Mohammed Amir Kalam
Rockborne
Python Module

UK Crime Data Exploratory Data Analysis for Real Estate Insights

Stakeholder: Nadine Green, Head of Sales – Real Estate.

Project Statement of Work

The main purpose of this project is to present an Exploratory Data Analysis (EDA) of crime across 4 different UK regions, using open dataset provided by data.police.uk. This analysis will help the real estate company to identify locations that are most and least desirable and make any informed decisions around sales.

Objectives

The main objectives of this projects are:

1. To collect and preprocess UK Crime Data from a minimum of four police forces across at least two years.
2. To perform an exploratory data analysis focusing on:
   - Regional comparisons of crime rates
   - Crime type distribution and frequencies
   - Crime map
   - Time
   - Visualisation and analysis
3. To assess data quality.
4. To present the findings in a clear, visual and professional format suitable for the stakeholder.

In-Scope

- Downloading, cleaning and merging multiple CSV files.
- Analysis of street level crime dataset between Wales and London.
- Use of Python for data handling and visualisations.
- Production of visual reports and dashboards.
- Creation of an executive summary.

Out of Scope

- Predictive Machine Learning Modelling.
- Inclusion of non-UK or private dataset.
- Real-time or API-based dashboard.

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Deliverables

- Project statement of work.
- Trello Board.
- Jupyter Notebook with the Pre-processing.
- Workflow depicting pre-processing.
- EDA Report.
- Executive Summary.

Expected Outcomes

The final output will provide a comprehensive understanding of crime trends across 4 police forces in different regions. This will help the real estate team to make an informed decision about property desirability and market opportunities.

Trello:

https://trello.com/invite/b/690b210d6fca6f6b0cf55c4a/ATTIbc8f3db26d1d4edd98d55816609fd226B05C8221/my-trello-board