

CONSUMER BEHAVIOR ANALYTICS

A new device has been launched.

WHICH CUSTOMERS SHOULD
BE ACTIVATED FOR ITS
PROMOTION?

THE CHALLENGE

Strategy

Customer
Segmentation

WITH DATA SCIENCE +
MACHINE LEARNING

Strategy

*Customer
Segmentation*



Sample Trial
2,240 customers tested



*Data Analysis +
Domain Expertise*



*Metrics
Definition*



*Machine
Learning*



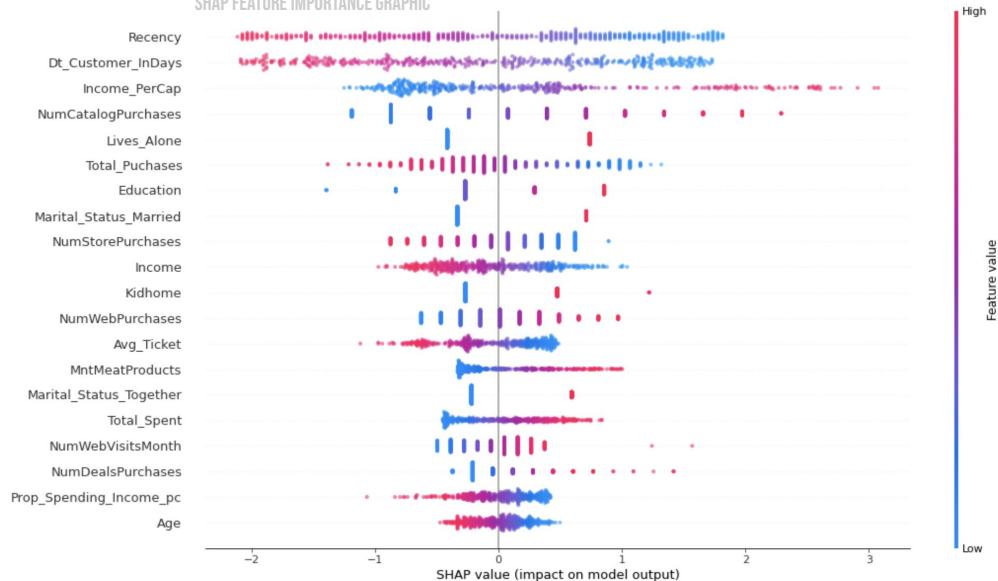
*Feature
Importance*



*Target
Definition*

THE TARGET

SHAP FEATURE IMPORTANCE GRAPHIC



The **best target** customer is someone who **purchased something from the company recently**. It is also someone who might've **joined the company recently**. He/She has a **high income** (per cap), is **very well educated**, and **tend to shop from catalog frequently**. **Live alone** or **is married (with kids)**, and sometimes **likes to buy meat** from the company's selling channels.

Device Price
(per unit)

MU \$ 10.93

Campaign Cost
(per unit)

MU \$ 3.00

Profit
(per customer who buys)

MU \$ 5.78

Using sample size as exemple:

$$2,240 \times 5.78 =$$

MU \$ 12,924.8

Expected gain for marketing for **30,000** customers:

MU \$ 173,395

Sample trial profit:

MU \$ -3,046

Confusion Matrix

| TRUE | DON'T BUY | BUY |
|------|-----------|--------------------|
| | 47 | 12 |
| BUY | 14 | 49 |
| | | PREDICTED |
| | | DON'T BUY BUY |

METRIC OPTIMIZED: **F1-SCORE**

**OPTIMIZED
COST-BENEFIT FOR
PROFIT
MAXIMIZATION**

EXPECTED RESULTS

POINTS OF ATTENTION + RECOMMENDATIONS

Data Integrity

MEETING WITH DATA ENG. TEAM !

VALUE AND INFORMATIONAL POWER OF
PRIMARY KEYS FOR DATA ANALYSIS

Sampling &
Design of
Experiments

MEETING WITH DATA + RESEARCH TEAM !

IMPORTANCE OF RANDOM SAMPLING FOR
STATISTICAL SIGNIFICANCE

Ambiguous
Variables

MEETING WITH DATA + RESEARCH TEAM !

IMPORTANCE OF VARIABLE DEFINITION AND
CORRECT MEASUREMENT

Continuous
Development

MEETING WITH MLOPS TEAM !

IMPORTANCE OF MODEL CONTINUOUS
DEVELOPMENT

Thank You!