In [1]:

```
import numpy as np
import pandas as pd
import matplotlib.pyplot as plt
import seaborn as sns
```

In [2]:

```
data = pd.read_csv(r'D:\Career\Udemy\DA 2\Uber Data\uber-pickups-in-new-york-city/uber-raw-
```

In [3]:

```
data.head(2)
```

Out[3]:

| | Dispatching_base_num | Pickup_date | Affiliated_base_num | locationID |
|---|---|---|---|---|
| **0** | B02617 | 2015-05-17 09:47:00 | B02617 | 141 |
| **1** | B02617 | 2015-05-17 09:47:00 | B02617 | 65 |

In [4]:

```
data.drop_duplicates(inplace = True)
```

In [5]:

```
data.shape
```

Out[5]:

```
(13372254, 4)
```

which month have max uber pickups

In [6]:

```
data['Pickup_date'] = pd.to_datetime(data['Pickup_date'], format = '%Y-%m-%d %H:%M:%S')
```

In [7]:

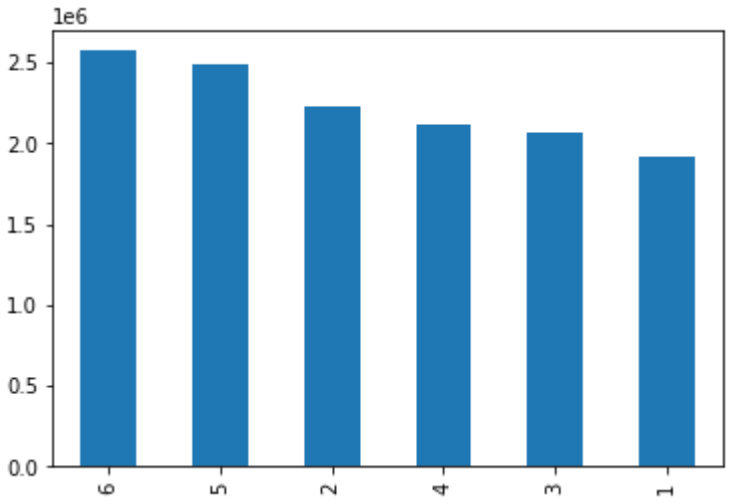
```
data['month'] = data['Pickup_date'].dt.month
```

In [8]:

```
data['month'].value_counts().plot(kind = 'bar')
```

Out[8]:

<AxesSubplot:>




Indepth Analysis of Uber Trips

In [9]:

```
data['week_day'] = data['Pickup_date'].dt.day_name()
data['day'] = data['Pickup_date'].dt.day
data['hour'] = data['Pickup_date'].dt.hour
data['month'] = data['Pickup_date'].dt.month
data['minute'] = data['Pickup_date'].dt.minute
```

In [10]:

```
data.head()
```

Out[10]:

| | Dispatching_base_num | Pickup_date | Affiliated_base_num | locationID | month | week_day | day |
|---|---|---|---|---|---|---|---|
| **0** | B02617 | 2015-05-17 09:47:00 | B02617 | 141 | 5 | Sunday | 17 |
| **1** | B02617 | 2015-05-17 09:47:00 | B02617 | 65 | 5 | Sunday | 17 |
| **2** | B02617 | 2015-05-17 09:47:00 | B02617 | 100 | 5 | Sunday | 17 |
| **3** | B02617 | 2015-05-17 09:47:00 | B02774 | 80 | 5 | Sunday | 17 |
| **4** | B02617 | 2015-05-17 09:47:00 | B02617 | 90 | 5 | Sunday | 17 |

In [11]:

```
temp = data.groupby(['month','week_day'],as_index = False).size()
```

In [12]:

```
temp['month'].unique()
```

Out[12]:

```
array([1, 2, 3, 4, 5, 6], dtype=int64)
```

In [13]:

```
dict_month = {1:'January', 2:'February', 3:'March', 4:'April', 5:'May', 6:'June'}
```

In [14]:

```
temp['month'] = temp['month'].map(dict_month)
```

In [15]:

```
temp
```

Out[15]:

| | month | week_day | size |
|---|---|---|---|
| 0 | January | Friday | 339285 |
| 1 | January | Monday | 190606 |
| 2 | January | Saturday | 386049 |
| 3 | January | Sunday | 230487 |
| 4 | January | Thursday | 330319 |
| 5 | January | Tuesday | 196574 |
| 6 | January | Wednesday | 245650 |
| 7 | February | Friday | 373550 |
| 8 | February | Monday | 274948 |
| 9 | February | Saturday | 368311 |
| 10 | February | Sunday | 296130 |
| 11 | February | Thursday | 335603 |
| 12 | February | Tuesday | 287260 |
| 13 | February | Wednesday | 286387 |
| 14 | March | Friday | 309631 |
| 15 | March | Monday | 269931 |
| 16 | March | Saturday | 314785 |
| 17 | March | Sunday | 313865 |
| 18 | March | Thursday | 277026 |
| 19 | March | Tuesday | 320634 |
| 20 | March | Wednesday | 256767 |
| 21 | April | Friday | 315002 |
| 22 | April | Monday | 238429 |
| 23 | April | Saturday | 324545 |
| 24 | April | Sunday | 273560 |
| 25 | April | Thursday | 372522 |
| 26 | April | Tuesday | 250632 |
| 27 | April | Wednesday | 338015 |
| 28 | May | Friday | 430134 |
| 29 | May | Monday | 255501 |
| 30 | May | Saturday | 464298 |
| 31 | May | Sunday | 390391 |
| 32 | May | Thursday | 337607 |
| 33 | May | Tuesday | 290004 |

