

# analysis

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## Motivation

## Exploratory Analysis

```
## Warning: package 'dplyr' was built under R version 4.1.3

##
## Attaching package: 'dplyr'

## The following objects are masked from 'package:stats':
##
##   filter, lag

## The following objects are masked from 'package:base':
##
##   intersect, setdiff, setequal, union

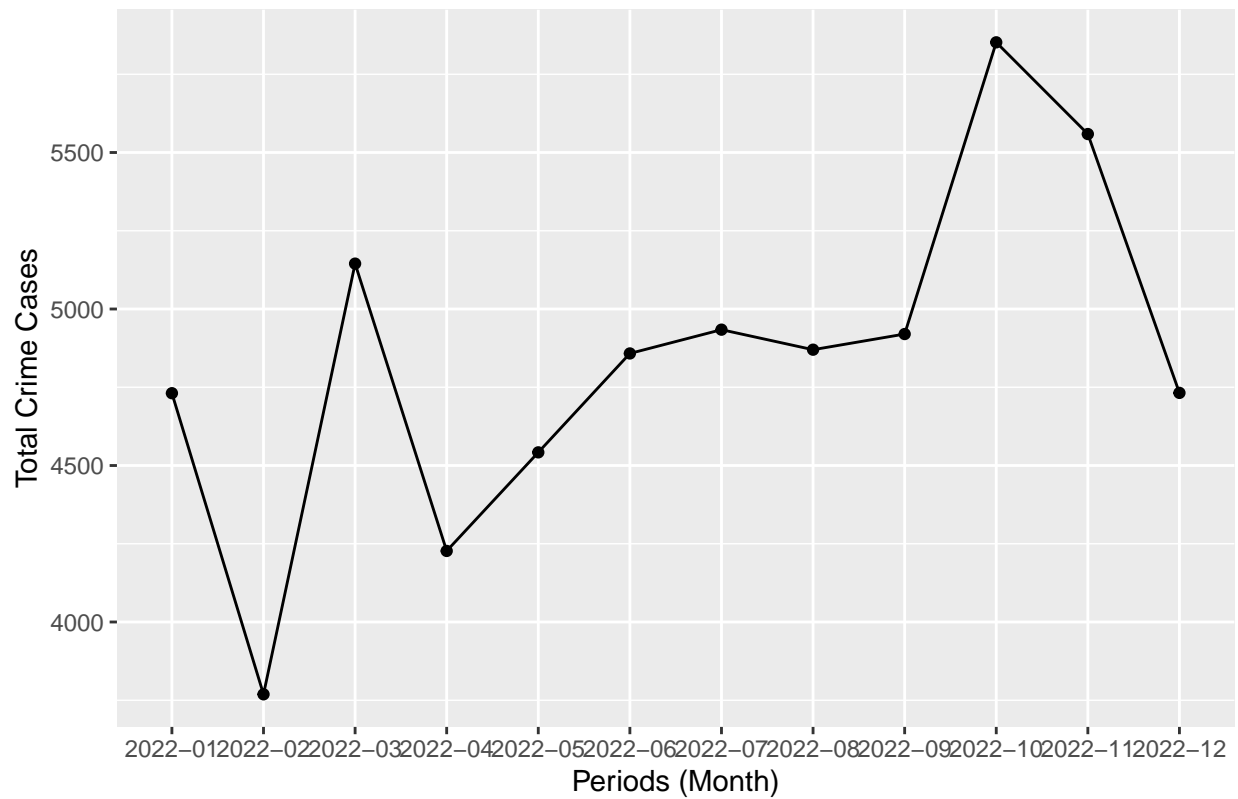
## 'summarise()' has grouped output by 'Neighborhoods'. You can override using the
## '.groups' argument.
```

To begin this analysis, this report will first highlight some descriptive statistics about the dataset used. To begin with, the dataset contains 1680 rows worth of data, with each row highlighting the amount of listings and crimes (per type), the average listings price, and percentages per listing types based on an Amsterdam neighborhood and time period. The dataset features 20 unique Amsterdam neighborhoods and 12 unique time periods (from x to x ).

