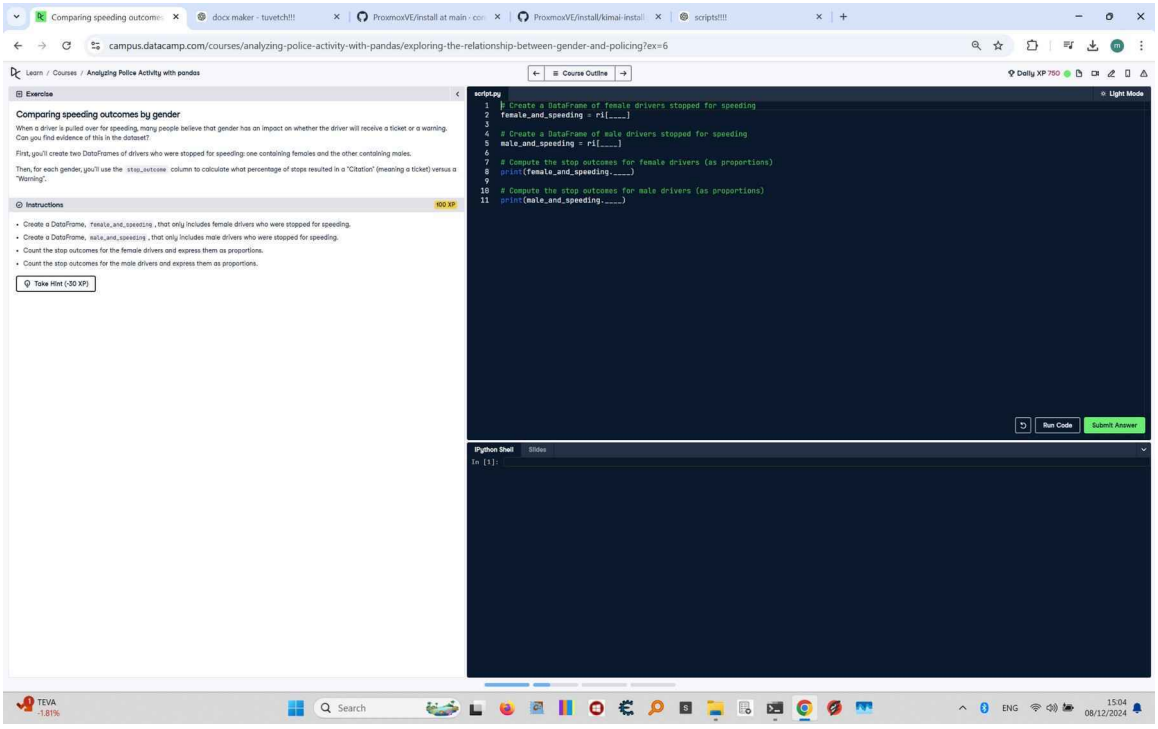
Comparing Speeding Outcomes by Gender



Task Description

1. Create a DataFrame, 'female_and_speeding', that only includes female drivers who were stopped for speeding.
2. Create a DataFrame, 'male_and_speeding', that only includes male drivers who were stopped for speeding.
3. Count the stop outcomes for the female drivers and express them as proportions.
4. Count the stop outcomes for the male drivers and express them as proportions.

Code Solution

```
# Create a DataFrame of female drivers stopped for speeding
female_and_speeding = ri[(ri['driver_gender'] == 'F') & (ri['violation'] == 'Speeding')]

# Create a DataFrame of male drivers stopped for speeding
male_and_speeding = ri[(ri['driver_gender'] == 'M') & (ri['violation'] == 'Speeding')]

# Compute the stop outcomes for female drivers (as proportions)
print(female_and_speeding['stop_outcome'].value_counts(normalize=True))
```

```
# Compute the stop outcomes for male drivers (as proportions)
print(male_and_speeding['stop_outcome'].value_counts(normalize=True))
```

Code Explanation

1. The line 'female_and_speeding = ri[(ri['driver_gender'] == 'F') & (ri['violation'] == 'Speeding')]' filters the DataFrame to include only rows where the driver is female and the violation is speeding.
2. The line 'male_and_speeding = ri[(ri['driver_gender'] == 'M') & (ri['violation'] == 'Speeding')]' filters the DataFrame to include only rows where the driver is male and the violation is speeding.
3. The line 'print(female_and_speeding['stop_outcome'].value_counts(normalize=True))' calculates the proportion of each type of stop outcome (e.g., Citation, Warning) for female drivers who were stopped for speeding.
4. The line 'print(male_and_speeding['stop_outcome'].value_counts(normalize=True))' calculates the proportion of each type of stop outcome for male drivers who were stopped for speeding.