Analyzing Virtual Telecom Service

CallMeMaybe

Analyzing the data on virtual telephony service *"CallMeMaybe"*, which its clients are organizations.

Finding clients with Non-Optimal plans and examine their impact on revenue.

clients with Non-Optimal plans are who:

- o Overpay for their current plans
- o Need bigger plans, since they'll be more advantageous

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Source: Data on virtual telecom service CallMeMaybe

Data Preprocessing

o We checked the missing values, data types and duplicates in the data.

o We Checked the users whether they are active.

o We dropped the missed calls and calls with 0 duration.

o We Checked irrational call durations and dropped them.

o Also we ignored the incoming calls because they are free and have no impact on revenue.

Source: Data on virtual telecom service CallMeMaybe

Internal & External calls

o 83% of the outgoing calls are external and 17% internal.

Share of internal & external calls
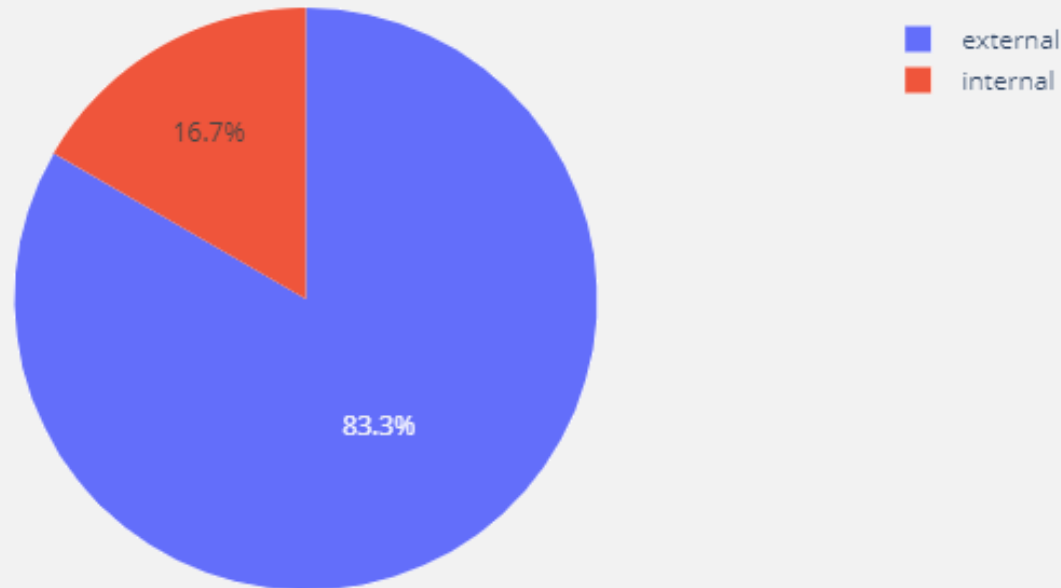
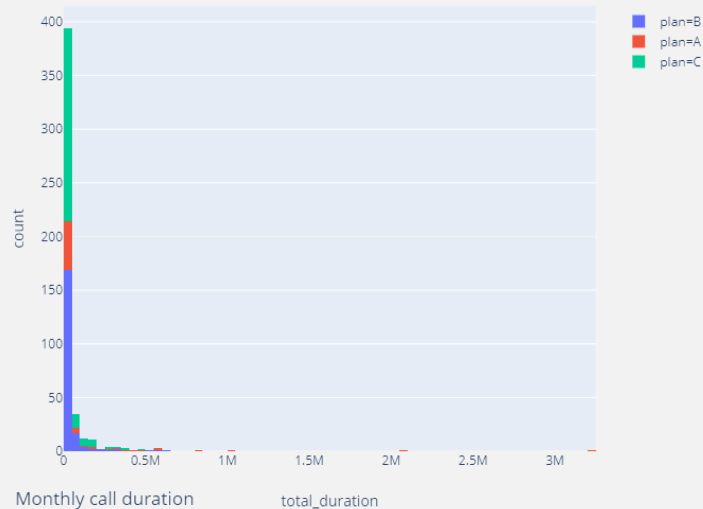

