CRIME RATE ANALYSIS

HIGH IMPACT AREAS

1. COLOMBO
2. GAMPAHA
3. KURUNEGALA
4. KALUTARA
5. RATNAPURA

6.477%

CRIME RATE DECREASE SINCE 2010-2012

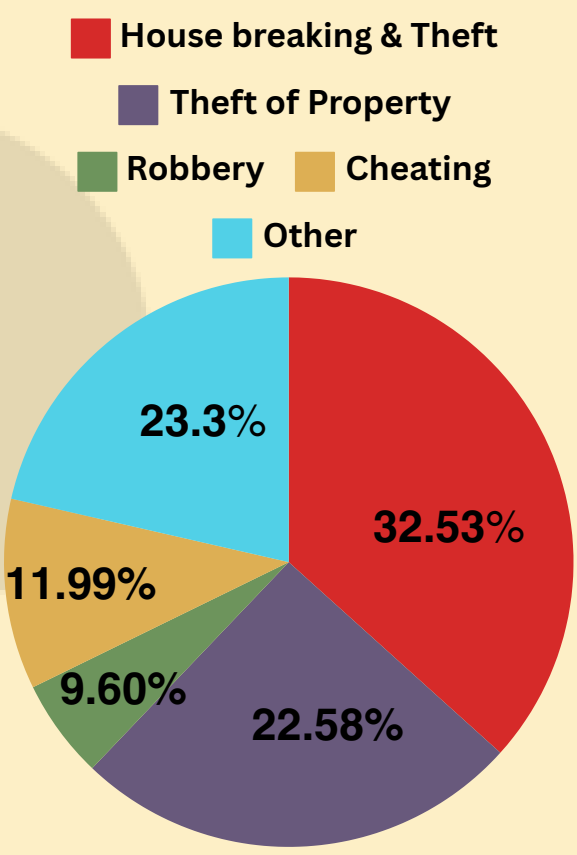
7.27%

AVERAGE DAILY WAGES INCREASE SINCE 2010-2012

LOW IMPACT AREAS

1. MULLATIVU
2. MANNAR
3. KILINOCHI
4. VAVUNIYA
5. TRINCOMALEE

MAJOR CRIMES



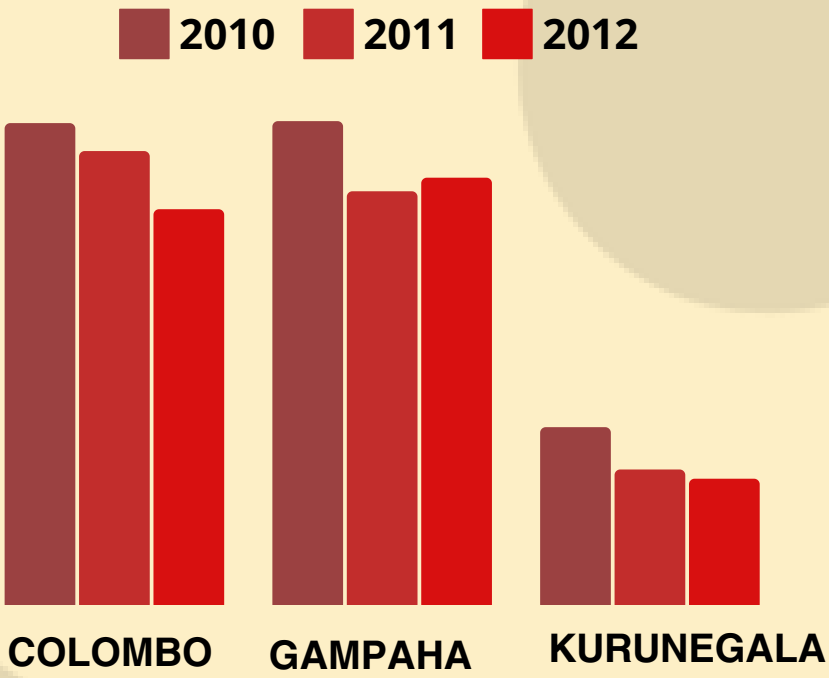
32.53%

OF THE CRIME ARE HOUSE BREAKING AND THEFT

ALARMING CITIES

NUWARA ELIYA
ANURADHAPURA
KILINOCHI

HOUSE BREAKING AND THEFT

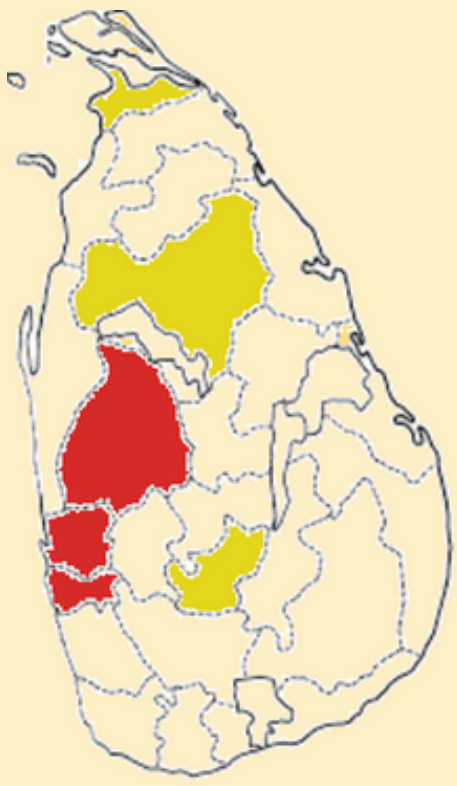


Amongst the High Impact Areas; COLOMBO, GAMPAHA & KURUNEGALA have seen a significant reduction in CRIME RATE but still remains the HIGHEST among others.

6.28%

Whilst there has been an overall reduction in crime rate; NUWARA ELIYA, ANURADHAPURA, KILINOCHI has seen gradual increase in CRIME RATE and are currently contesting High crime rate areas.

5.47%



CHOOSE YOUR DREAM HOUSE WISELY

1. Dataset Credits

Crime Data 2010 - 2012
(https://data.gov.lk/dataset/crime-data-2010-2012)

2. Tools and Techniques used

Data Preprocessing and Cleaning - Python Pandas Library
Visualization and Pattern analysis - Tableau
Infographic Poster - Canva

3. Disclaimers and Challenges

Disclaimers - The analysis of this dataset reveals the reduction of Crime rates from the years 2010 to 2012. Hence this reduction is correlated with the average daily wages of the Informal sector where the data shows an increase in daily wages within the years 2010-2012. The infographic is directed including that assumption.

Challenges - There is a limitation of data where the Crime data includes only 3 years without any seasonal components such as month, week or day. For an appropriate time series predictive analysis presence of at least 5 years worth of data with seasonal components would have been ideal.

4. Methodology and Further Details

The data is preprocessed and cleaned via Python Pandas library. An Exploratory data analysis is done to understand the nature of the data, presence of null values, unique columns, number summary, categorical variable information etc. The dataset obtained is found as 3 separate datasets for each corresponding year, so the 3 datasets were compared and merged as one dataset. The data present has areas as columns and crime count as the values for specific Crime Category so for easier analysis the dataset was melted to create the long format.

