DATA VISUALIZATION TOOL USABILITY STUDY

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Introduction to Data Visualization

Study Objective

1

To identify the usability characteristics related to Data Visualization Tools

2

To test evaluation model for Data Visualization Tool based on usability characteristics with teaching module as guidance

3

To evaluate usability of data visualization tools using the designed teaching module and evaluation method

Course Overview

Outline of topics

- Introduction to Data Visualization
- Data Type, relationships and visualization formats.
- Data Visualization tools
- Learning R/ Python/ Tableau
- Benchmark Task
- Survey/ Feedback

" THE GREATEST VALUE OF A PICTURE IS WHEN IT FORCES US TO NOTICE WHAT WE NEVER EXPECTED TO SEE

JOHN W. TUKEY

What is Data Visualization

Data visualization refers to showcasing data, numbers and statistics through images and charts.

When you display data visually, you'll be able to more easily tease out meaningful patterns from a set of otherwise indecipherable numbers, and it makes it easier to draw conclusions and make informed decision

Why is Data Visualization Important?

Identifying trends, answering questions, proving theories.

Easily perceive numbers in context and comprehend how they connect to one another when you visualise your data.

Comprehend images are much faster and more easily than text

MICROSOFT EXCEL

Allows sort and analyze the data, then create data visualization using chart wizard

GOOGLE TRENDS

Showcase history of certain topics and keywords over time. Allows to create custom trend graphs of keyword by region, country or area select at any time range

DATA VISUALIZATION TOOLS

INFOGR.AM

Ideal for those with little design experience to create and customize infographics

CANVA

easy-to-use free tool with interactive chart feature for creating simple pie carts, bar graphs and more in any sized templates

TABLEAU

Offers sophisticated data visualization and integrations with data visualization software like Excel, which helps easily make raw data into beautiful visuals.

PYTHON

Contain library and packages for any complicated data analysis and data visualization.
(Require Programming)

DATA VISUALIZATION TOOLS

R

Focuses on statistical computing, making it ideal for manipulating, cleaning , summarizing, producing probability statistics.
(Require Programming)

MICROSOFT POWER BI

Cloud-based business analytic service with a lot of features including interactive and detailed visualizations

USABILITY CHARACTERISTICS

- **Usefulness**

  How successfully users can complete their goals

- **Ease of Use**

  Number of resources (like time and energy) used to achieve these goals

- **Enjoyment**

  How satisfied users are after using the tool

- **Learnability**

  Easiness of the user to learn using the tool

https://github.com/arifjamal89/data_visualization_tools