■ external
■ internal

16.7%

83.3%

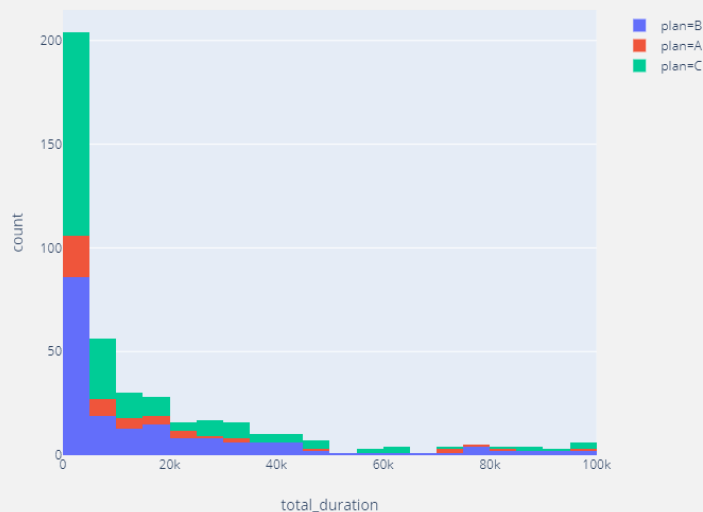*Source: Data on virtual telecom service CallMeMaybe*

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For each user, we found the number of calls, the call duration and calculated the revenue per month.


Monthly call duration

Monthly call duration

- o There are some huge call duration in plan A(more than 2M sec= 555 hours).

- o The monthly call duration for many calls of plans B and C are less than 5k sec(1.3 hours).

- o The monthly call duration for some calls of plans A and B are less than 5k sec(1.3 hours). They are the users who have low call duration and need smaller plans.

- o The average call duration(median) for each plan:
  - • plan A: 12060 sec(3.3 hours)
  - • plan B: 8809 sec(2.4 hours)
  - • plan C: 6502 sec(1.8 hours)

Source: Data on virtual telecom service CallMeMaybe

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o The call duration is increasing over the months(some clients have registered later).

o The most call duration belongs to November.

o There are many outliers for plan B and C too. they are the users who have more call duration and need bigger plans.
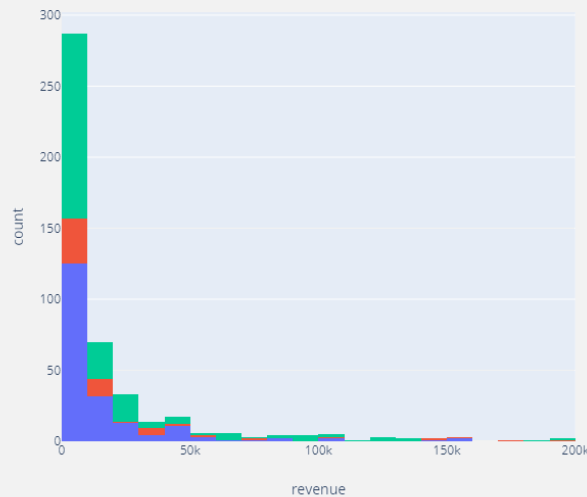

