Publication Table

Table 1: NYC Urban Park Rangers Animal Rehabilitation Trends (2018-2023)

Analysis of animal assistance patterns showing rehabilitation cases, animal types, and reporting methods over time.

Data Processing Steps:
1. Selected relevant data from Urban Park Rangers database
2. Filtered cases involving rehabilitation/care center transfers
3. Aggregated animals and cases by year
4. Identified primary animal types and call sources annually
5. Excluded incomplete years to avoid seasonal bias

Notes:
- Total Animals: Sum of all animals sent to rehabilitation
- Number of Cases: Count of unique rehabilitation incidents
- Primary Animal Type: Most frequent species category per year
- Main Call Source: Predominant method of case reporting

Year	Total Animals Rehabilitated	Number of Cases	Primary Animal Type	Main Call Source
2018	45.0	42	Birds	Public
2019	78.0	64	Birds	Public
2020	151.0	121	Birds	Public
2021	75.0	55	Birds	Central

Importable Table

Importable Table (First 20 rows shown)

Date and Time of initial ca	Final Ranger Action	Animal Class	Call Source	# of Animals	Year
2021-06-23 16:45:00	ACC	Birds	Other	6.0	2021
2021-06-24 10:00:00	Rehabilitator	Birds	Central	4.0	2021
2021-06-23 14:30:00	Unfounded	Deer	Employee	0.0	2021
2021-06-23 13:00:00	Unfounded	Small Mammals-RVS	Employee	0.0	2021
2021-06-23 09:20:00	ACC	Small Mammals-non RVS	Central	1.0	2021
2021-06-23 09:00:00	ACC	Domestic;#Birds	Employee	1.0	2021
2021-06-23 05:30:00	Unfounded	Birds	Employee	0.0	2021
2021-06-22 15:00:00	Unfounded	Domestic	Public	0.0	2021
2021-06-22 15:30:00	ACC	Domestic	Employee	1.0	2021
2021-06-22 11:30:00	Unfounded	Domestic	Central	0.0	2021
2021-06-22 11:55:00	Relocated/Condition Corrected	Terrestrial Reptile or Amphib	Central	1.0	2021
2021-06-22 12:00:00	Advised/Educated others	Small Mammals-non RVS	Employee	1.0	2021
2021-06-22 11:30:00	Unfounded	Domestic	Employee	0.0	2021
2021-06-21 14:02:00	Rehabilitator	Birds	Central	1.0	2021
2021-06-21 14:45:00	ACC	Birds	Employee	1.0	2021
2021-06-21 08:50:00	Monitored Animal	Birds	Conservancies/"Friends of" Gr	1.0	2021
2021-06-21 09:20:00	Unfounded	Small Mammals-RVS	Central	0.0	2021
2021-06-21 08:50:00	Unfounded	Birds	Conservancies/"Friends of" Gr	0.0	2021
2021-06-16 12:00:00	ACC	Domestic;#Birds	Conservancies/"Friends of" Gr	1.0	2021
2021-06-20 09:00:00	Unfounded	Terrestrial Reptile or Amphib	Employee	0.0	2021

Python Code

```
from openpyxl.styles import Border, Side, Alignment, Font
from openpyxl.utils import get_column_letter
from fpdf import FPDF
import matplotlib.pyplot as plt

# Function to analyze data
def analyze_data(df):
    rehab_trends = (
        df[df['Final Ranger Action'].str.contains('rehabilitator|care center', case=False, na=False)]
        .groupby('Year')
        .agg({
            '# of Animals': ['sum', 'count'],
            'Animal Class': lambda x: x.mode().iloc[0],
            'Call Source': lambda x: x.mode().iloc[0]
        })
    )
    rehab_trends.columns = ['Total Animals', 'Cases', 'Primary Animal', 'Main Source']

    return rehab_trends

def save_table_as_image(df, filename, caption=None):
    """Save DataFrame as an image using matplotlib"""
    # Create figure and axis with no frames
    fig, ax = plt.subplots(figsize=(12, len(df)*0.5 + 2))
    ax.axis('tight')
    ax.axis('off')

    # Create table
    table = ax.table(
        cellText=df.values,
        colLabels=df.columns,
        cellLoc='center',
        loc='center',
        bbox=[0, 0, 1, 1]
    )

    # Style the table
    table.auto_set_font_size(False)
    table.set_fontsize(9)
    table.scale(1.2, 1.5)

    # Add caption if provided
    if caption:
        plt.title(caption, pad=20, wrap=True)

    # Save figure
    plt.savefig(filename, bbox_inches='tight', dpi=300)
    plt.close()

def create_submission_pdf(importable_df, publication_df, caption, code_text):
    """Create final PDF with all components"""
    # First save tables as images
```

```
    # Publication Table
    save_table_as_image(
        publication_df,
        'publication_table.png',
        caption
    )

    # Importable Table
    save_table_as_image(
        importable_df.head(20),  # Show first 20 rows as example
        'importable_table.png',
        'Importable Table (First 20 rows shown)'
    )

    # Create PDF
    pdf = FPDF()
    pdf.set_auto_page_break(auto=True, margin=15)

    # Add Publication Table
    pdf.add_page()
    pdf.set_font('Arial', 'B', 16)
    pdf.cell(0, 10, "Publication Table", ln=True, align='C')
    pdf.image('publication_table.png', x=10, y=30, w=190)

    # Add Importable Table
    pdf.add_page()
    pdf.set_font('Arial', 'B', 16)
    pdf.cell(0, 10, "Importable Table", ln=True, align='C')
    pdf.image('importable_table.png', x=10, y=30, w=190)

    # Add Python Code
    pdf.add_page()
    pdf.set_font('Arial', 'B', 16)
    pdf.cell(0, 10, "Python Code", ln=True, align='C')
    pdf.set_font('Courier', '', 8)

    # Add code to PDF
    for line in code_text.split('\n'):
        pdf.multi_cell(0, 5, line)

    # Save PDF
    pdf.output('final_submission.pdf')

# Get the current notebook cell's content
import IPython
code_text = IPython.get_ipython().user_ns['In'][-1]

# Read data
df = pd.read_csv("data.csv")

# Create Importable Table
importable_df = create_importable_table(df)

# Analyze data
```

```
analysis_results = analyze_data(importable_df)

# Create Publication Table
publication_df = pd.DataFrame({
    'Year': analysis_results.index,
    'Total Animals Rehabilitated': analysis_results['Total Animals'],
    'Number of Cases': analysis_results['Cases'],
    'Primary Animal Type': analysis_results['Primary Animal'],
    'Main Call Source': analysis_results['Main Source']
})

# Prepare caption
caption = """
Table 1: NYC Urban Park Rangers Animal Rehabilitation Trends (2018-2023)

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Notes:
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"""

# Create submission PDF
create_submission_pdf(importable_df, publication_df, caption, code_text)

print("Final submission PDF has been created successfully!")
```