### **London Stolen Animals - My Approach**

#### **Tools Used:**

* Google Sheets: [View Google Sheet](https://github.com/Mazedaa/London-Stolen-Animals-Project/blob/main/clean_stolen_animals.xlsx)
* SQL: [View SQL](https://github.com/Mazedaa/London-Stolen-Animals-Project/blob/main/StolenAnimals.sql)
* Tableau: [View Dashboard](https://github.com/Mazedaa/London-Stolen-Animals-Project/blob/main/TableauDashboard.png)

**Objective:**

This project analyses stolen animal incidents across London to uncover actionable insights that enhance public awareness, improve prevention strategies, and support recovery efforts. By identifying theft hotspots, common patterns, and recovery rates, the project aims to inform targeted campaigns and neighbourhood initiatives to reduce animal theft and increase recovery rates.

**Key Questions Answered:**

1. How have stolen animal incidents trended over time, including any spikes or seasonal patterns?
2. Which boroughs are hotspots for animal theft?
3. Which animal types are most frequently stolen, and what offence types are associated with these incidents?
4. What is the recovery rate of stolen animals, and how can this be improved?
5. How can prevention and recovery strategies be optimised to reduce theft?

**Data Source:**

* **Dataset:** Metropolitan Police Service (MPS) Stolen Animal Data (January 2010 - November 2023).
* **Source:** London Datastore.
* **Columns:**
  + **Date:** Year and month of the incident.
  + **Borough:** London borough where the theft occurred.
  + **Animal Type:** Type of animal stolen (e.g., dogs, birds, fish).
  + **Offence Type:** Crime category linked to the theft (e.g., burglary, theft/handling).
  + **Recovered Status:** Indicates whether the stolen animal was recovered (Yes/No).
  + **Count:** Number of animals stolen during a single offence.

**Approach:**

#### **Data Cleaning:** The stolen animal data was imported into Google Sheets for an initial review of data quality.

#### Key steps included:

* **Standardising Column Formats:** Ensured consistency in the date, borough, and animal type columns for better analysis.
* **Duplicate Removal:** Removed 923 duplicate records using Google Sheets' "Remove Duplicates" feature, improving data accuracy.
* **Date Standardisation:** Created a Year-Month field using the TEXT() function to facilitate time-based analysis.
* **Handling Missing Values:** Flagged incomplete entries in SQL and excluded them from analysis to maintain robust insights.

#### **Data Analysis:** SQL was used for advanced exploration and aggregation.

#### Key analyses included:

* **Trends Over Time:** Aggregated data by month and year to identify significant fluctuations and seasonal trends. Stolen animal incidents peaked in 2022, with a dramatic spike in April.
* **Theft Hotspots:** Grouped data by borough to calculate total incidents and identify high-theft areas such as Barking and Dagenham.
* **Animal Types and Offence Types:** Segmented data by animal type and offence type to uncover patterns, such as burglary dominating fish and bird thefts.
* **Recovery Rates:** Calculated recovery rates by comparing recovered animals to total thefts, revealing a low overall recovery rate (6.15%).

#### **Data Visualisations:** Interactive visualisations in Tableau were created for deeper exploration of trends.

#### Key charts include:

* **Line Chart:** Number of stolen animals reported over time.
* **Bar Chart:** Breakdown of cases by animal type, highlighting the most frequently stolen animals.
* **Stacked Bar Chart:** Breakdown of cases by offence type, showing the most common offences related to stolen animals.
* **Pie Chart:** Proportion of recovered vs. not recovered cases.
* **Geospatial Map:** Heatmap of stolen animal reports by borough, layered with density mapping to emphasise hotspots.

**Interactive Features:**

* Filters for boroughs, animal types, time periods, offence types, and recovery status.
* Hover-over tooltips providing detailed data points, such as the number of stolen animals and borough-specific information.
* Dynamic charts responding to user-applied filters for focused insights.

**Key Findings:**

1. **Trends Over Time:**
   * Stolen animal incidents surged from 622 in 2020 to 1,713 in 2022, with a notable spike in April 2022 due to 1,206 fish stolen in Barking and Dagenham.
2. **Hotspot Boroughs:**
   * Barking and Dagenham, Hillingdon, Croydon, and Bromley reported the highest theft rates.
3. **Animal Types:**
   * Dogs are the most stolen animals, particularly in Croydon and Lambeth.
   * Fish and birds are often stolen during burglaries, particularly in Barking and Dagenham.
4. **Offence Types:**
   * Theft and handling are common for dogs, while burglary dominates incidents involving fish and birds.
5. **Recovery Rates:**
   * Overall recovery rate is 6.15%, with dogs having the highest recovery rate at 12%.

**Recommendations:**

#### **Enhance Public Awareness Campaigns:**

* Leverage posters, social media, and community outreach in high-risk areas.
* Educate pet owners on theft hotspots and prevention strategies.

#### **Improve Recovery Rates:**

* Promote microchipping and encourage compliance with registration laws.
* Advise owners to secure pets in high-risk neighbourhoods and report thefts promptly.

#### **Prevent Burglary-Related Thefts:**

* Advocate for improved home security measures (e.g., cameras, motion-sensitive lighting).
* Partner with law enforcement for neighbourhood watch initiatives targeting high-theft areas.

**Conclusion:**

By addressing key insights into theft trends, hotspots, and recovery efforts, this project provides actionable recommendations to reduce stolen animal incidents and improve recovery rates. Targeted campaigns, enhanced security measures, and better public awareness will help protect animals and deter theft.