

Email Campaign Performance Report

April 17, 2025

1. Email Open and Click Rates

The email campaign was sent to 100,000 users. Key engagement metrics are as follows:

- **Open Rate:** 10.35%
- **Click Rate:** 2.12%
- **Click-to-Open Rate (CTOR):** 20.48%

These figures suggest that while the overall engagement was modest, a significant portion of users who opened the email proceeded to click the link.

2. Optimization Model for Click Prediction

To improve campaign effectiveness, I have developed a classification model (RandomForest-Classifier) to predict the likelihood of users clicking on email links. While the model achieved high overall accuracy (97.46%), performance on the minority class (clicked users) was limited due to class imbalance:

- Precision (clicked): 0.08
- Recall (clicked): 0.01

Despite these limitations, the model enables segmentation for targeted outreach.

3. Estimated CTR Uplift and Testing Approach

The model was used to identify the top 30% of users most likely to click. The results are:

- **Actual CTR (All users):** 2.27%
- **Estimated CTR (Top 30% by model):** 3.50%
- **Estimated Uplift:** +1.24 percentage points

To validate the model's impact, an A/B test is recommended:

- Group A: Random 30% of users
- Group B: Model-selected top 30% users
- Compare CTRs and assess statistical significance

4. Key Segment Insights

Notable patterns emerged across various user and content segments:

Email Content

- **Personalized Emails:** 2.73% CTR
- **Generic Emails:** 1.51% CTR
- **Short Emails:** 2.39% CTR
- **Long Emails:** 1.85% CTR

Timing

- **Best Days:** Wednesday (2.76%), Tuesday (2.49%)
- **Best Hours:** 11 PM (4.14%), 10 AM (2.82%)

Geography

- **UK:** 2.47%
- **US:** 2.44%
- **France:** 0.80%, **Spain:** 0.83%

Conclusion: Personalized, short emails sent on optimal days/times to targeted segments show strong potential to improve user engagement and overall CTR.