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Tut_2_Code

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Preamble

Purpose: determines the number of reports based on the category of crime.

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Workspace setup

load packages

```
library(janitor)
library(tidyverse)
library(dplyr)
library(opendatatoronto)
```

get package

```
package <- show_package("police-annual-statistical-report-reported-crimes")</pre>
```

get all resources for this package

```
resources <- list_package_resources("police-annual-statistical-report-reported-crimes")</pre>
```

identify datastore resources; by default, Toronto Open Data sets datastore resource format to CSV for non-geospatial and GeoJSON for geospatial resources

```
datastore_resources <- filter(resources, tolower(format) %in% c('csv', 'geojson'))</pre>
```

load the first datastore resource as a sample

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```
data <- filter(datastore_resources, row_number()==1) %>% get_resource()
head(data)
```

```
# A tibble: 6 \times 7
  ` id` REPORT_YEAR DIVISION CATEGORY
                                                       SUBTYPE COUNT_ COUNT_CLEARED
  <int>
              <int> <chr>
                              <chr>>
                                                       <chr>
                                                               <chr> <chr>
                                                                       9
               2014 D11
                              Crimes Against the Pe... Other
2
      2
              2014 D11
                              Crimes Against Proper... Theft ... 1
                                                                       1
3
      3
              2014 D11
                              Crimes Against the Pe... Other
              2014 D11
                              Crimes Against the Pe… Robber… 1
5
      5
               2014 D11
                              Crimes Against Proper... Break ... 23
                                                                       13
               2014 D11
                              Crimes Against Proper... Theft ... 1
                                                                       1
```

Cleaning and tidying data

Clean column names

```
cleaned <-
  clean_names(data)</pre>
```

Select necessary columns

```
cleaned <-
  cleaned |>
  select(
   id,
    category
)
head(cleaned)
```

```
# A tibble: 6 x 2
    id category
    <int> <chr>
1     1 Crimes Against the Person
2     2 Crimes Against Property
3     3 Crimes Against the Person
4     4 Crimes Against the Person
5     5 Crimes Against Property
6     6 Crimes Against Property
```

Save cleaned data as csv file

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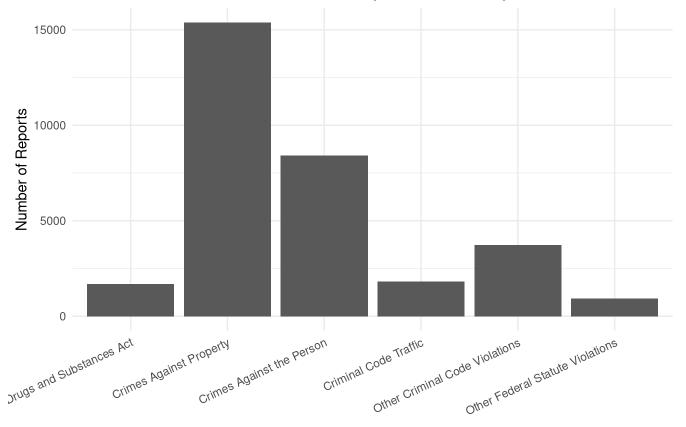
```
write_csv(x=cleaned, file="reported_crimes_reports.csv")
```

Plot

Create bar graph to find the number of reported crimes for each category in 2014

```
cleaned |>
    ggplot(aes(x = category)) +
    geom_bar() +
    theme_minimal() +
    theme(axis.text.x = element_text(angle = 25, hjust = 1)) + # Rotate x-axis labels
    labs(title = "Number of Reported Crimes in 2014 by Crime Category", x = "Categories", y = "Number of Reported Crimes in 2014 by Crime Category", x = "Categories", y = "Number of Reported Crimes in 2014 by Crime Category", x = "Categories", y = "Number of Reported Crimes in 2014 by Crime Category", x = "Categories", y = "Number of Reported Crimes in 2014 by Crime Category", x = "Categories", y = "Number of Reported Crimes in 2014 by Crime Category", x = "Categories", y = "Number of Reported Crimes in 2014 by Crime Category", x = "Categories", y = "Number of Reported Crimes in 2014 by Crime Category", x = "Categories", y = "Number of Reported Crimes in 2014 by Crime Category", x = "Categories", y = "Number of Reported Crimes Crimes Crimes Category", x = "Categories", y = "Number of Reported Crimes Crimes Crimes Category", x = "Categories", y = "Number of Reported Crimes C
```

Number of Reported Crimes in 2014 by Crime Category



Categories