codecademy

User Churn analysis @ Codeflix

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1. Getting to know Codeflix

1.1 Getting familiar with Codeflix

- Codeflix has been operating for 4 months: from 1 December 2016 to 31 March 2017
- Churn rate analysis can be carried out for the period January – March 2017
- This is because of month-long subscription periods which imply that cancellations only occur from 1 January 2017
- There are 2 user segments, **segment 30** & **segment 87,** which identify users acquired through different marketing channels

2. Churn rate analysis

2.1 Big picture: overall trend in churn rate

- Since the company started, the overall churn rate has trended upwards from **16%** to **27%**
- In March 2017, the churn rate peaked at 27%, representing a **9%** increase from February 2017
- The query used to extract the table below is provided

Month	Churn rate
January	16%
February	19%
March	27%

```
WITH months AS
( SELECT
    '2017-01-01' as first_day,
    '2017-01-31' as last_day
  UNION
  SELECT
    '2017-02-01' as first_day,
    '2017-02-28' as last_day
  UNION
  SELECT
    '2017-03-01' as first_day,
    '2017-03-31' as last_day),

cross_join AS
(SELECT *
  FROM subscriptions
  CROSS JOIN months),

status AS
(SELECT
 id,
 first_day AS 'month',
 CASE WHEN(subscription_start <
first_day)
 AND (subscription_end > first_day
 OR subscription_end IS NULL)
 THEN 1 ELSE 0
 END AS 'is_active',
 CASE WHEN(subscription_end
BETWEEN first_day AND last_day)
THEN 1 ELSE 0
END AS 'is_canceled'
FROM cross_join),

status_aggregate AS
(SELECT
 month,
 SUM(is_active) AS 'sum_active',
 SUM(is_canceled) AS'sum_canceled'
 FROM status
 GROUP BY month)

SELECT
month,
1.0* sum_canceled/sum_active
AS 'churn_rate'
FROM status_aggregate;
```

2.2 Granular view: Analysis by user segment

- The churn rate trends upwards for both user segments throughout the 3 month period
- The churn rate for user segment 87 is, on average, four times (4x) that of user segment 30
- In March, the churn rate was ~50-70% greater for both user segments than in February of 2017

Month	Segment 30	Segment 87
January	8%	25%
February	7%	32%
March	12%	49%
Average	**9%**	**35%**

3. Recommendations & Actionable Insight

3.2 Conclusions and Recommendations

Lower churn rates: (1) reflect greater user loyalty (more ‘stickiness’) and (2) translate to higher retention rates and higher revenues for Codeflix.

In this regard, Codeflix should:

- increase investments in the marketing channel used for **user segment 30** to other user segments - since it seems to be translating to greater retention rates on average
- discontinue or re-evaluate the marketing channels used for **user segment 87**
- investigate any exogenous factors that might have accelerated churn rates for both user segments in March 2017 (unpopular content? increased competition? macro-economic factors?)

Many thanks!