Event-Based Analytics.

Integrated project.

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Goal of the project:

- Investigate user behavior for a given mobile application.
- Study the sales funnel.
- Perform A/A/B test, analyze results.

General conclusion and overview.

· 7551 users participated and in total performed 243713 events inside of the
  application.

· 4 mandatory stages in order to reach the purchase page.

· Data represents the period from 2019/08/01 until 2019/08/07.

· Only 18.4% users got to the Payment Screen.

· A/A/B groups include 248, 247 and 246 users respectively.

· According to the A/B test, there is no significant difference between groups.

Amount of all events for period 2019.08.01 - 2019.08.07
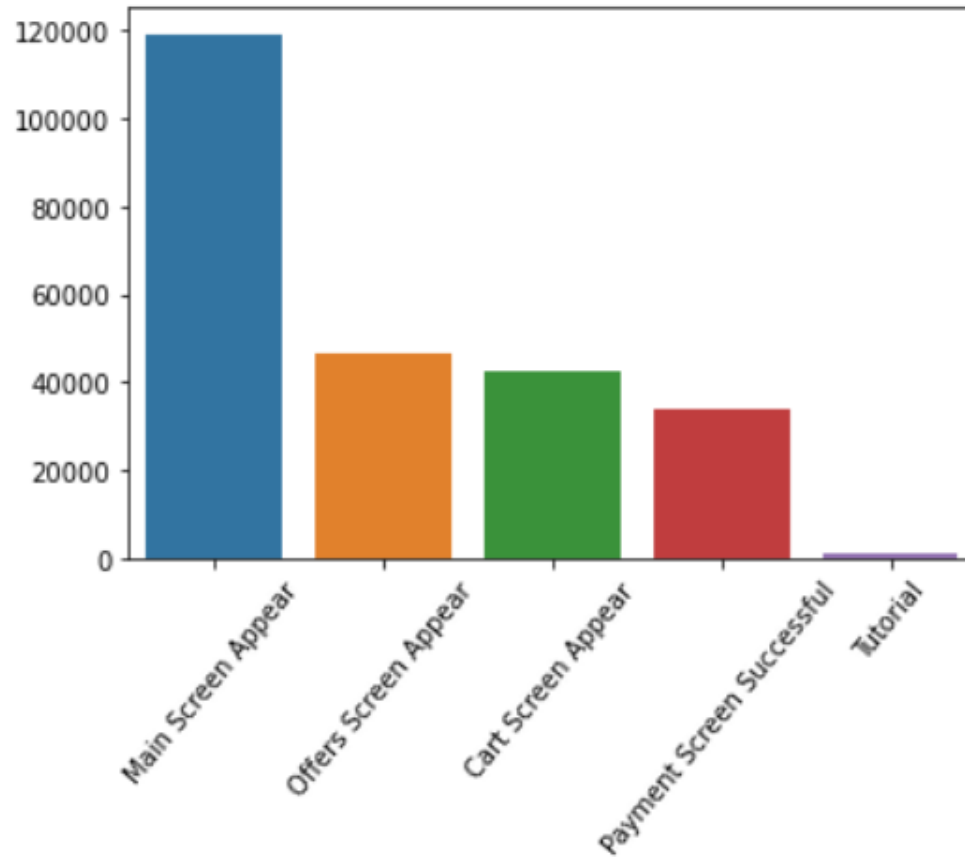
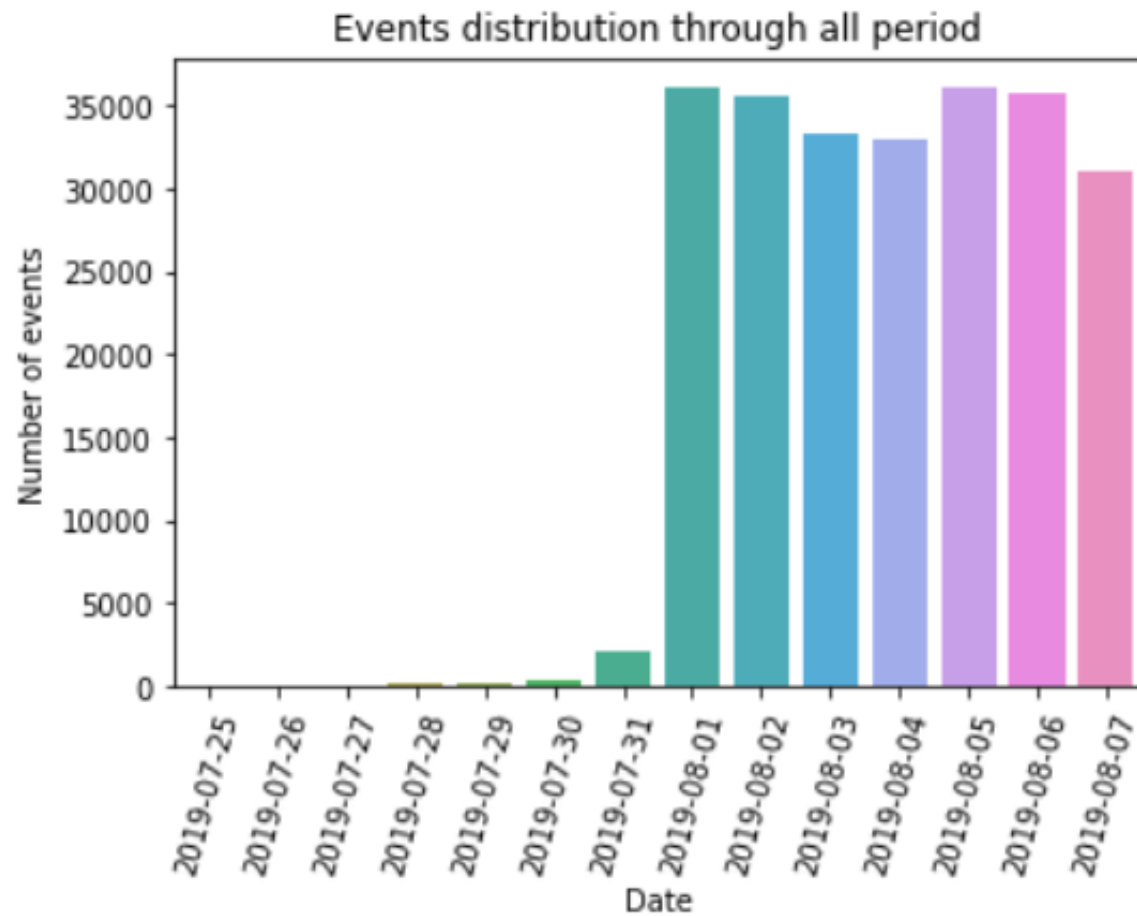|	
Main Screen Appear	119101
Offers Screen Appear	46808
Cart Screen Appear	42668
Payment Screen Successful	34118
Tutorial	1018

