Power BI Project: Analysis of Homicides in the USA

Project Description:

The project involved developing a comprehensive Power BI dashboard focused on U.S. demographic and crime data visualization. The goal was to import, transform, and integrate datasets from various sources (Wikipedia tables, CSV, and Excel files) to create a clear and interactive representation of state populations, capitals, abbreviations, and homicide statistics. The project required organizing data in a structured model and presenting it through multiple pages and visuals within Power BI.

Key Responsibilities and Tasks:

- Imported the *"Best States to Retire"* table from Wikipedia and filtered relevant columns (State, Population).
- Loaded and transformed datasets from omicidi.csv, capitali.xlsx, abbr.xlsx, and popolazione.xlsx using Power Query.
- Built relationships among tables and created visuals such as:
    1. A main summary table displaying State, Abbreviation, Population, and Capital.
    2. A stacked bar chart showing the number of homicides per state, sorted in ascending order, highlighting New York with a distinct color.
    3. Calculated key metrics such as total and average population and homicides, along with murder rate (%) per state.
    4. Designed filters for State and Capital to allow interactive exploration.
    5. Added a background image with 85% transparency to enhance visual design.
- Created additional pages titled USA, STATISTICHE, and ALBERO, each including different visuals:
    1. STATISTICHE: Funnel chart for population by state.
    2. ALBERO: Tree map displaying total population vs. homicides per state.
    3. Two more pages with at least six diverse visuals, including one map visualization.

Outcome:

The resulting Power BI report offered an engaging and interactive platform to explore U.S. state data in terms of demographics and homicide statistics. The dashboard effectively combined multiple datasets into a unified analytical tool, enabling users to filter, compare, and visually interpret information efficiently.

Technologies and Tools Used:

- Power BI Desktop (for data modeling and visualization)
- Power Query (for data extraction and transformation)

- Microsoft Excel and CSV files (data sources)
- Wikipedia data import (via web connector)
- Data visualization techniques: tables, bar charts, funnel charts, tree maps, maps, filters, and background formatting.