4_LTV

December 12, 2022

SQL request project Yandex Practicum (personal visuzalization implementation in Python)

LTV visualization

[5]:

```
import pandas as pd
%load_ext sql
%sql postgresql://postgres:sqltest123@localhost/1
```

```
The sql extension is already loaded. To reload it, use:
  %reload_ext sql
```

[6]:

```
%%sql result <<
SELECT
CAST(DATE_TRUNC('month', tsu.created_at) AS date) AS dt,
SUM(tso.total_amt)/COUNT(DISTINCT(tso.user_id)) as LTV
FROM tools_shop.orders AS tso
JOIN tools_shop.users AS tsu ON tso.user_id = tsu.user_id
GROUP BY dt
```

```
 * postgresql://postgres:***@localhost/1
64 rows affected.
Returning data to local variable result
```

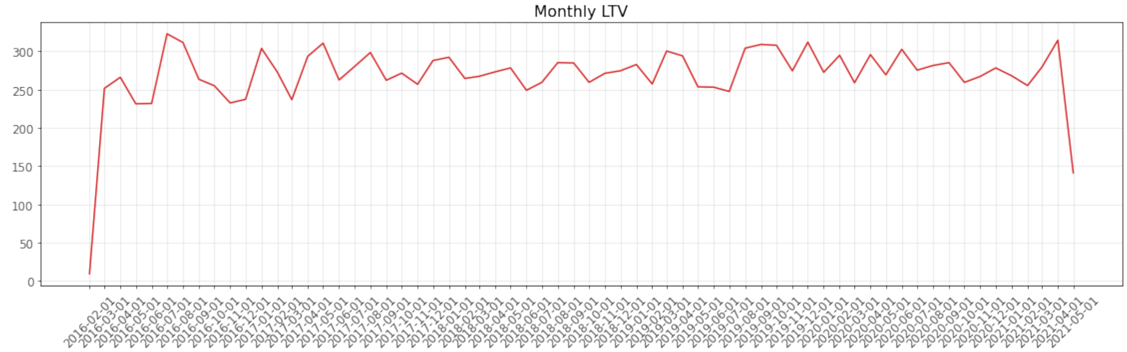
[7]:

```
df = result.DataFrame()
display(df.head(11))
```

```
            dt                   ltv
0   2016-02-01    9.4200000000000000
1   2016-03-01  251.3796774193548387
2   2016-04-01  265.8161363636363636
3   2016-05-01  231.2950769230769231
4   2016-06-01  231.6674242424242424
5   2016-07-01  322.5788990825688073
6   2016-08-01  311.2181188118811881
7   2016-09-01  263.2275961538461538
8   2016-10-01  254.7994915254237288
9   2016-11-01  232.3373717948717949
10  2016-12-01  237.0954966887417219
```

[8]:

```
import pandas as pd
import matplotlib.pyplot as plt
plt.figure(figsize=(20,5), dpi=70)
plt.plot('dt', 'ltv', data=df, color='tab:red')
plt.xticks(ticks=df['dt'], labels=df['dt'],
           rotation=45, fontsize=12, horizontalalignment='center', alpha=.7)
plt.yticks(fontsize=12, alpha=.7)
plt.title("Monthly LTV", fontsize=16)
plt.grid(axis='both', alpha=.3)
plt.show()
```



[ ]:

```
```