**Project-Phase I: Planning**

Laukik Pathak(1226939222)

Omkar Patel(1226466724)

Abhinav Kumar(1226878213)

Rafe Mohammed Abdul(1226360735)

Masters in Information Technology, Arizona State University

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Prof: Asmaa Elbadrawy

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**Section 1: Dataset Description**

All crimes committed in Denver, Colorado over the past six years, plus the first six months of this year, are represented in this data set. The information is drawn from the National Incident-Based Reporting System (NIBRS), which accounts for all crimes committed within a given incident, not just those committed against a specific person. We can always have the most up-to-date information in the database because of the data's dynamic nature, which allows for the addition, deletion, and modification of records at any time. Because new data is constantly being entered, the total number of records that can be retrieved in a given extraction can fluctuate. Monday through Friday new crime reports will be available.

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Column | Datatype | Domain | Attribute type | Description |
| 1. Incident\_id | Number (Whole) | It can have any number | Categorical | This used to identify each incident individually. It can be duplicated if multiple offence is done in a single incident |
| 1. OFFENCE\_ID | Number (Whole) | This is formed by combining incident id, offence code and offence code extension | Categorical | This is used to identifies each offence uniquely. |
| 1. OFFENCE\_CODE | Number (Whole) | It can have a range of values. each value represents a type of offence | Categorical | This uniquely identifies an offence. |
| 1. OFFENSE\_CODE\_EXTENSION | Number (Whole) | It can have a range of values | Categorical | It is used to identify a sub offence under a specific crime |
| 1. OFFENSE\_TYPE\_ID | String | It can have a value from a limited set | Categorical | It contains the actual name of the offence for which the data point exist. |
| 1. OFFENSE\_CATEGORY\_ID | String | It can have names of the theft happen | Categorial | It provides general categorization for crimes |
| 1. FIRST\_OCCURENCE\_DATE | Number  (Time) | It can have dates of the crime occur first. | Categorial | It provides first date of offense occurred |
| 1. LAST\_OCCURENCE\_DATE | Number  (Time) | It can have dates of the crime occur last. | Categorial | It provides last date of offense occurred |
| 1. REPORTED\_DATE | Number  (Time) | It can have dates of the crime reported first. | Categorial | It provides reported date of offense occurred |
| 1. INCIDENT\_ADDRESS | String | It can have data of the crime location. | Nominal | It provides address of offense occurred. |
| 1. GEO\_X | Number | It can have numerical values representing the X coordinate location in feet | Continuous | It represents the X coordinate of the location in feet |
| 1. GEO\_Y | Number | It can have numerical values representing the Y coordinate location in feet | Continuous | It represents the Y coordinate of the location in feet |
| 1. GEO\_LON | Number | It can have numerical values representing the Longitude | Continuous | It represents the longitude of the location |
| 1. GEO\_LAT | Number | It can have numerical values representing the latitude | Continuous | It represents the latitude of the location |
| 1. DISTRICT\_ID | Number | It can have numbers representing the district ID of crime | Categorical | It represents the district id of the districts present in Denver, Colorado |
| 1. PRECINCT\_ID | Number(whole) | It can have any number | Categorical | This column represents the precinct ID number |
| 1. NEIGHBORHOOD\_ID | String | It can have the names of the neighborhood | Categorical | It represents the names of neighborhood |
| 1. IS\_CRIME | Number(whole) | It has value 1 | Ratio | This column represents the number of crimes happened. |
| 1. IS\_TRAFFIC | Number(whole) | It has value 0 | Ratio | It represents the traffic. |
| 1. VICTIM\_COUNT | Number(whole) | It has values ranging from 1 to any number. | Ratio | This column represents the number of victims affected by the crime. |

**Section 2: Prospective Dashboard Users**

Denver Police Department: Police Department will use this dashboard to track the crime rate in the city. This dashboard will enable them to see regions in the city where more patrolling must be done. Where warning must be issued etc.

Federal Bureau of Investigation: The dashboard assists the Federal Bureau of Investigation in learning the demographic groups that are targeted for the types of offenses that are associated with crime incidents in Denver.

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

User Requirements:

The hate crime dashboard in Denver displays the percentage of crime incidences by demographic group as well as the sorts of offenses most typically related with crimes. The Denver Police Department has a public dashboard that displays information on criminal incidences. The primary means via which DPD has shared hate crime data to the public has been the Crime Annual Report, a PDF report made accessible each year. DPD has prepared a dashboard companion to the Crime Annual Report in addition to the report itself.

Potential Question:

1. What is the basic trend of crime in Denver city?
2. Which category of Crimes are happening more in the city?
3. Which districts in the city are comparatively unsafe?
4. Which districts of the city are affected by a certain kind of offence?
5. Which neighborhoods have most the number of crimes?
6. What are the number of crimes for a particular neighborhood?
7. What are the number of victims affected due to the crime in a location?
8. Which Precinct has the most number of crimes?
9. Which criminal categories have seen the most growth over time?
10. Which district has most number of crimes?
11. Which district is safest for mass public?
12. Which districts have more number of crimes than the average of all districts?
13. Which districts have less number of crimes than the average of all districts?
14. Which neighborhood has maximum number of motor vehicle theft crimes?

**References**

Paul, M. (2022, October 13). *Denver Crime Data*. Kaggle. Retrieved November 13, 2022, from

<https://www.kaggle.com/datasets/paultimothymooney/denver-crime-data>

<https://www.denvergov.org/Government/Agencies-Departments-Offices/Agencies-Departments-Offices-Directory/Police-Department>

<https://www.denvergov.org/opendata/dataset/city-and-county-of-denver-crime>

Mural Link:

<https://app.mural.co/t/student6216/m/student6216/1668027483965/99fbbcbd1b339d6820dfd5744026486f11120c96?sender=u7d5c822e573b3c3158e81389>