October 31, 2023

**Data & Code Book**

**Team 3**

**CRIME ANALYSIS USING GIS FOR DATA SCIENCE**

**OVERVIEW:**

This document contains:

**a.** Brief explanation of datasets that will be used in this project (including physical location).

**b.** Reference code books pertaining to analysis. (Location, Census tract features)

**[DATASET] CRIME INCIDENTS** (recent 5 years: 2019~2023)

- Source: [Open Data DC](https://opendata.dc.gov/datasets/DCGIS::crime-incidents-in-2023/about), the crime DB by the DC Metropolitan Police Department (MPD).

- Format: CSV (geojson format will be also considered), Yearly generated.

- Location: [Team3 Github repository](https://github.com/Abhi050/GIS_Project/tree/main/Dataset)

- Description: Spatiotemporal Information of crime events in Washington, DC

Key Attributes:

REPORT\_DATE: Date

SHIFT: Character string depicting the time of the crime (EVENING, DAY, MIDNIGHT)

METHOD: Character string indicating the method of crime (OTHERS, GUN, KNIFE)

OFFENSE: Character string detailing the type of offense

BLOCK: Character string representing the crime's location

XBLOCK & YBLOCK: Double-precision decimal numbers for spatial data

WARD & ANC: Character strings detailing administrative regions.

\*Total number of Attributes: 25

|  |  |
| --- | --- |
| Category (# of attributes) | Attributes |
| Key value (3) | OBJECTID, OCTO\_RECORD\_ID, CCN |
| Timing (4) | START\_DATE, END\_DATE, REPORT\_DAT, SHIFT |
| General info (2) | METHOD, OFFENSE |
| Location (16) | BLOCK, XBLOCK, YBLOCK, WARD, ANC, DISTRICT, PSA, NEIGHBORHOOD\_CLUSTER, BLOCK\_GROUP, [CENSUS\_TRACT](chrome-extension://efaidnbmnnnibpcajpcglclefindmkaj/https:/www2.census.gov/geo/pdfs/education/CensusTracts.pdf), VOTING\_PRECINCT, BID, etc. |
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**[CODE BOOK 1] LOCATION ATTRIBUTES (MAPS, SHAPEFILES or GDB)**

- [Police Service Area](https://mpdc.dc.gov/page/police-districts-and-police-service-areas) : Seven police districts in DC, and each police district is  
divided into three sectors, which are groups of Police Service Areas (PSAs)

- [CENSUS Tract](https://www.census.gov/geographies/mapping-files/time-series/geo/tiger-geodatabase-file.2023.html#list-tab-1258746043) : Small, relatively permanent statistical subdivisions of a county. Uniquely numbered in each county with a numeric code about 4,000 inhabitants  
 - Code book data will be stored the same location of Dataset. (S Drive)

**[CODE BOOK 2] CENSUS TRACT -** [**Economic Characteristics DC**](https://opendata.dc.gov/datasets/DCGIS::acs-economic-characteristics-dc-census-tract/about)

- 5-year estimates shown by 2020 Census Tract boundaries sourced from American Community Survey (ACS), which represent about 200 economic characteristics- Employment, Commuting, Occupation, Income, Health Insurance, Poverty, etc.