5. Target Audience

1. General Public and Home buyers who are on the lookout to buy a new house where the first concern is safety.
2. The security authorities that seek insights into crime patterns to develop effective crime prevention strategies.
3. Urban Planners - Professionals involved in urban planning who has to have an understanding of areas and crime rates.

6. Conclusion and Analysis Recommendation

1. Descriptive Analysis - Describe the trends in crime rates over the years (2010 - 2012) and their correlation with average wages, Identify High and Low crime rate areas based on the data, Analyzing the proportions of major types of crimes highlighting the most impactful crime.

2. Diagnostic Analysis - Understanding why certain areas remain high crime rate areas despite decreases in crime rates over time.

3. Prescriptive Analysis - Suggesting measures for security authorities to prevent increasing crime rates in areas experiencing a gradual rise in crime.(
Through this poster we recommend the places that has gradual increase in crime rate and those that should have more attention)

4. Predictive Analysis - Forecasting potential changes in crime rates in different areas to inform decision-making for homebuyers and authorities is one way of Prediction however due to limitations in dataset this was not accommodated here

Conclusion- Housing Breaking and Theft is the major crime in most of the areas in Sri Lanka. Crime rate is correlated with the average daily wages from the years 2010 - 2012. Since the wages are increasing, the crime rate is decreasing. Even though crime rates are decreasing the crimes in High impact area is still continuing which needs to have special attention. At the same time certain peaceful places are slowly getting into the crime impact which has to be immediately controlled by security authorities. When one buy or build houses in such areas necessary security measures need to be taken to prevent any harm.

7. Github Repository Link

https://github.com/kovisha/DataAnalysisInfograph