

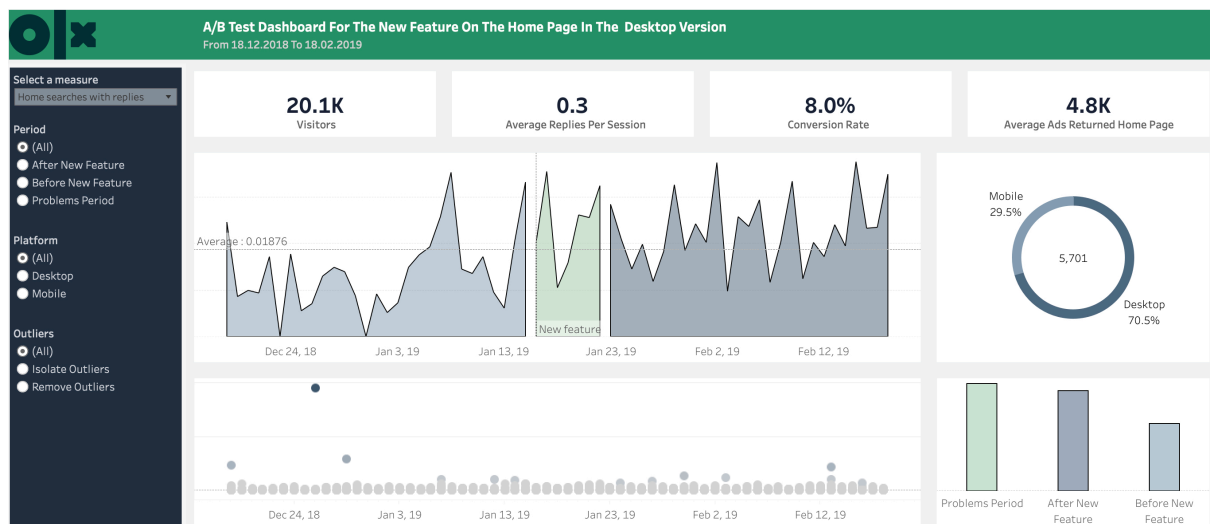


# Product Analyst Challenge

One of our main goals at OLX is to connect buyers with sellers. A reply is when this connection happens.

With that goal in mind, we recently made a change in our homepage search feature for desktop (in one of our products). It is now possible for users to filter by more characteristics directly in the home page.

The change happened on the 16th Jan and there were some issues with the feature happening until the 22nd Jan.



*Screenshot taken from my Tableau public*

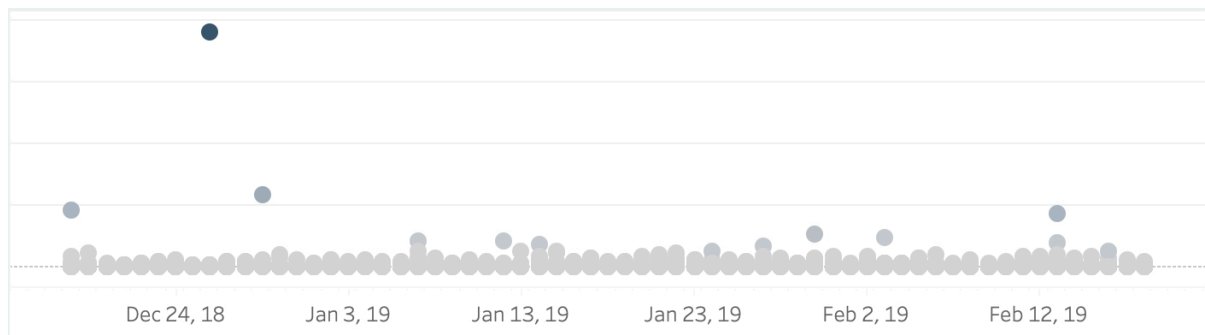
**Link to the Tableau dashboard:** [https://public.tableau.com/views/OLX/Dashboard?:language=en&:display\\_count=y&:origin=viz\\_share\\_link](https://public.tableau.com/views/OLX/Dashboard?:language=en&:display_count=y&:origin=viz_share_link)

**Link to the Jupiter notebook:** [https://github.com/rafaelmello82/olx\\_challenge/blob/master/olx.ipynb](https://github.com/rafaelmello82/olx_challenge/blob/master/olx.ipynb)

# Answering the questions

**Do you have any observations about the quality of the data, or is there anything that strikes you as strange in the data?**

- We can observe that we have **at least 4 outliers** that draw attention, especially a big outlier on the 26th of December. Of the 400 responses on this day, 381 were made by a single user in the same session. **This fact caught my attention and makes me suspect that this user might actually be a bot.**



- The data is quite clean, concerning this I didn't have much work to do, we just had a lot of **nulls** in the Ads returned columns, so I decided to **replace them by zeros** understanding that the nulls represent no advertising return.
- The adds returned don't have correlation with the replies.
- The **issues period does not seem to have affected the average number of replies**. Curiously it maintained a high average of responses and conversions.

**What conclusions do you take from the data made available, regarding the impact of this change? Do you think it was a positive one?**

Overall I think the impact was **positive**. We measured this by looking at 3 metrics. The first one was available in the data set, the others were calculations made in order to deepen our analysis:

- Average Replies;
- Average Conversion: At least one reply per session;
- Average Home searchers with replies: Searches made on the main page that resulted in at least one reply.

Knowing that the new feature was only for the **desktop version**, we will apply this platform as a **filter** for our analysis.

**Conversions and Average Home searchers with replies, do not consider the number (sum) of responses, but whether or not there have been any. This reduces the impact that outliers have on our analysis.**

After the new feature, we can observe:



- A slight drop in the average replies;
- A small rise in average conversions;
- **Higher** home searchers with replies and we can conclude that the new search filter on the homepage brought **positive** results!
- In the same time, we can see that after the issue was solved the average conversion rate remained higher than before;
- The same way we can see that home searches with replies jumps during the issue window, then after its is fixed, lowers but still stays above the metric for the previous period, this means that people find stuff easier or the search returns better result.

**What additional data points might also be interesting to assess the impact of this feature?**

- The number of clicks performed in each session would be a very relevant data to measure the efficiency of the new feature and if it would have a correlation with the replies;
- Knowing what the new feature does and which category it affects;
- The duration of each session would also be relevant for our analysis;
- It would be important to know details of the issue that happened between 16 and 22 January.

**Is there anything you would have recommended the team to do differently when implementing this new feature?**

- Make the new feature available to **only a percentage of users** to be able to better compare the impact during the same period of time;
- Test the new feature in another period, since December is a strong sales month and this could be a bias in our analysis;
- Try website behaviour tracking tools like Hotjar to see how the behaviour changes after the change compared to before.