications**

IV. **Practical Tableau: 100 TIPS Tutorials and Strategies by Ryan Sleeper publisher O'Reilly(2018)**