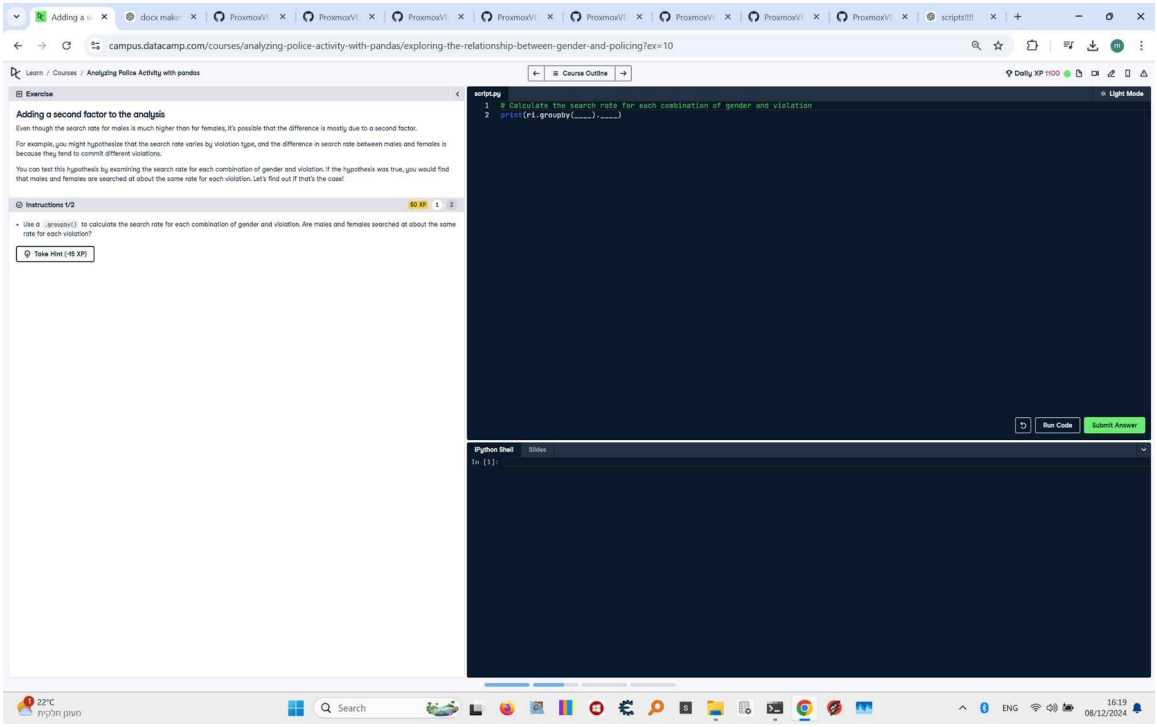
Adding a Second Factor to the Analysis (Updated)



Task Description

1. Use a groupby() to calculate the search rate for each combination of violation and gender.
2. Analyze whether males and females are searched at about the same rate for each violation type.

Code Solution

```
# Reverse the ordering to group by violation before gender
violation_gender_search_rate = ri.groupby(['violation',
'driver_gender']).search_conducted.mean()
print(violation_gender_search_rate)
```

Code Explanation

1. The line 'violation_gender_search_rate = ri.groupby(['violation', 'driver_gender']).search_conducted.mean()' groups the DataFrame by both 'violation' and 'driver_gender' columns, then calculates the mean of 'search_conducted' for each group. By grouping first by violation, the results are organized to allow for comparison of search rates within each violation type across genders.
2. The line 'print(violation_gender_search_rate)' outputs the calculated search rates to enable analysis of any patterns or differences between genders for each violation.