

```
# -*- coding: utf-8 -*-
```

```
"""
```

```
Created on Thu Dec 14 22:46:30 2023
```

```
@author: shyam
```

```
"""
```

```
import matplotlib.pyplot as plt
```

```
import seaborn as sns
```

```
#Function 1
```

```
def Collision_Locations_in_NYC(selected_data):
```

```
    plt.figure(figsize=(12, 8))
```

```
    plt.scatter(selected_data['longitude'], selected_data['latitude'], alpha=0.5)
```

```
    plt.title('Collision Locations in NYC')
```

```
    plt.xlabel('Longitude')
```

```
    plt.ylabel('Latitude')
```

```
    plt.grid(True)
```

```
    plt.show()
```

```
    return plt.show()
```

```
#function 2
```

```
def Spatial_Distribution_of_Collisions_by_Borough(selected_data):
```

```
    plt.figure(figsize=(12, 8))
```

```
    sns.scatterplot(x='longitude', y='latitude', hue='borough', data=selected_data,  
alpha=0.5)
```

```
    plt.title('Spatial Distribution of Collisions by Borough')
```

```
    plt.xlabel('Longitude')
```

```
    plt.ylabel('Latitude')
```

```
    plt.legend(title='Borough')
```

```
    plt.show()
```

```
    return plt.show()
```

```
#function 3
```

```
def distribution_of_injuries_and_fatalities(selected_data):
```

```
    plt.figure(figsize=(12, 6))
```

```
    sns.boxplot(x='borough', y='number_of_persons_injured', data=selected_data,  
palette='viridis')
```

```
    sns.boxplot(x='borough', y='number_of_persons_killed', data=selected_data,  
palette='Reds', width=0.4)
```

```
    plt.title('Distribution of Injuries and Fatalities by Borough')
```

```
    plt.xlabel('Borough')
```

```
    plt.ylabel('Count')
```

```
    plt.show()
```

```
    return plt.show()
```