Tableau Visualization Link:

https://public.tableau.com/app/profile/elia.lanzuise/viz/MappingInfluenzaDeathsInUSA/InfluenzaDeathsInUS

Project: Influenza Data Analysis and Visualization

Overview

This was my first analytical project in the Data Analytics Bootcamp and marked the beginning of my journey into real-world data work. The task focused on analyzing influenza trends using a structured Excel workflow, followed by creating an interactive visualization in Tableau. The goal was to practice the full data analysis cycle — cleaning raw data, identifying patterns, summarizing key metrics, and communicating findings through clear visuals.

Objectives

- Clean and organize the raw influenza dataset in Excel.
- Summarize key measures such as infection counts, rates, and regional totals.
- Identify patterns and seasonal variations in influenza outbreaks.
- Build a final Tableau visualization that communicates the results effectively.

Process

1. Data Cleaning in Excel

2. Imported and reviewed the raw influenza datasets for missing, duplicated, or inconsistent entries.

3. Standardized date formats and verified numeric fields for correct data types.

4. Removed unnecessary columns and handled missing values to ensure a clean dataset for analysis.

5. Data Summarization and Profiling

6. Used Excel formulas, filters, and Pivot Tables to calculate totals, averages, and year-over-year changes.

7. Created summary tables that compared infection rates across regions and months.

8. Highlighted peak infection months and trends using conditional formatting for clarity.

Exploratory Insights

- Discovered distinct seasonal patterns, with influenza cases peaking during colder months.

- Identified regions with consistently higher infection rates, which could indicate environmental or demographic influences.

- Compared multiple years of data to assess whether influenza intensity was increasing or stabilizing over time.

Visualization in Tableau

- Imported the cleaned Excel dataset into Tableau for visualization.

- Created a clear, interactive dashboard including:

- Line chart: showing influenza cases over time.

- Bar chart: ranking infection rates by region.

- Map visualization: displaying geographic spread and intensity.

- Applied filters for year and region selection, and used color coding to emphasize trends and peaks.

Reflection

- This project taught me how to prepare and analyze real-world datasets in Excel before visualizing them.

- I learned how to transition smoothly from spreadsheet analysis to professional-level visualization tools.

- The process built a foundation in data cleaning, summarization, and storytelling, essential for later analytical projects in SQL and Python.

Tools Used

- Microsoft Excel (data cleaning, summarization, pivot tables, data validation)

- Tableau Desktop (visualization and dashboard creation)

Skills Applied

Data cleaning, exploratory data analysis (EDA), pivot tables, descriptive statistics, trend analysis, data visualization, dashboard design.