## **CTR of an Email Campaign Methodologies**

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**Objective:** Your task at hand is to build a machine learning-based approach to predict the CTR of an email campaign.

## Approach:

- **STEP 1)** Trained Initial Model to Find out on which Product we are getting Negative R2 by splitting the Dataset into different Subsets by using Masks.
- **STEP 2)** Build MaxEnsemble Model, each model for selected Product(Mask) and with a universal model. As this boosts the R2 on those Data Points where initially we were getting -ve R2.
- **STEP 3)** Saved MaxEnsemble Model Output as *solution\_max\_ensemble.csv*.
- **STEP 4)** Build a new Boosting Model in which we also include those entries or on those subsets on which we are getting R2>=0.90 from the **test-set**. (Label is Predicted by MaxEnsemble Model). As the Dataset size has been increased so we will be getting more R2-Value.
- **STEP 5)** Trained the newly Built Boosting (Adaboost) model on the Combined Dataset.
- **STEP 6)** Finally Make Predictions on Global Test CSV File.

## **Feature Preprocessing:**

We have used very less Feature Preprocessing as we are using RandomForest as base Regression Model so minimal preprocessing steps are required.

1. We only converted some columns into One-Hot Vectors.