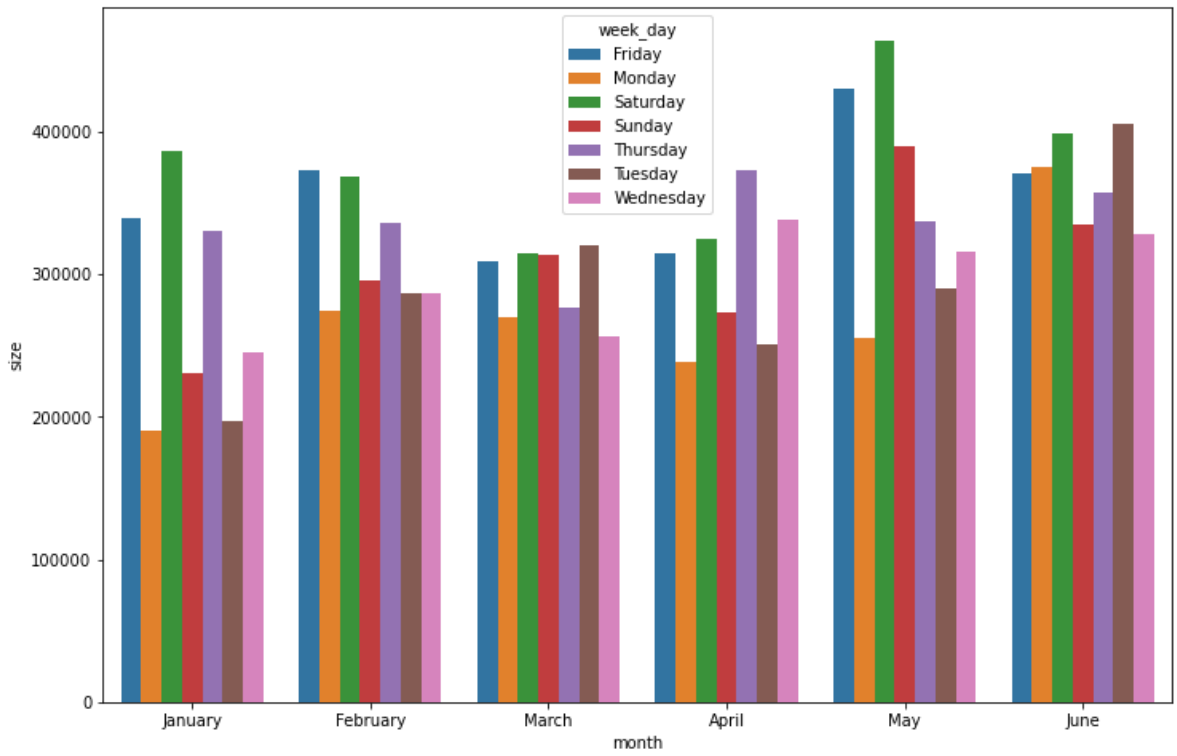
| | month | week_day | size |
|---|---|---|---|
| **34** | May | Wednesday | 316045 |
| **35** | June | Friday | 371225 |
| **36** | June | Monday | 375312 |
| **37** | June | Saturday | 399377 |
| **38** | June | Sunday | 334434 |
| **39** | June | Thursday | 357782 |
| **40** | June | Tuesday | 405500 |
| **41** | June | Wednesday | 328141 |

In [16]:

```
plt.figure(figsize = (12,8))
sns.barplot(x = 'month', y = 'size', hue = 'week_day', data = temp)
```

Out[16]:

```
<AxesSubplot:xlabel='month', ylabel='size'>
```




Hourly demand in new york

In [17]:

```
summary = data.groupby(['week_day','hour'],as_index = False).size()
```

In [18]:

```
summary
```

Out[18]:

| | week_day | hour | size |
|---|---|---|---|
| **0** | Friday | 0 | 79879 |
| **1** | Friday | 1 | 44563 |
| **2** | Friday | 2 | 27252 |
| **3** | Friday | 3 | 19076 |
| **4** | Friday | 4 | 23049 |
| **...** | ... | ... | ... |
| **163** | Wednesday | 19 | 131317 |
| **164** | Wednesday | 20 | 123490 |
| **165** | Wednesday | 21 | 120941 |
| **166** | Wednesday | 22 | 115208 |
| **167** | Wednesday | 23 | 91631 |

