

## 2 Data Description

### 2.1 Data Sources

In order to research safety and neighborhood, the open data of Crime Rate of Toronto and to get the housing price, Housing Market Trend will be collected and manipulated. The data file will be csv format for numbers and charts and geojson format for presenting locations.

### 2.2 Data cleansing

The data will be grouped and cleansed by Police Boundaries such as D11, D51 in Toronto. The year of data will be used for the last two years but it will be depended how big the dataset is. If possible, full dataset will be applied in case of Crime Rate. The dataset will be separated by the type of Crimes such as Assault, Break and Enter, Auto Theft and Robbery etc. for presenting charts and locations.

### 2.3 Data Table

The dataset will be reconfigured as below, and the data will be grouped by Division. After then the location data will also be merged into this table.

Table1. Sample Data Table

|   | Division | Hood_ID | Neighbourhood           | Assault_2018 | Assault_2017 |
|---|----------|---------|-------------------------|--------------|--------------|
| 1 | D53      | 97      | Yonge-St.Clair          | 61           | 46           |
| 2 | D31      | 27      | York University Heights | 138          | 120          |
| 3 | D32      | 38      | Lansing-Westgate        | 197          | 226          |
| 4 | D32      | 31      | Yorkdale-Glen Park      | 127          | 124          |
| 5 | D22      | 16      | Stonegate-Queensway     | 128          | 112          |
| 6 | D42      | 118     | Tam O'Shanter-Sullivan  | 56           | 57           |

Table2. Merged Data Table

|   | Division | Neighbourhood                        | Assault_2018 | Assault_2017 | Lat     | Long     |
|---|----------|--------------------------------------|--------------|--------------|---------|----------|
| 1 | D53      | Yonge-St.Clair                       | 61           | 46           | 43.7219 | -79.4016 |
| 2 | D31      | York University Heights              | 138          | 120          | 43.7500 | -79.5023 |
| 3 | D32      | Lansing-Westgate, Yorkdale-Glen Park | 324          | 350          | 43.7701 | -79.4131 |
| 4 | D22      | Stonegate-Queensway                  | 128          | 112          | 43.6150 | -79.4942 |
| 5 | D42      | Tam O'Shanter-Sullivan               | 56           | 57           | 43.8199 | -79.3130 |