# URBANCLAP MARKETING ANALYTICS

# INTERNSHIP ASSIGNMENT

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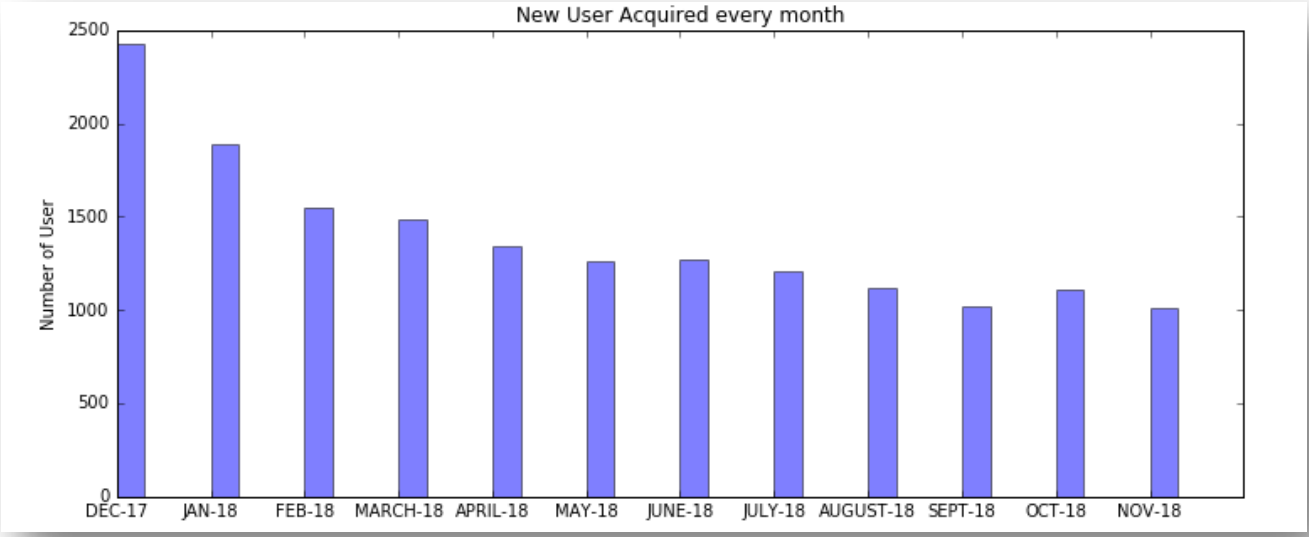
**Problem 1:** Plot new users acquired every month on a bar chart (New user in a month = a customer who has placed a request for the first time in this month)

**Solution 1:** It is observed that the number of new customers been acquired as decreasing generally. There has been a very slight increase in the month of October and the reason could the festive season.



**Problem 2:** What is the 30-day repeat rate of users acquired in December 2017?

**Solution 2:** The percentage of user acquired in the month of December who made a booking for the second time within 30 days are almost 16.8% which is 408 out of the total of 2424.

```
print (c/Total*100)
#percentage of 30 day repeat rate
```

```
16.831683168316832
```

**Problem 3:** What is the 90-day repeat rate of users acquired in Jan, Feb, March 2018?

**Solution 3:** The percentage of user acquired in the month of January, February and March who made a booking for the second time within 90 days are almost 20.7% which is 1023 out of the total of 4931.

```
print (m/Total1*100)
#Percentage of 90 day repeat r
```

```
20.74629892516731
```

**Problem 4:** Use logistic regression to predict the 90-day repeat of users acquired in November 2018.

**Solution 4:** The logistic regression model developed used Slot of Booking, Source and Gap between date of booking and date of service requested as features.

The Result variable 1 displays that user will book in next 90 days and 0 displays that user won't book in next 90 days.

Therefore, the predicted 90 Day Repeat Rate for customer acquired in November 2018 is approximately 45.8%.

```
print (Noofrepeatbuyer/TotalBuyer*100)
#Predicted 90 Day repeat Rate for customer acquired in Nov
```

```
45.812807881773395
```

The image below is a sample of the result of predictions for the test data.

| T_ID_x | P_ID | DOB | Slot_x | Diff_bw_booking_request | Source_x | Result |
|---|---|---|---|---|---|---|
| DYDMF | 2 | 2018-11-10 | 11 | 3 | 3 | 1 |
| TDVFU | 8 | 2018-11-29 | 10 | 0 | 3 | 1 |
| QIYRA | 21 | 2018-11-27 | 8 | 0 | 2 | 1 |
| KGYWP | 62 | 2018-11-11 | 14 | 1 | 3 | 1 |
| QFPHG | 85 | 2018-11-04 | 6 | 2 | 4 | 1 |
| UNMBP | 94 | 2018-11-22 | 10 | 1 | 4 | 1 |
| LOCOR | 116 | 2018-11-17 | 14 | 4 | 3 | 0 |
| SKPXC | 205 | 2018-11-23 | 17 | 2 | 2 | 0 |
| HHJQP | 219 | 2018-11-13 | 12 | 3 | 4 | 0 |
| CFJKQ | 248 | 2018-11-24 | 19 | 0 | 2 | 0 |
| IBYJL | 252 | 2018-11-09 | 13 | 0 | 3 | 1 |
| RVMSJ | 262 | 2018-11-25 | 6 | 0 | 3 | 1 |
| HRVML | 270 | 2018-11-07 | 15 | 3 | 3 | 0 |
| UWKZC | 271 | 2018-11-29 | 18 | 5 | 3 | 0 |
| EGQFI | 298 | 2018-11-18 | 7 | 2 | 3 | 1 |

**Problem 5:** Plot the distribution of users by frequency of their 90-day repeat (Number of times user repeated within first 90 days)

**Solution 5:** The plot represents the number of users who made a booking for specific number of times within 90 Day

Out of the total user (16711) ,the total number of user who made bookings only once are 14108( Almost 85%) whereas those who made booking two times within first 90 day period are 1810 which is almost 10%.

It is observed that there are 18 customers who have made more than 10 booking over the period of first 90 days. These can be said as the highly loyal/Dedicated users.

The 16% of user who are making the booking for 2-5 times are the potential loyal customers can be engaged more so they don't drop out.