

HW 2. Digital campaign analysis

You are provided with data describing the results of an email and push campaigns of a bank.

The offer was the following:

the client should open a new Visa card and make 3 transactions at 500 rub at least each during a 14-day period. If he does so, he receives a 5% cashback for all transactions made using this card during the next month.

The datasets contain the following information:

1. The funnel metrics of a campaign ("visa_communications")
2. The statistic of visa card openings ("card_openings", "card_openings_not_particip")
3. The transactional data within the campaign period ("transactions", "transactions_non_particip")
4. The features for generating the synthetic control group ("features").

The goal of the homework:

to analyze a dataset containing customers' responses on a campaign, conclude whether the campaign was successful or not by calculating the financial effect using Python. The bank gets 1% of any transaction amount as income.

Homework task and points:

1. Make the data preprocessing (1 point)
2. Choose the key indicators of the campaign (1 point)
3. Calculate the email campaign funnel (provide the absolute metrics and conversions). Make the conclusions based on the results (2 points)
4. Compare the test and control group, calculate the financial effect of the email (the conversion and financial uplift, if there is any – check using the statistics) (2 point)
5. Create a model to calculate a synthetic control group - find clients who were not participants of the campaign but who were similar by their behavior (2 point)
6. Generate the synthetic control group, calculate the metrics (1 point)
7. Compare the results of analysis, received after comparing real control group with the test group, with the results of the comparison of test group with the synthetic control group. Write the conclusion whether the promo mechanics and the email letter were effective or not (1 point).

As the result a GitHub repository with a colab file/Jupyter notebook should be provided (with the code results, conclusions, and summary) and a 3-5 slides presentation with the homework results, summary, insights.

The task is made in groups of 3-4 students. The deadline: 6th of December 23:59