Course Title: **IFT 533 – Data Visualization & Reporting for IT**

**Team Number:** 28

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**Project - Phase I:** Planning

**Due Date:** November 10, 2024

**“Dataset: Indian Crimes Dataset”**

“**Section 1: Dataset Description”**:

**Dataset Overview**:

This dataset consolidates the crime reports of multiple cities in India from January 1st to January 13th 2020. Included in this directory of information are vital details such as the date and time when the incident occurred, the location, type of offence involved, data pertaining to victims and his/her present condition.

**Key Attributes**:

- **Categorical Attributes**:

These attributes represent qualitative data with no inherent order:

City: The location where the crime occurred

Crime Code: Numerical code assigned to each type of crime

Crime Description: Brief description of the type of crime committed

Victim Gender: Gender of the victim (M, F, X)

Weapon Used: Type of weapon used in the crime

Crime Domain: Broader classification of the crime

Case Closed: Indicates whether the case has been closed (Yes/No)

- **Ordinal Attribute**:

This attribute has a natural order but the differences between values may not be consistent:

Report Number: A unique identifier for each crime report

Ratio Attributes

These attributes have a true zero point and allow for meaningful ratios:

Victim Age: The age of the victim at the time of the crime

Police Deployed: The number of police officers deployed to respond to the crime

- **Interval Attributes:**

These attributes have equal intervals between values but no true zero point:

Date Reported: The date when the crime was reported

Date of Occurrence: The date when the crime took place

Time of Occurrence: The specific time when the crime occurred

Date Case Closed: The date when the case was closed.

**"Section 2: Prospective Dashboard Users"**:

**Law Enforcement Officer:**

This dashboard helps officers identify crime hotspots, allocate resources wisely, and develop targeted prevention strategies. It supports their investigations by revealing patterns in criminal activities for better planning.

**Crime Analyst:**

Crime analysts can leverage this dashboard to analyze trends, identify correlations, detect anomalies, and support law enforcement strategies with evidence-based insights, enabling more precise crime prevention measures and resource optimization.

**Public Safety Administrator:**

Administrators use this dashboard to evaluate safety initiatives, create data-driven policies, allocate budgets, and communicate crime trends effectively, enhancing public safety through well-informed decisions and comprehensive insights.

**City Planner:**

City planners utilize this dashboard to inform urban development, improve public safety infrastructure, address lighting and security needs, and integrate crime data into broader planning initiatives for safer communities.

"**Section 3: List of User Requirements & Potential Questions**:"

"**User Requirements**":

- Crime Data Visualization: To create interactive dashboards displaying crime trends and patterns.
- Demographic Analysis: To analyze crime victims by age, gender, and location.
- Geographic Mapping: To visualize the geographic distribution of crimes across cities and regions.
- Trend Analysis: To identify temporal trends, such as monthly and daily crime patterns.
- Hotspot Identification: To highlight areas with high crime density for resource allocation.
- Crime Type Insights: To provide insights into the most common crime types and weapons used.

- Case Resolution Metrics: To track case closure rates and average resolution times by crime type.
- Resource Deployment Analysis: To correlate police deployment levels with crime rates.
- Custom Queries: To allow users to generate specific reports, such as by city, time, or crime category.
- Predictive Analytics (Optional): To forecast potential crime trends based on historical data.

"**Potential Questions**":

1. What are the top 5 most frequent crime types?
2. How does the distribution of crimes vary across cities?
3. What is the monthly trend of reported crimes over time?
4. How does the crime rate vary by time of day and day of week?
5. Which weapons are most commonly used in violent crimes?
6. What is the geographic distribution of crimes across India?
7. What is the case closure rate by crime type?
8. What is the age distribution of crime victims by gender?
9. What is the average time to close a case for different crime types?
10. How does the crime rate correlate with the number of police deployed?

**"Section – 4: References"**

"https://www.kaggle.com/datasets/sudhanvahg/indian-crimes-dataset"

“**Dashboard Link for Mural**:”