

Take Home Assignment

A randomized experiment was conducted and the results are in 'Training.csv'

Treatment – Indicates if the customer was part of treatment or control

Purchase – Indicates if the customer purchased the product

ID – Customer ID

V1 to V7 – features of the customer

Cost of sending a Promotion: \$0.15

Revenue from purchase of product: \$10 (There is only one product)

Questions:

- 1) Analyze the results of the experiment and identify the effect of the Treatment on product purchase and Net Incremental Revenue
- 2) Build a model to select the best customers to target that maximizes the Incremental Response Rate and Net Incremental Revenue.

Deliverables

- 3) Score the 'Test.csv' using the model and select the best customers and share the customer ID's as csv file
- 4) Explain briefly the approach used in a separate document and also share the code that can be executed to reproduce results.

Incremental Response Rate:

$$\frac{(\# \text{ of Purchasers In Treated})}{\text{Total \# of customers in Treated}} - \frac{(\# \text{ of Purchasers In Control})}{\text{Total \# of customers in Control}}$$

Net Incremental Revenue:

$$[(\# \text{ of Purchasers in Treated} * \$10) - (\# \text{ of Treated Customers} * \$0.15)] - [\# \text{ of Purchasers in Control} * \$10]$$