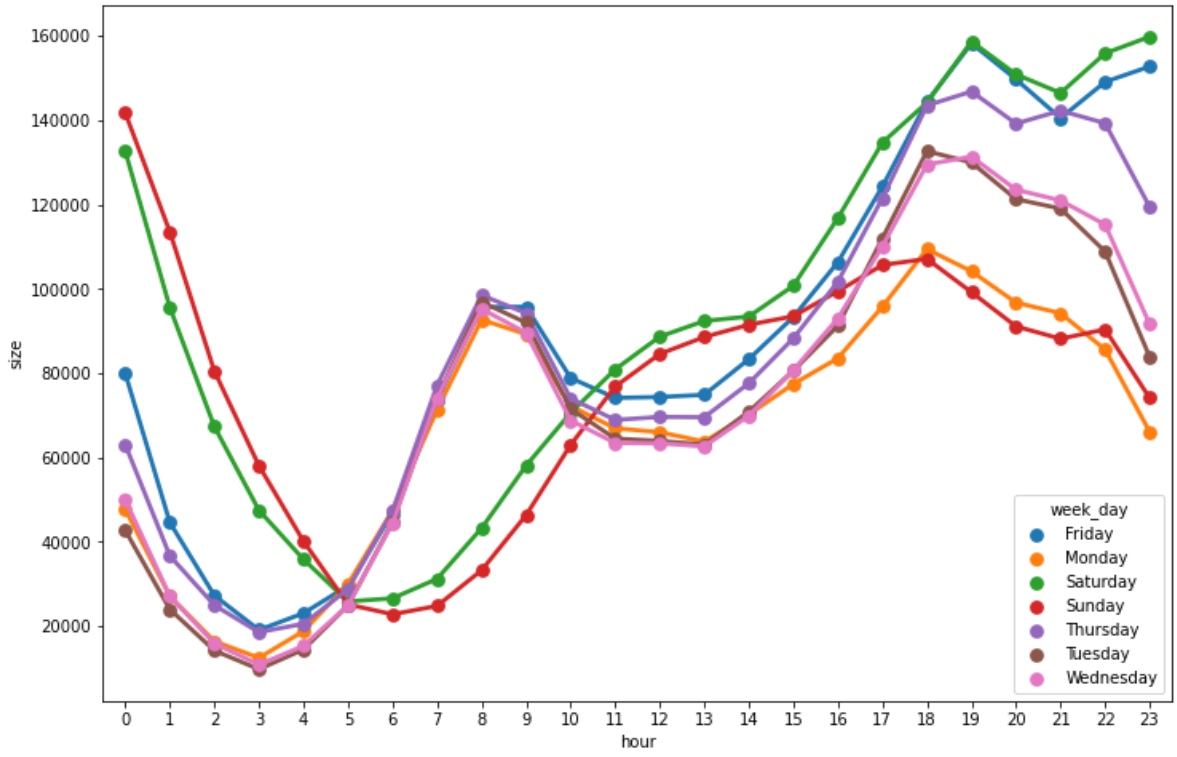
168 rows × 3 columns

In [19]:

```
plt.figure(figsize = (12,8))
sns.pointplot(x = 'hour', y = 'size', hue = 'week_day', data = summary)
```

Out[19]:

```
<AxesSubplot:xlabel='hour', ylabel='size'>
```




Most number of active vehicles

In [20]:

```
foil = pd.read_csv(r'D:\Career\Udemy\DA 2\Uber Data\uber-pickups-in-new-york-city/Uber-Jan-
foil.head()
```

Out[20]:

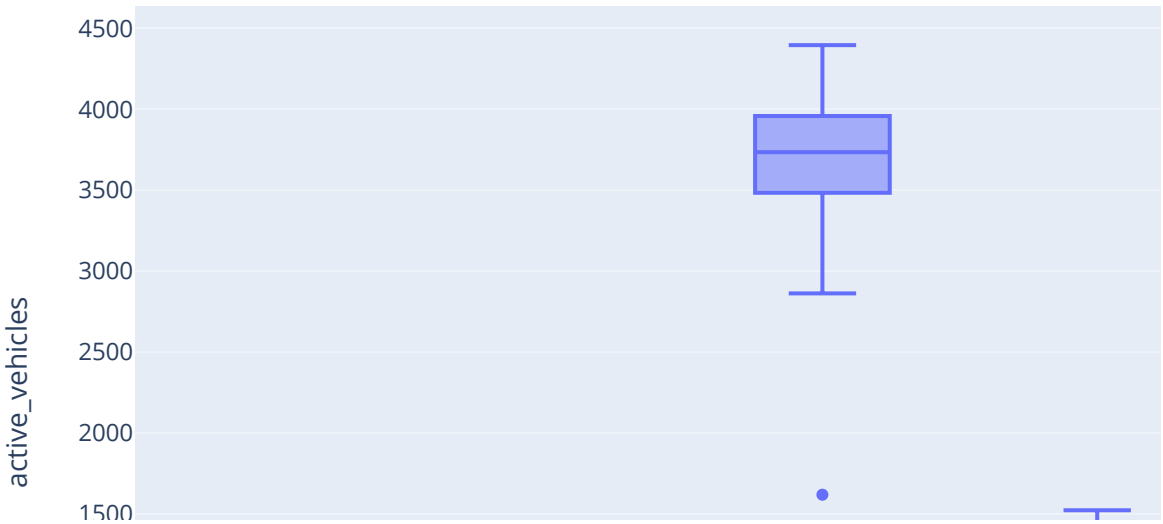
| | dispatching_base_number | date | active_vehicles | trips |
|---|---|---|---|---|
| **0** | B02512 | 1/1/2015 | 190 | 1132 |
| **1** | B02765 | 1/1/2015 | 225 | 1765 |
| **2** | B02764 | 1/1/2015 | 3427 | 29421 |
| **3** | B02682 | 1/1/2015 | 945 | 7679 |
| **4** | B02617 | 1/1/2015 | 1228 | 9537 |

