Project Documentation

Crime Data Analysis (2022–2025)

1. Project Overview

This project analyses Los Angeles crime data from 2022 to 2025 to identify crime trends, victim demographics, and crime distribution across different locations. Using Excel and Power Query for data cleaning and Power BI for visualization, the project aims to deliver actionable insights that can assist law enforcement and administrative bodies in better resource planning and policy-making.

2. Tools Used

- Microsoft Excel
- Power Query Editor
- Microsoft Power BI

3. Dataset

- **Source**: https://data.lacity.org/Public-Safety/Crime-Data-from-2020-to-Present/2nrs-mtv8/about_data
- **Data contains**:
    - Date Reported
    - Crime Description
    - Crime Code
    - Victim Sex
    - Victim Age
    - Premises Description
    - Area Name
    - Status (Solved/Unsolved)

4. Steps Followed

- Imported raw data into Microsoft Excel
- Cleaned the data by:
    - Removing duplicates and null entries
    - Standardizing formats (date, text fields)
    - Correcting inconsistencies in area names and crime descriptions
- Performed data transformation using Power Query Editor:
    - Created calculated columns for Year and Month
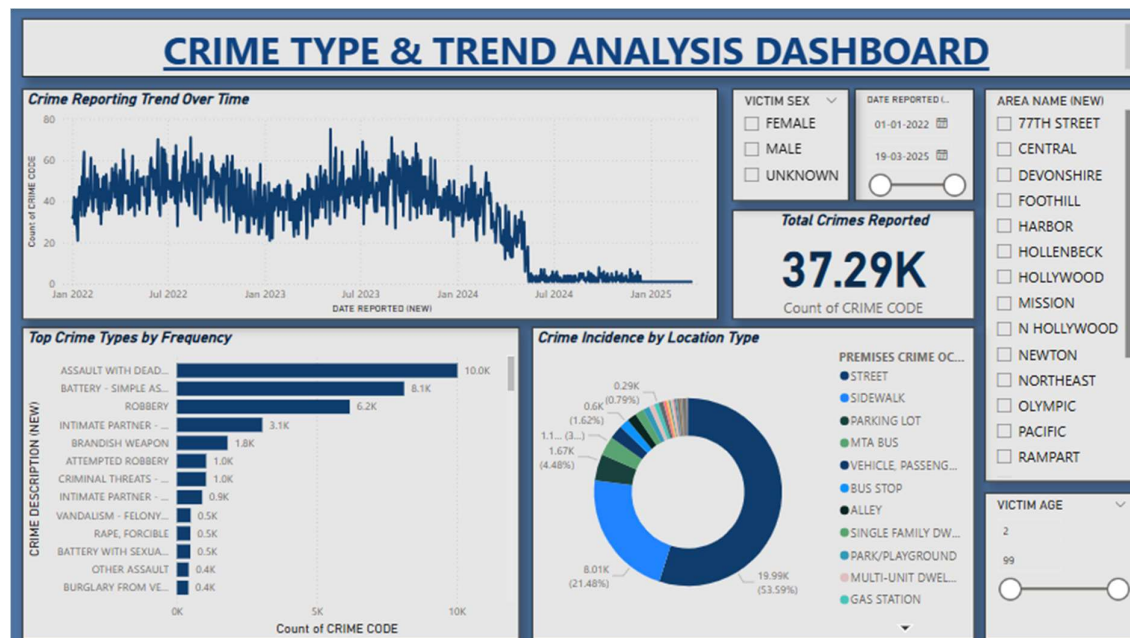   - Filtered out irrelevant columns

- Imported the cleaned data into Power BI
- Designed multiple dashboards showcasing:
  - Crime trend over time
  - Top crime types
  - Crime location analysis
  - Victim gender and age demographics
  - Heat map for geographic crime distribution
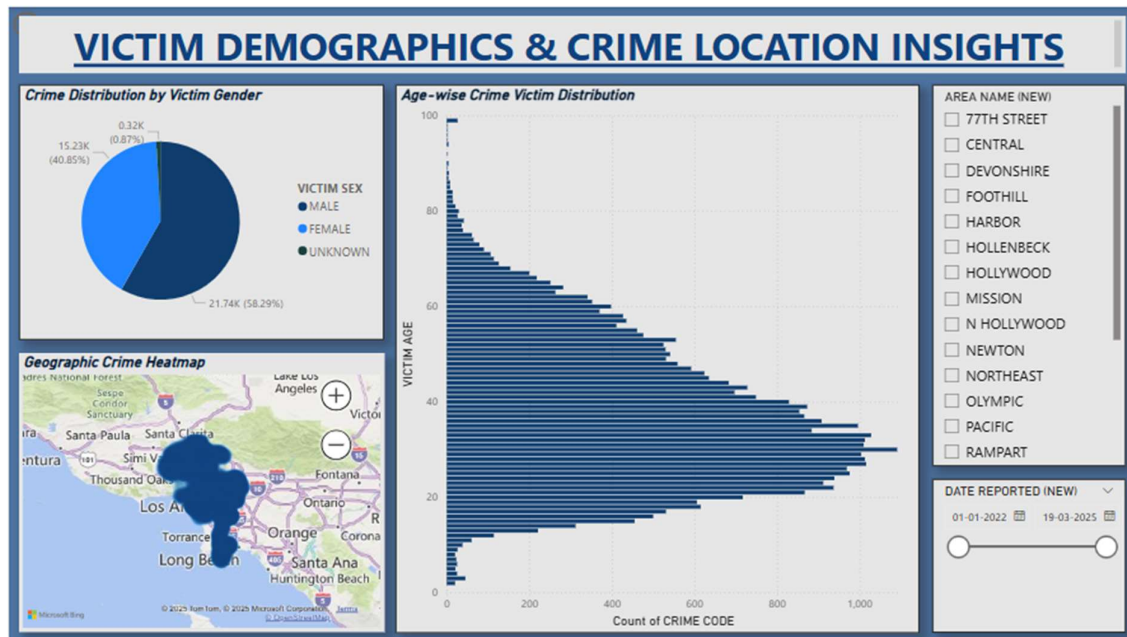
5. Key Insights

- **Crime Reporting Trends**: Crime reports peaked in 2023 and showed a decline towards the end of 2024.

- **Top Crime Types**: Assault with deadly weapon, simple battery, and robbery were the most frequently reported crimes.

- **Crime Location Analysis**: Over 53% of crimes occurred on streets, followed by sidewalks and parking lots.

- **Victim Gender**: Male victims constituted 58.29% of total cases, while females made up 40.85%.

- **Victim Age demographics:** The highest number of crimes (1000+ incidents) involved victims aged between 27 and 33 years.

- **Geographic Insights**: Crime hotspots were highly concentrated around major urban areas as depicted in the heat map.

6. Screenshots

Dashboard 1: Crime Type & Trend Analysis

Dashboard 2: Victim Demographics & Crime Location Insights

7. Files Included

- Crime data set.xlsx - Cleaned crime dataset.

- Crime Dataset - Y2022-Y2025.pbix - Power BI dashboard file.

- Project Documentation.pdf - Contents and workflow guide.

8. How to Use

- Open Crime data set.xlsx in Excel to review the cleaned dataset.

- Open Crime Dataset - Y2022-Y2025.pbix using Power BI Desktop to explore the interactive dashboards.

- Use filters like dates, area name, victim age and victim sex to perform dynamic analysis.