Call duration by different month

Call duration by different month

Source: Data on virtual telecom service CallMeMaybe

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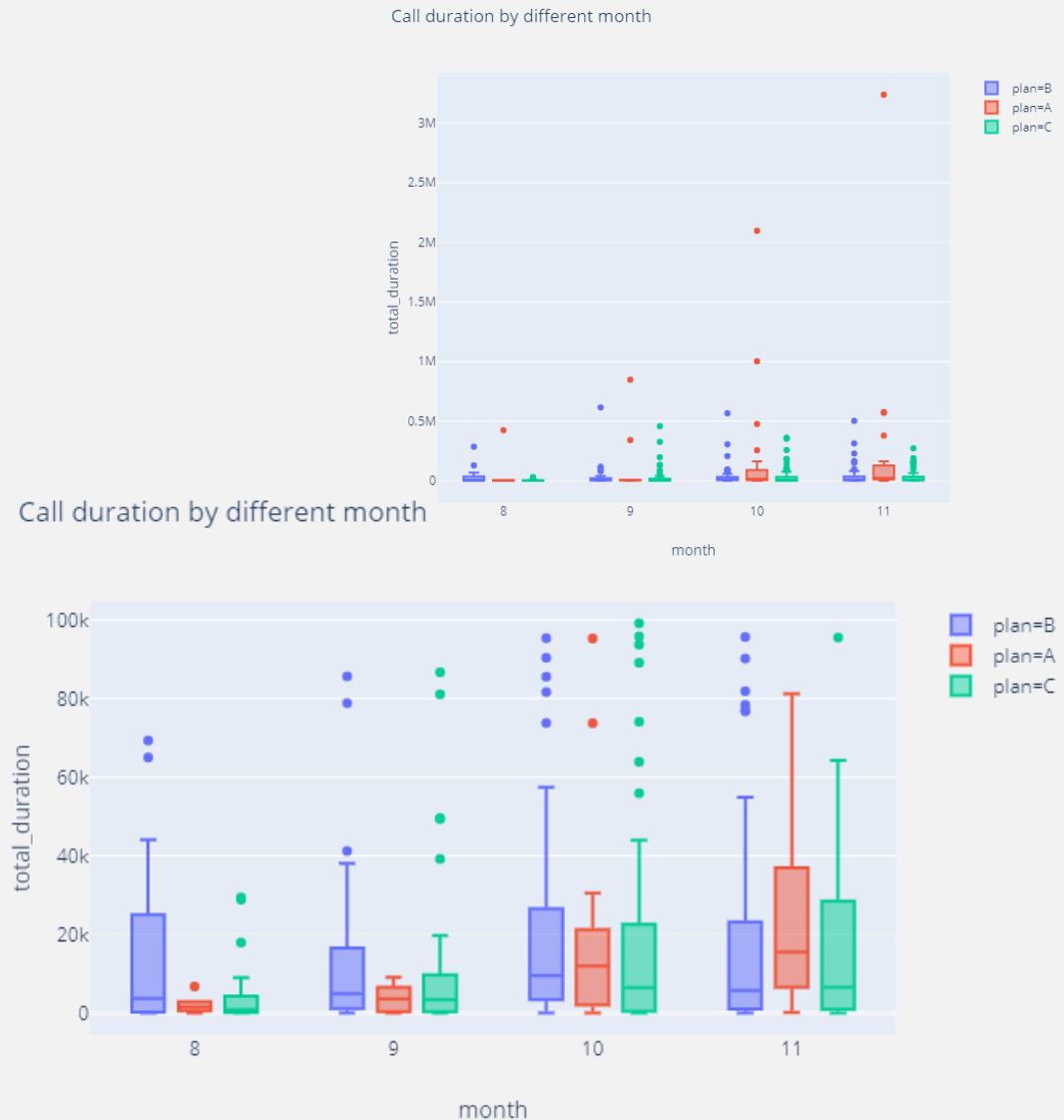
Monthly Revenue

Monthly Revenue

Monthly Revenue

o The monthly revenue for many clients of all plans are less than 20k.

o There is a huge revenue in plan A(more than 1.2M).

o The monthly revenue for many clients of plans B and C are less than 10k.

o The average revenue(median) for each plan:

- plan A: 9973
- plan B: 6693
- plan C: 5824

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Optimal & Non-optimal Customers

o There are 211 customers.

o The number of customers for each plan:

- A: 27
- B: 84
- C:100

o We split the customers into 2 categories: optimal and non-optimal.

o 60% of the customers are non-optimal.

o The share of non-optimal customers for each plan:

- A: 15 (55%)
- B: 57 (67%)
- C: 53 (53%)

We tested 4 hypotheses:

- The average revenue from clients of the optimal and non-optimal categories differs.
- The average revenue from clients of A and B calling plans differs.
- The average revenue from clients of A and C calling plans differs.
- The average revenue from clients of B and C calling plans differs.

In all of the hypotheses the H0 was rejected.

The average revenue from clients of all three plans and also of optimal and non_optimal categories differs.

Source: Data on virtual telecom service CallMeMaybe

Final Conclusion and Suggestions

We found non-optimal customers in all three plans. And we checked that the revenue for them is different from the optimal customers.

The marketing department can be advised to recommend more cost-effective plans for non-optimal customers. In this way we can gain more trust and loyalty of customers.

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Thank You

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