In [21]:

```
import chart_studio.plotly as py
import plotly.graph_objs as go
import plotly.express as px
from plotly.offline import download_plotlyjs, plot, iplot, init_notebook_mode
init_notebook_mode(connected = True)
```

In [22]:

```
px.box(x = 'dispatching_base_number', y = 'active_vehicles',data_frame = foil)
```



In [23]:

```
px.violin(x = 'dispatching_base_number', y = 'active_vehicles',data_frame = foil)
```


Collect Entire Data

In [24]:

```
import os
files = os.listdir(r'D:\Career\Udemy\DA 2\Uber Data\uber-pickups-in-new-york-city')[-7:]
```

In [25]:

```
files
```

Out[25]:

```
['uber-raw-data-apr14.csv',
 'uber-raw-data-aug14.csv',
 'uber-raw-data-janjune-15.csv',
 'uber-raw-data-jul14.csv',
 'uber-raw-data-jun14.csv',
 'uber-raw-data-may14.csv',
 'uber-raw-data-sep14.csv']
```

In [26]:

```
files.remove('uber-raw-data-janjune-15.csv')
```

In [27]:

```
files
```

Out[27]:

```
['uber-raw-data-apr14.csv',
 'uber-raw-data-aug14.csv',
 'uber-raw-data-jul14.csv',
 'uber-raw-data-jun14.csv',
 'uber-raw-data-may14.csv',
 'uber-raw-data-sep14.csv']
```

In [28]:

```
path = r'D:\Career\Udemy\DA 2\Uber Data\uber-pickups-in-new-york-city'

final_df = pd.DataFrame()
for file in files:
    current_df = pd.read_csv(path+'/'+file, encoding = 'utf-8')
    final_df = pd.concat([current_df,final_df])
```

In [29]:

```
final_df.head()
```

Out[29]:

| | Date/Time | Lat | Lon | Base |
|---|---|---|---|---|
| **0** | 9/1/2014 0:01:00 | 40.2201 | -74.0021 | B02512 |
| **1** | 9/1/2014 0:01:00 | 40.7500 | -74.0027 | B02512 |
| **2** | 9/1/2014 0:03:00 | 40.7559 | -73.9864 | B02512 |
| **3** | 9/1/2014 0:06:00 | 40.7450 | -73.9889 | B02512 |
| **4** | 9/1/2014 0:11:00 | 40.8145 | -73.9444 | B02512 |

In [30]:

```
final_df.drop_duplicates(inplace = True)
```

In [31]:

```
final_df.shape
```

Out[31]:

```
(4451746, 4)
```

Location where uber getting rush

In [32]:

```
rush_uber = final_df.groupby(['Lat','Lon'],as_index = False).size()
```

In [33]:

```
rush_uber.head()
```

Out[33]:

| | Lat | Lon | size |
|---|---|---|---|
| **0** | 39.6569 | -74.2258 | 1 |
| **1** | 39.6686 | -74.1607 | 1 |
| **2** | 39.7214 | -74.2446 | 1 |
| **3** | 39.8416 | -74.1512 | 1 |
| **4** | 39.9055 | -74.0791 | 1 |

In [34]:

```
import folium
```

In [35]:

```
baseMap = folium.Map()
```

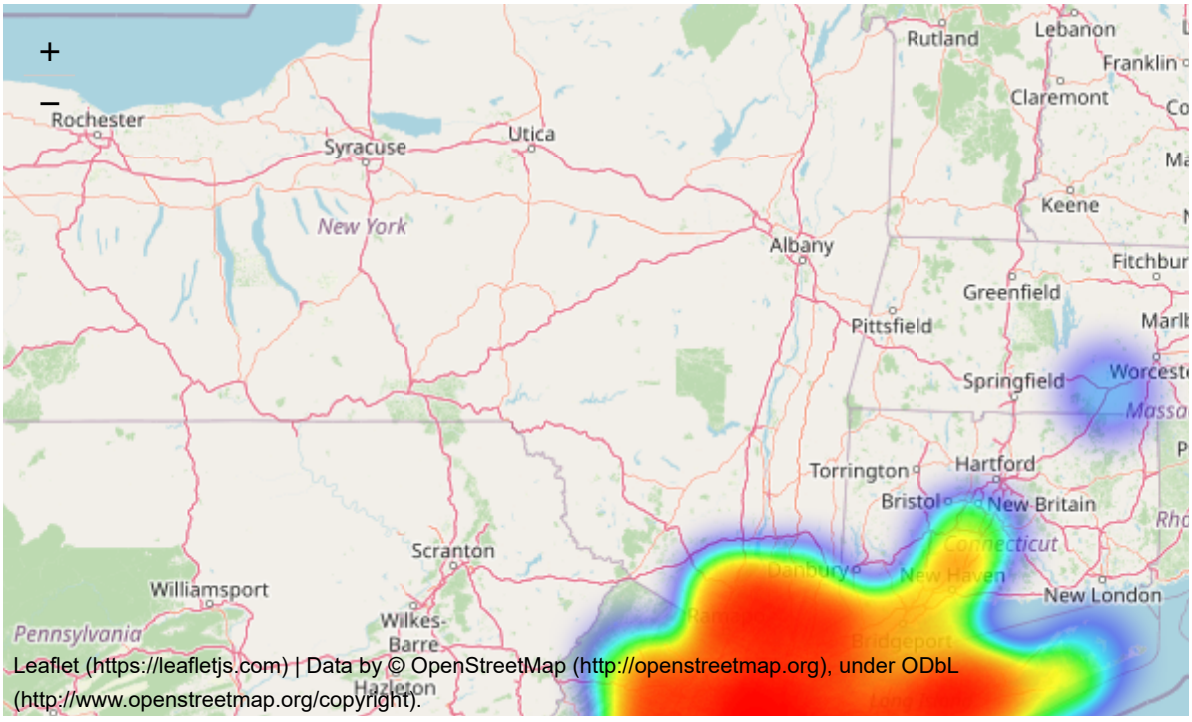
In [36]:

```
from folium.plugins import HeatMap
```