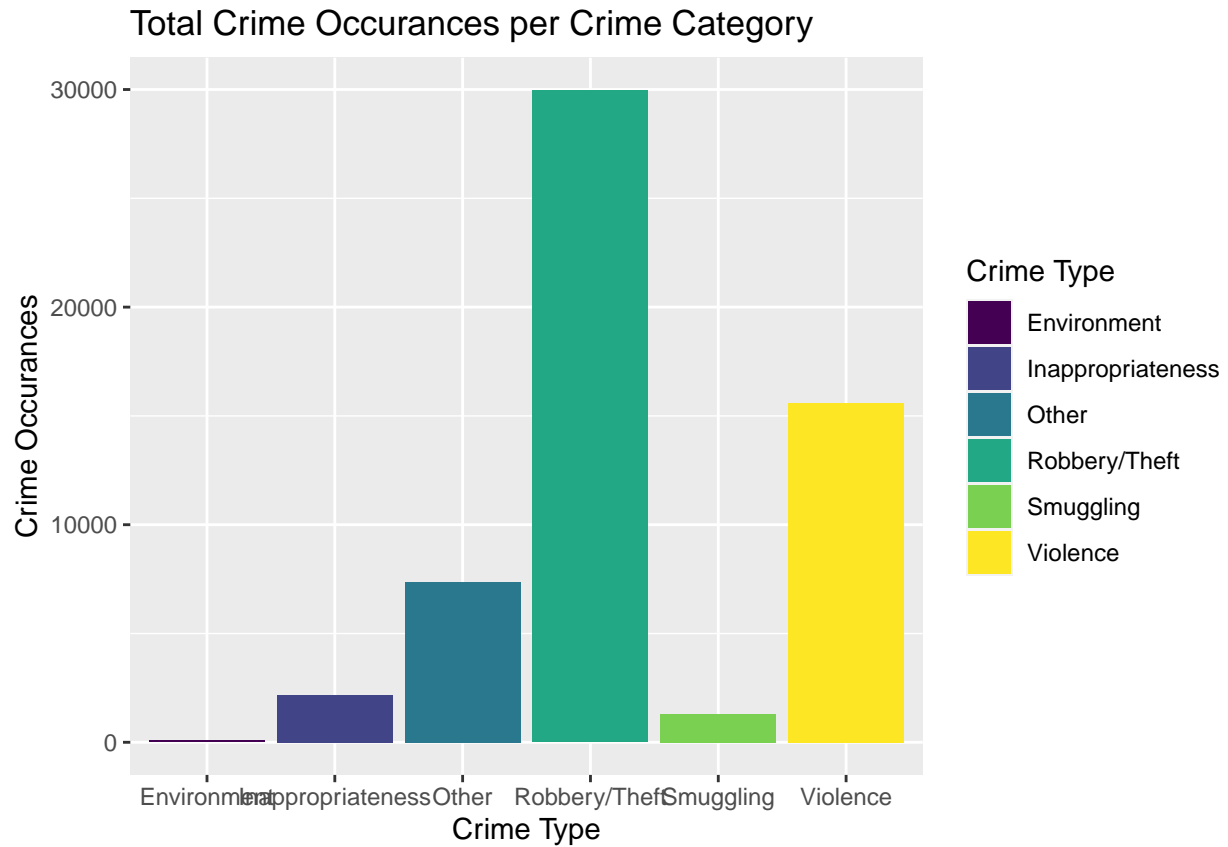
Based on this data, the area with the most amount of listings is Centrum-West with 206976 listings, while the area with the least is Bijlmer-Centrum with 3864 listings. Furthermore, the most expensive area listings-wise is Centrum-Oost with 202.744336569579 average price, while the area with the least is Gaasperdam - Driemond with 97.6590909090909 average price.

The graphs below visualize how the number of crimes has evolved throughout the available time periods, as well as the occurrences of crimes per type

Total Crime Occurrences per Month



As it can be seen from the Crime Occurrences per Month graph, the data exhibits no seasonality trend when viewed on a 12 month period. The lowest number of crime occurrences is on 2022-02 with 3769 crimes, while the highest is on 2022-10 with 5852 crimes.



When observing the distribution of Crime Occurrences per Crime Category graph, it is clear that crime occurrences are highly different in frequency. The graph clearly shows how the lowest number of crime occurrences is for Environment crimes with 86 occurrences, while the highest is Robbery/Theft crimes with 29962 occurrences.

## Correlation Analysis

## Discussion

## Conclusion