Session 3 – Visual Analytics using Tableau

Case study five: Exploratory data analysis using descriptive statistics

> **Dataset (press CTRL+ CLICK to open the link):** Download
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> **Data set summary: USA foreign worker's salary data set**
>
> **Source: US Govt.**

Scenario: Imagine you are a career consultant advising highly qualified graduates who need an H1B visa to work in the USA. To get a better overview of the H1B visa applicants, their current wages and their job functions you analyze the recent data provided by the USA govt.

1. The states in this dataset are represented using an abbreviated name and a complete name. Use grouping feature to bring together these data on states where H1B employees are most likely to work (CA - California, WA - Washington, TX - Texas, MA - Massachusets and use Alaska as control)

   Information reference:

   To get an idea of the abbreviations of the states, refer to the following link below

   50states.com/abbreviations.htm

2. Create a bubble chart using visa classes and job title subgroups. What are the drawbacks of this type of visualization?

3. Let's use the **measures of dispersion** for analyzing the data on **median salaries** across different job title subgroups?

   Information reference:

   To get an idea of measures of dispersion refer

   ncbi.nlm.nih.gov/pmc/articles/PMC3198538/

4. Isolate the outliers for median salary values using scatter plot. Which job title subcategory has the highest outliers?

5. How do you negate outlier effect? What functionality could we use in Tableau to remove outliers?

6. Create hierarchies using time dimension and analyze salary trends using box plots.
    Hint: Disaggregate the values and create a box plot to analyze the median salary distribution.

7. To better understand the salary scales, create line charts using maximum, median, and minimum functions in the salaries.

8. How does continuous and discrete property of variables influence the visualizations?

    Information reference:

    o   drawingwithnumbers.artisart.org/wiki/tableau/dimensions-and-measures/
    o   onlinehelp.tableau.com/current/pro/desktop/en-us/qs_hierarchies.htm

9. Finally prepare dashboard and summarize your findings using story option in Tableau