In [37]:

```
HeatMap(rush_uber).add_to(baseMap)
baseMap
```

Out[37]:




## Rush on hour and weekday

In [38]:

```
final_df.head()
```

Out[38]:

| | Date/Time | Lat | Lon | Base |
|---|---|---|---|---|
| **0** | 9/1/2014 0:01:00 | 40.2201 | -74.0021 | B02512 |
| **1** | 9/1/2014 0:01:00 | 40.7500 | -74.0027 | B02512 |
| **2** | 9/1/2014 0:03:00 | 40.7559 | -73.9864 | B02512 |
| **3** | 9/1/2014 0:06:00 | 40.7450 | -73.9889 | B02512 |
| **4** | 9/1/2014 0:11:00 | 40.8145 | -73.9444 | B02512 |

In [39]:

```
final_df['Date/Time'] = pd.to_datetime(final_df['Date/Time'], format = '%m/%d/%Y %H:%M:%S')
```

In [40]:

```
final_df.head()
```

Out[40]:

| | Date/Time | Lat | Lon | Base |
|---|---|---|---|---|
| **0** | 2014-09-01 00:01:00 | 40.2201 | -74.0021 | B02512 |
| **1** | 2014-09-01 00:01:00 | 40.7500 | -74.0027 | B02512 |
| **2** | 2014-09-01 00:03:00 | 40.7559 | -73.9864 | B02512 |
| **3** | 2014-09-01 00:06:00 | 40.7450 | -73.9889 | B02512 |
| **4** | 2014-09-01 00:11:00 | 40.8145 | -73.9444 | B02512 |

In [41]:

```
final_df['weekday'] = final_df['Date/Time'].dt.day
final_df['hour'] = final_df['Date/Time'].dt.hour
```

In [42]:

```
final_df.head()
```

Out[42]:

| | Date/Time | Lat | Lon | Base | weekday | hour |
|---|---|---|---|---|---|---|
| **0** | 2014-09-01 00:01:00 | 40.2201 | -74.0021 | B02512 | 1 | 0 |
| **1** | 2014-09-01 00:01:00 | 40.7500 | -74.0027 | B02512 | 1 | 0 |
| **2** | 2014-09-01 00:03:00 | 40.7559 | -73.9864 | B02512 | 1 | 0 |
| **3** | 2014-09-01 00:06:00 | 40.7450 | -73.9889 | B02512 | 1 | 0 |
| **4** | 2014-09-01 00:11:00 | 40.8145 | -73.9444 | B02512 | 1 | 0 |

In [43]:

```
pivot = final_df.groupby(['weekday','hour']).size().unstack()
```

In [44]:

```
pivot
```

Out[44]:

| hour | 0 | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | ... | 14 | 15 | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| weekday | | | | | | | | | | | | | | |
| 1 | 3178 | 1944 | 1256 | 1308 | 1429 | 2126 | 3664 | 5380 | 5292 | 4617 | ... | 6933 | 7910 | 8 |
| 2 | 2435 | 1569 | 1087 | 1414 | 1876 | 2812 | 4920 | 6544 | 6310 | 4712 | ... | 6904 | 8449 | 10 |
| 3 | 3354 | 2142 | 1407 | 1467 | 1550 | 2387 | 4241 | 5663 | 5386 | 4657 | ... | 7226 | 8850 | 10 |
| 4 | 2897 | 1688 | 1199 | 1424 | 1696 | 2581 | 4592 | 6029 | 5704 | 4744 | ... | 7158 | 8515 | 9 |
| 5 | 2733 | 1541 | 1030 | 1253 | 1617 | 2900 | 4814 | 6261 | 6469 | 5530 | ... | 6955 | 8312 | 9 |
| 6 | 4537 | 2864 | 1864 | 1555 | 1551 | 2162 | 3642 | 4766 | 4942 | 4401 | ... | 7235 | 8612 | 9 |
| 7 | 3645 | 2296 | 1507 | 1597 | 1763 | 2422 | 4102 | 5575 | 5376 | 4639 | ... | 7276 | 8474 | 10 |
| 8 | 2830 | 1646 | 1123 | 1483 | 1889 | 3224 | 5431 | 7361 | 7357 | 5703 | ... | 7240 | 8775 | 9 |
| 9 | 2657 | 1724 | 1222 | 1480 | 1871 | 3168 | 5802 | 7592 | 7519 | 5895 | ... | 7877 | 9220 | 10 |
| 10 | 3296 | 2126 | 1464 | 1434 | 1591 | 2594 | 4664 | 6046 | 6158 | 5072 | ... | 7612 | 9578 | 11 |
| 11 | 3036 | 1665 | 1095 | 1424 | 1842 | 2520 | 4954 | 6876 | 6871 | 5396 | ... | 7503 | 8920 | 10 |
| 12 | 3227 | 2147 | 1393 | 1362 | 1757 | 2710 | 4576 | 6250 | 6231 | 5177 | ... | 7743 | 9390 | 10 |
| 13 | 5408 | 3509 | 2262 | 1832 | 1705 | 2327 | 4196 | 5685 | 6060 | 5631 | ... | 8200 | 9264 | 10 |
| 14 | 3748 | 2349 | 1605 | 1656 | 1756 | 2629 | 4257 | 5781 | 5520 | 4824 | ... | 6963 | 8192 | 9 |
| 15 | 2497 | 1515 | 1087 | 1381 | 1862 | 2980 | 5050 | 6837 | 6729 | 5201 | ... | 7633 | 8505 | 10 |
| 16 | 2547 | 1585 | 1119 | 1395 | 1818 | 2966 | 5558 | 7517 | 7495 | 5958 | ... | 7597 | 9290 | 10 |
| 17 | 3155 | 2048 | 1500 | 1488 | 1897 | 2741 | 4562 | 6315 | 5882 | 4934 | ... | 7472 | 8997 | 10 |
| 18 | 3390 | 2135 | 1332 | 1626 | 1892 | 2959 | 4688 | 6618 | 6451 | 5377 | ... | 7534 | 9040 | 10 |
| 19 | 3217 | 2188 | 1604 | 1675 | 1810 | 2639 | 4733 | 6159 | 6014 | 5006 | ... | 7374 | 8898 | 9 |
| 20 | 4475 | 3190 | 2100 | 1858 | 1618 | 2143 | 3584 | 4900 | 5083 | 4765 | ... | 7462 | 8630 | 9 |
| 21 | 4294 | 3194 | 1972 | 1727 | 1926 | 2615 | 4185 | 5727 | 5529 | 4707 | ... | 7064 | 8127 | 9 |
| 22 | 2787 | 1637 | 1175 | 1468 | 1934 | 3151 | 5204 | 6872 | 6850 | 5198 | ... | 7337 | 9148 | 10 |
| 23 | 2546 | 1580 | 1136 | 1429 | 1957 | 3132 | 5204 | 6890 | 6436 | 5177 | ... | 7575 | 9309 | 9 |
| 24 | 3200 | 2055 | 1438 | 1493 | 1798 | 2754 | 4484 | 6013 | 5913 | 5146 | ... | 7083 | 8706 | 10 |
| 25 | 2405 | 1499 | 1072 | 1439 | 1943 | 2973 | 5356 | 7627 | 7078 | 5994 | ... | 7298 | 8732 | 9 |
| 26 | 3810 | 3065 | 2046 | 1806 | 1730 | 2337 | 3776 | 5172 | 5071 | 4808 | ... | 7269 | 8815 | 9 |
| 27 | 5196 | 3635 | 2352 | 2055 | 1723 | 2336 | 3539 | 4937 | 5053 | 4771 | ... | 7519 | 8803 | 9 |
| 28 | 4123 | 2646 | 1843 | 1802 | 1883 | 2793 | 4290 | 5715 | 5671 | 5206 | ... | 7341 | 8584 | 9 |
| 29 | 2678 | 1827 | 1409 | 1678 | 1948 | 3056 | 5213 | 6852 | 6695 | 5481 | ... | 7630 | 9249 | 10 |
| 30 | 2401 | 1510 | 1112 | 1403 | 1841 | 3216 | 5757 | 7596 | 7611 | 6064 | ... | 8396 | 10243 | 11 |
| 31 | 2174 | 1394 | 1087 | 919 | 773 | 997 | 1561 | 2169 | 2410 | 2525 | ... | 4104 | 5099 | 5 |

31 rows × 24 columns

In [45]:

```
pivot.style.background_gradient()
```

Out[45]:

