Summary:

This project involved creating an Excel-based interactive dashboard to analyze crime statistics in Chicago. The dashboard provides comprehensive insights into case filings, racial demographics of crime incidents, and detailed statute-based analysis. It enables law enforcement and city officials to track crime trends and make data-driven decisions for public safety initiatives.

Client Requirements:

The client required a Chicago Crime Analysis Dashboard with the following objectives:

1. Total Cases: Display the overall number of cases filed

2. Statute Analysis: Break down cases by different charge statutes (1-4)

3. Yearly Trends: Visualize case filing patterns across years

4. Demographic Analysis: Show crime distribution by race

5. Monthly Patterns: Track case filing trends throughout the year

6. Top Crime Types: List most frequent criminal charges

7. Timeline Analysis: Enable year-wise filtering (2014-2023)

8. Race-based Filtering: Allow demographic-based data analysis

Stakeholders:

1. Chicago Police Department

2. City Administration

3. Law Enforcement Officials

4. Public Safety Planners

5. Criminal Justice Analysts

6. Community Safety Officers

7. Policy Makers

8. Legal System Representatives

Steps in Project:

1. Data Collection from Chicago Crime Database

2. Data Cleaning and Validation

3. Excel Data Structure Setup

4. Dashboard Layout Design

5. Chart and Graph Creation

6. Filter Implementation

7. Data Validation and Testing

8. Documentation and Deployment

Insights and Final Outcome:

1. Case Volume: Total of 585,418 cases filed, with all appearing under Charge 1 Statute

2. Multiple Charges: 247,963 cases under Charge 2, 136,051 under Charge 3, and 75,410 under Charge 4

3. Yearly Trend: Peak cases in 2014 (93.7K), showing general decline to 36.8K in 2022

4. Racial Demographics: Largest proportion of cases involved Black individuals (419,679), followed by White Hispanic (104,530)

5. Top Offenses: "Issuance of Warrant" leads with 81,274 cases, followed by "PCS - Possession" with 43,349 cases

6. Temporal Trends: Consistent monthly case filing patterns with slight variations

7. Recent Data: Significant drop to 1.7K cases in 2023 (partial year)

8. Filtering Capabilities: Comprehensive date and race-based filtering options for detailed analysis