Events distribution through all period:

Event funnel:

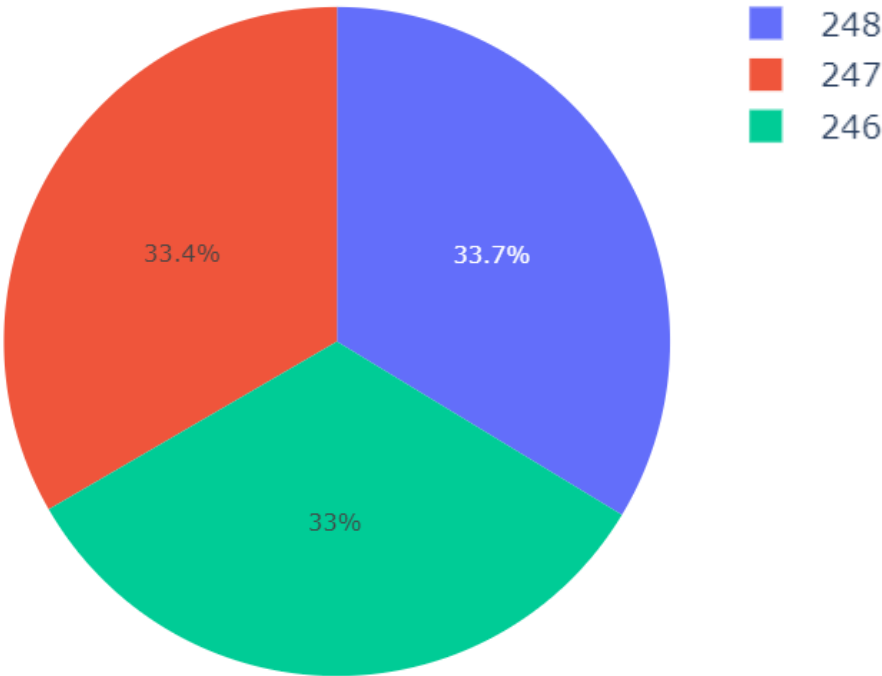|	
Main Screen Appear	7419
Offers Screen Appear	4593
Cart Screen Appear	3734
Payment Screen Successful	3539
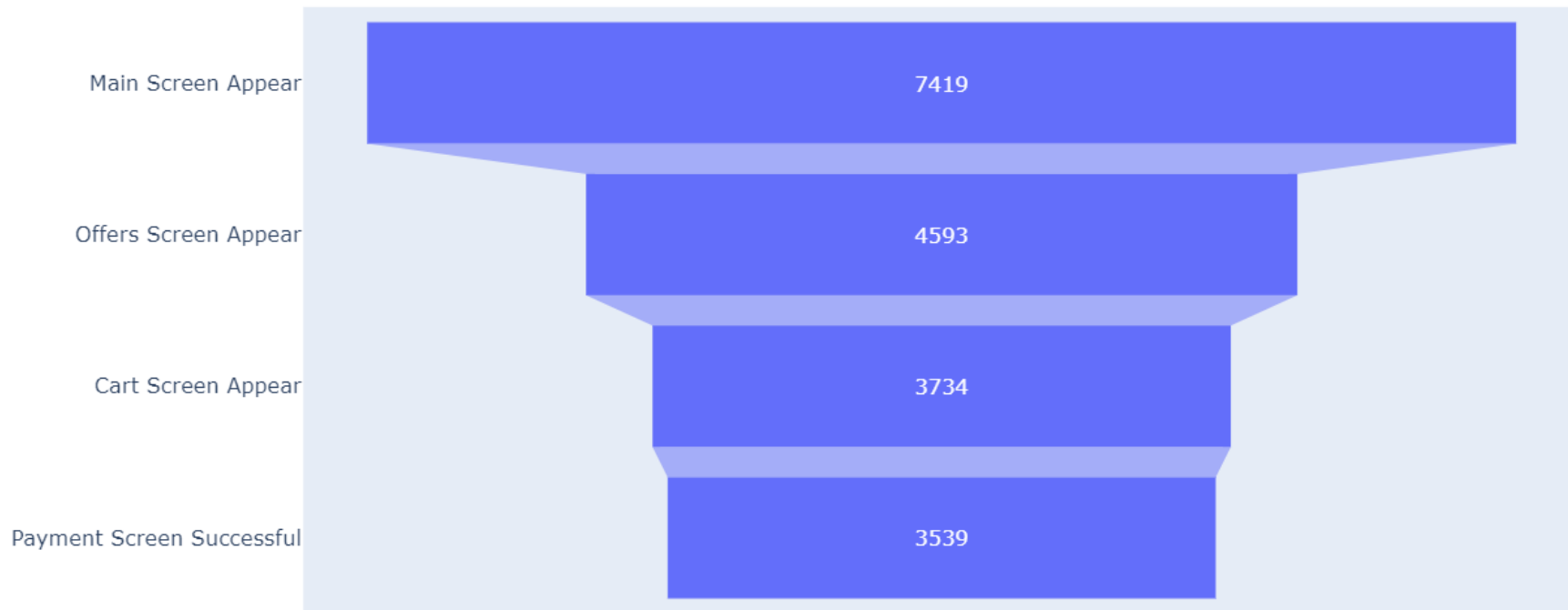
(losing 38% of users after main screen, 18.4% of all users made to payment stage)

Size of A/A/B groups:

event_name	246	247	248
Cart Screen Appear	1266	1238	1230
Main Screen Appear	2450	2476	2493
Offers Screen Appear	1542	1520	1531
Payment Screen Successful	1200	1158	1181

Legend:
- 248
- 247
- 246

Pie chart values: 33.7%, 33.4%, 33%

Results of Z-test for two proportions (A/A/B groups):

H0 (null hypothesis) conversion rate is equal in both cases.

H1 (alternative hypothesis) conversion rate is not equal.

Based on the test, we could not reject the null hypothesis for all events. A/A groups are similar. As well as for A/B groups.

In addition Bonferroni correction was used in order to reduce chance of getting Error Type 1, due to the amount of tests performed, therefore $a = 0.05/n = 0.00417$.

Meaning. Performed changes did not affect user behavior.