| hour | 0 | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 1 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| weekday | | | | | | | | | | | | | | |
| 1 | 3178 | 1944 | 1256 | 1308 | 1429 | 2126 | 3664 | 5380 | 5292 | 4617 | 4607 | 4729 | 4930 | 579 |
| 2 | 2435 | 1569 | 1087 | 1414 | 1876 | 2812 | 4920 | 6544 | 6310 | 4712 | 4797 | 4975 | 5188 | 569 |
| 3 | 3354 | 2142 | 1407 | 1467 | 1550 | 2387 | 4241 | 5663 | 5386 | 4657 | 4788 | 5065 | 5384 | 609 |
| 4 | 2897 | 1688 | 1199 | 1424 | 1696 | 2581 | 4592 | 6029 | 5704 | 4744 | 4743 | 4975 | 5193 | 617 |
| 5 | 2733 | 1541 | 1030 | 1253 | 1617 | 2900 | 4814 | 6261 | 6469 | 5530 | 5141 | 5011 | 5047 | 569 |
| 6 | 4537 | 2864 | 1864 | 1555 | 1551 | 2162 | 3642 | 4766 | 4942 | 4401 | 4801 | 5174 | 5426 | 625 |
| 7 | 3645 | 2296 | 1507 | 1597 | 1763 | 2422 | 4102 | 5575 | 5376 | 4639 | 4905 | 5166 | 5364 | 621 |
| 8 | 2830 | 1646 | 1123 | 1483 | 1889 | 3224 | 5431 | 7361 | 7357 | 5703 | 5288 | 5350 | 5483 | 631 |
| 9 | 2657 | 1724 | 1222 | 1480 | 1871 | 3168 | 5802 | 7592 | 7519 | 5895 | 5406 | 5443 | 5496 | 641 |
| 10 | 3296 | 2126 | 1464 | 1434 | 1591 | 2594 | 4664 | 6046 | 6158 | 5072 | 4976 | 5415 | 5506 | 652 |
| 11 | 3036 | 1665 | 1095 | 1424 | 1842 | 2520 | 4954 | 6876 | 6871 | 5396 | 5215 | 5423 | 5513 | 648 |
| 12 | 3227 | 2147 | 1393 | 1362 | 1757 | 2710 | 4576 | 6250 | 6231 | 5177 | 5157 | 5319 | 5570 | 644 |
| 13 | 5408 | 3509 | 2262 | 1832 | 1705 | 2327 | 4196 | 5685 | 6060 | 5631 | 5442 | 5720 | 5914 | 667 |
| 14 | 3748 | 2349 | 1605 | 1656 | 1756 | 2629 | 4257 | 5781 | 5520 | 4824 | 4911 | 5118 | 5153 | 574 |
| 15 | 2497 | 1515 | 1087 | 1381 | 1862 | 2980 | 5050 | 6837 | 6729 | 5201 | 5347 | 5517 | 5503 | 699 |
| 16 | 2547 | 1585 | 1119 | 1395 | 1818 | 2966 | 5558 | 7517 | 7495 | 5958 | 5626 | 5480 | 5525 | 619 |
| 17 | 3155 | 2048 | 1500 | 1488 | 1897 | 2741 | 4562 | 6315 | 5882 | 4934 | 5004 | 5306 | 5634 | 650 |
| 18 | 3390 | 2135 | 1332 | 1626 | 1892 | 2959 | 4688 | 6618 | 6451 | 5377 | 5150 | 5487 | 5490 | 638 |
| 19 | 3217 | 2188 | 1604 | 1675 | 1810 | 2639 | 4733 | 6159 | 6014 | 5006 | 5092 | 5240 | 5590 | 636 |
| 20 | 4475 | 3190 | 2100 | 1858 | 1618 | 2143 | 3584 | 4900 | 5083 | 4765 | 5135 | 5650 | 5745 | 665 |
| 21 | 4294 | 3194 | 1972 | 1727 | 1926 | 2615 | 4185 | 5727 | 5529 | 4707 | 4911 | 5212 | 5465 | 608 |
| 22 | 2787 | 1637 | 1175 | 1468 | 1934 | 3151 | 5204 | 6872 | 6850 | 5198 | 5277 | 5352 | 5512 | 634 |
| 23 | 2546 | 1580 | 1136 | 1429 | 1957 | 3132 | 5204 | 6890 | 6436 | 5177 | 5066 | 5304 | 5504 | 623 |
| 24 | 3200 | 2055 | 1438 | 1493 | 1798 | 2754 | 4484 | 6013 | 5913 | 5146 | 4947 | 5311 | 5229 | 597 |
| 25 | 2405 | 1499 | 1072 | 1439 | 1943 | 2973 | 5356 | 7627 | 7078 | 5994 | 5432 | 5504 | 5694 | 620 |
| 26 | 3810 | 3065 | 2046 | 1806 | 1730 | 2337 | 3776 | 5172 | 5071 | 4808 | 5061 | 5179 | 5381 | 616 |
| 27 | 5196 | 3635 | 2352 | 2055 | 1723 | 2336 | 3539 | 4937 | 5053 | 4771 | 5198 | 5732 | 5839 | 682 |
| 28 | 4123 | 2646 | 1843 | 1802 | 1883 | 2793 | 4290 | 5715 | 5671 | 5206 | 5247 | 5500 | 5486 | 612 |
| 29 | 2678 | 1827 | 1409 | 1678 | 1948 | 3056 | 5213 | 6852 | 6695 | 5481 | 5234 | 5163 | 5220 | 630 |
| 30 | 2401 | 1510 | 1112 | 1403 | 1841 | 3216 | 5757 | 7596 | 7611 | 6064 | 5987 | 6090 | 6423 | 724 |
| 31 | 2174 | 1394 | 1087 | 919 | 773 | 997 | 1561 | 2169 | 2410 | 2525 | 2564 | 2777 | 2954 | 328 |

## Automation of Analysis

In [46]:

```
def gen_table(df,col1,col2):
    pivot = df.groupby([col1,col2]).size().unstack()
    return pivot.style.background_gradient()
```

