codecademy

Churn Rates with Codeflix

Learn SQL from Scratch

Ana M Timofte

July 10, 2018

Table of Contents

1. Get Familiar with Codeflix

Codeflix, a new streaming video startup, is interested in measuring their user churn rate.

- The company has been in business for 4 months: December 2016 – March 2017.
- Now, at the end of the 4 months, the company wants to evaluate the churn rates to see which marketing segment should be expended
- The company has 2 distinct user segments, 30 and 87, with 1000 subscribers associated with each segment.
- The “subscriptions” table shows the subscription start date, end date and the type of segment associated with each

Query Results

id	subscription_start	subscription_end	segment
1	2016-12-01	2017-02-01	87
2	2016-12-01	2017-01-24	87
3	2016-12-01	2017-03-07	87
13	2016-12-01	Ø	30
14	2016-12-01	2017-03-07	30
15	2016-12-01	2017-02-22	30

test.sqlite

```sql
SELECT DISTINCT segment
FROM subscriptions;
```

Query Results

segment
87
30

Database Schema

subscriptions	2000 rows
id	INTEGER
subscription_start	TEXT
subscription_end	TEXT
segment	INTEGER

test.sqlite

```sql
SELECT segment, COUNT (segment)
FROM subscriptions
GROUP BY segment;
```

Query Results

segment	COUNT (segment)
30	1000
87	1000

Database Schema

subscriptions	2000 rows
id	INTEGER
subscription_start	TEXT
subscription_end	TEXT
segment	INTEGER

1. Churn Rates at Codeflix

- Although there is data available between December 2016 and March 2017, December churn rates cannot be provided since the subscribers can only start canceling after 31 days.
- January 2017, February 2017 and March 2017 churn rates will be analyzed.
- We calculate the churn rate by dividing the number of subscribers that cancelled subscription in a month by the number of subscribers who were still active at the beginning of that month.

Query Results	
First_Month_Codeflix	
2016-12-01	
Last_Month_Codeflix	
2017-03-30	
Database Schema	
subscriptions	2000 rows
id	INTEGER
subscription_start	TEXT
subscription_end	TEXT
segment	INTEGER

Query Results	
first_day	last_day
2017-01-01	2017-01-31
2017-02-01	2017-02-28
2017-03-01	2017-03-31

Churn Rates by Month

- January 16.17% churn rate
- February 18.98% churn rate
- March 27.43% churn rate

As observed, the overall churn rate increased from month to month, with March 2017 increase being the most dramatic.

Query Results	
month	overall_churn_rate
2017-01-01	0.161687170474517
2017-02-01	0.189795918367347
2017-03-01	0.274258219727346

Churn Rates by Segment

- There are two distinct segments 30 and 87
- For Segment 87, we notice a drastic increase in churning rates from month to month
- For Segment 30, there is only a slight increase from month to month, with the months of January and February staying almost at the same rate. That tells us that segment 30 is managing to keep its subscribers longer.

Query Results		
month	churn_rate_87	churn_rate_30
2017-01-01	0.251798561151079	0.0756013745704467
2017-02-01	0.32034632034632	0.0733590733590734
2017-03-01	0.485875706214689	0.11731843575419

1. Conclusions and Recommendations

- The overall company trend is that churn rates are increasing considerably from month to month, thus the company should reevaluate their priorities.
- Segment 30 has a significantly lower churn rate than Segment 87, thus the marketing efforts should be concentrated on this Segment in order to increase its subscribers.
- Some research should be done into why Segment 87 is losing so many subscribers per month, particularly if any events transpired in the month of March 2017 (the month with the most drastic loss of subscribers).
- (Bonus) To support a larger number of segments, one would avoid hard coding the segment numbers by using loops.