In [47]:

```
gen_table(final_df,'weekday','hour')
```

Out[47]:

| hour | 0 | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 1 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| weekday | | | | | | | | | | | | | | |
| 1 | 3178 | 1944 | 1256 | 1308 | 1429 | 2126 | 3664 | 5380 | 5292 | 4617 | 4607 | 4729 | 4930 | 579 |
| 2 | 2435 | 1569 | 1087 | 1414 | 1876 | 2812 | 4920 | 6544 | 6310 | 4712 | 4797 | 4975 | 5188 | 569 |
| 3 | 3354 | 2142 | 1407 | 1467 | 1550 | 2387 | 4241 | 5663 | 5386 | 4657 | 4788 | 5065 | 5384 | 609 |
| 4 | 2897 | 1688 | 1199 | 1424 | 1696 | 2581 | 4592 | 6029 | 5704 | 4744 | 4743 | 4975 | 5193 | 617 |
| 5 | 2733 | 1541 | 1030 | 1253 | 1617 | 2900 | 4814 | 6261 | 6469 | 5530 | 5141 | 5011 | 5047 | 569 |
| 6 | 4537 | 2864 | 1864 | 1555 | 1551 | 2162 | 3642 | 4766 | 4942 | 4401 | 4801 | 5174 | 5426 | 625 |
| 7 | 3645 | 2296 | 1507 | 1597 | 1763 | 2422 | 4102 | 5575 | 5376 | 4639 | 4905 | 5166 | 5364 | 621 |
| 8 | 2830 | 1646 | 1123 | 1483 | 1889 | 3224 | 5431 | 7361 | 7357 | 5703 | 5288 | 5350 | 5483 | 631 |
| 9 | 2657 | 1724 | 1222 | 1480 | 1871 | 3168 | 5802 | 7592 | 7519 | 5895 | 5406 | 5443 | 5496 | 641 |
| 10 | 3296 | 2126 | 1464 | 1434 | 1591 | 2594 | 4664 | 6046 | 6158 | 5072 | 4976 | 5415 | 5506 | 652 |
| 11 | 3036 | 1665 | 1095 | 1424 | 1842 | 2520 | 4954 | 6876 | 6871 | 5396 | 5215 | 5423 | 5513 | 648 |
| 12 | 3227 | 2147 | 1393 | 1362 | 1757 | 2710 | 4576 | 6250 | 6231 | 5177 | 5157 | 5319 | 5570 | 644 |
| 13 | 5408 | 3509 | 2262 | 1832 | 1705 | 2327 | 4196 | 5685 | 6060 | 5631 | 5442 | 5720 | 5914 | 667 |
| 14 | 3748 | 2349 | 1605 | 1656 | 1756 | 2629 | 4257 | 5781 | 5520 | 4824 | 4911 | 5118 | 5153 | 574 |
| 15 | 2497 | 1515 | 1087 | 1381 | 1862 | 2980 | 5050 | 6837 | 6729 | 5201 | 5347 | 5517 | 5503 | 699 |
| 16 | 2547 | 1585 | 1119 | 1395 | 1818 | 2966 | 5558 | 7517 | 7495 | 5958 | 5626 | 5480 | 5525 | 619 |
| 17 | 3155 | 2048 | 1500 | 1488 | 1897 | 2741 | 4562 | 6315 | 5882 | 4934 | 5004 | 5306 | 5634 | 650 |
| 18 | 3390 | 2135 | 1332 | 1626 | 1892 | 2959 | 4688 | 6618 | 6451 | 5377 | 5150 | 5487 | 5490 | 638 |
| 19 | 3217 | 2188 | 1604 | 1675 | 1810 | 2639 | 4733 | 6159 | 6014 | 5006 | 5092 | 5240 | 5590 | 636 |
| 20 | 4475 | 3190 | 2100 | 1858 | 1618 | 2143 | 3584 | 4900 | 5083 | 4765 | 5135 | 5650 | 5745 | 665 |
| 21 | 4294 | 3194 | 1972 | 1727 | 1926 | 2615 | 4185 | 5727 | 5529 | 4707 | 4911 | 5212 | 5465 | 608 |
| 22 | 2787 | 1637 | 1175 | 1468 | 1934 | 3151 | 5204 | 6872 | 6850 | 5198 | 5277 | 5352 | 5512 | 634 |
| 23 | 2546 | 1580 | 1136 | 1429 | 1957 | 3132 | 5204 | 6890 | 6436 | 5177 | 5066 | 5304 | 5504 | 623 |
| 24 | 3200 | 2055 | 1438 | 1493 | 1798 | 2754 | 4484 | 6013 | 5913 | 5146 | 4947 | 5311 | 5229 | 597 |
| 25 | 2405 | 1499 | 1072 | 1439 | 1943 | 2973 | 5356 | 7627 | 7078 | 5994 | 5432 | 5504 | 5694 | 620 |
| 26 | 3810 | 3065 | 2046 | 1806 | 1730 | 2337 | 3776 | 5172 | 5071 | 4808 | 5061 | 5179 | 5381 | 616 |
| 27 | 5196 | 3635 | 2352 | 2055 | 1723 | 2336 | 3539 | 4937 | 5053 | 4771 | 5198 | 5732 | 5839 | 682 |
| 28 | 4123 | 2646 | 1843 | 1802 | 1883 | 2793 | 4290 | 5715 | 5671 | 5206 | 5247 | 5500 | 5486 | 612 |
| 29 | 2678 | 1827 | 1409 | 1678 | 1948 | 3056 | 5213 | 6852 | 6695 | 5481 | 5234 | 5163 | 5220 | 630 |
| 30 | 2401 | 1510 | 1112 | 1403 | 1841 | 3216 | 5757 | 7596 | 7611 | 6064 | 5987 | 6090 | 6423 | 724 |
| 31 | 2174 | 1394 | 1087 | 919 | 773 | 997 | 1561 | 2169 | 2410 | 2525 | 2564 | 2777 | 2954 | 328 |