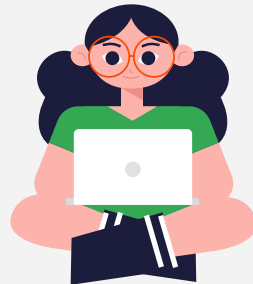


Customer Lifetime Value Projections

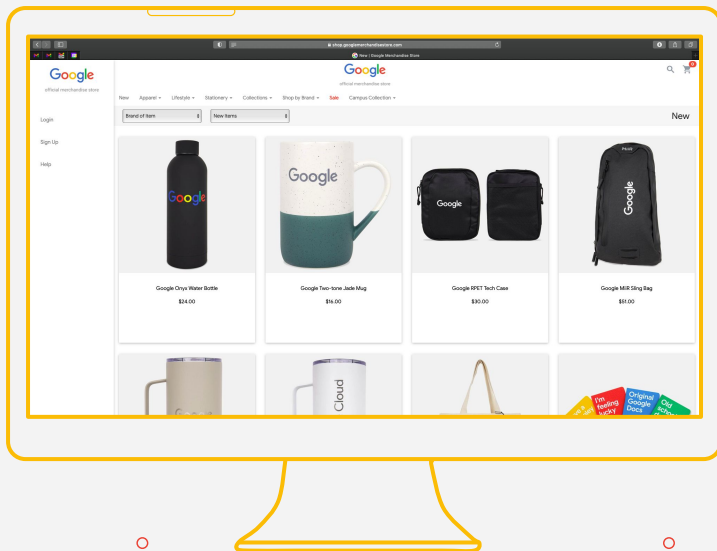


By Oyinkansola Awosika, Pranjali Joshi, Upasana Mohapatra,
Hitika Hirani, Ishita Sengupta, & Shreyas Bhargava

Start!



1. Business Challenge



Google Merchandise Store

Our team has been tasked with identifying predictive customer lifetime values in order to understand most profitable customer attributes.



2. Data Exploration & Preparation



Customer Visits Website

#Visitor ID

Customer makes First Purchase

#Channel Grouping

#Browser Details

#Time of Purchase

Revenue & Related Transactions

#Product Quantity & Category

#Regions

Session Data for newly acquired customer prior to first purchase (7 days)

#Promotional Variables

Session level data that occurred after first purchase session (Within 7 days)

#First Week Revenue

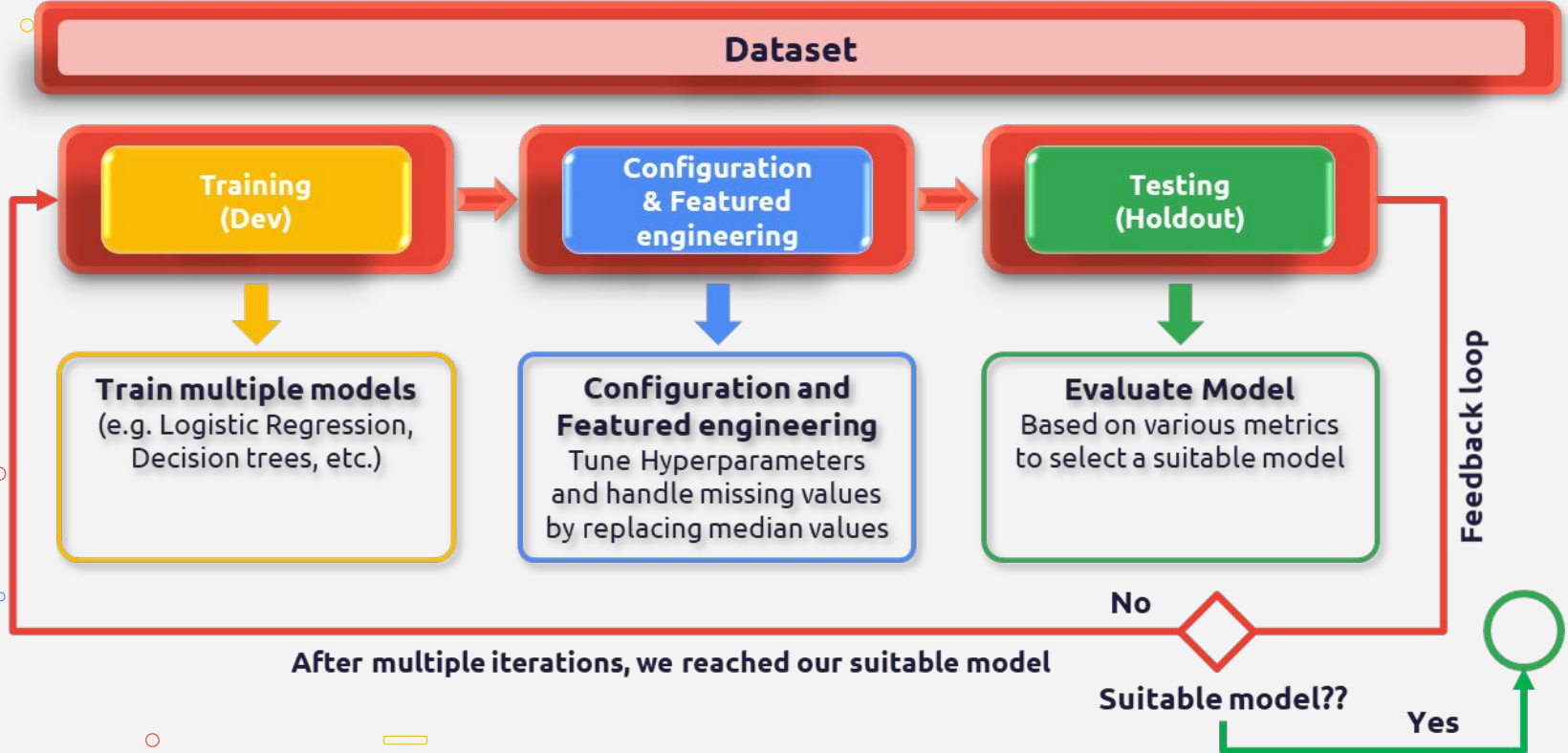
#First Week Hits

#First Week Transactions

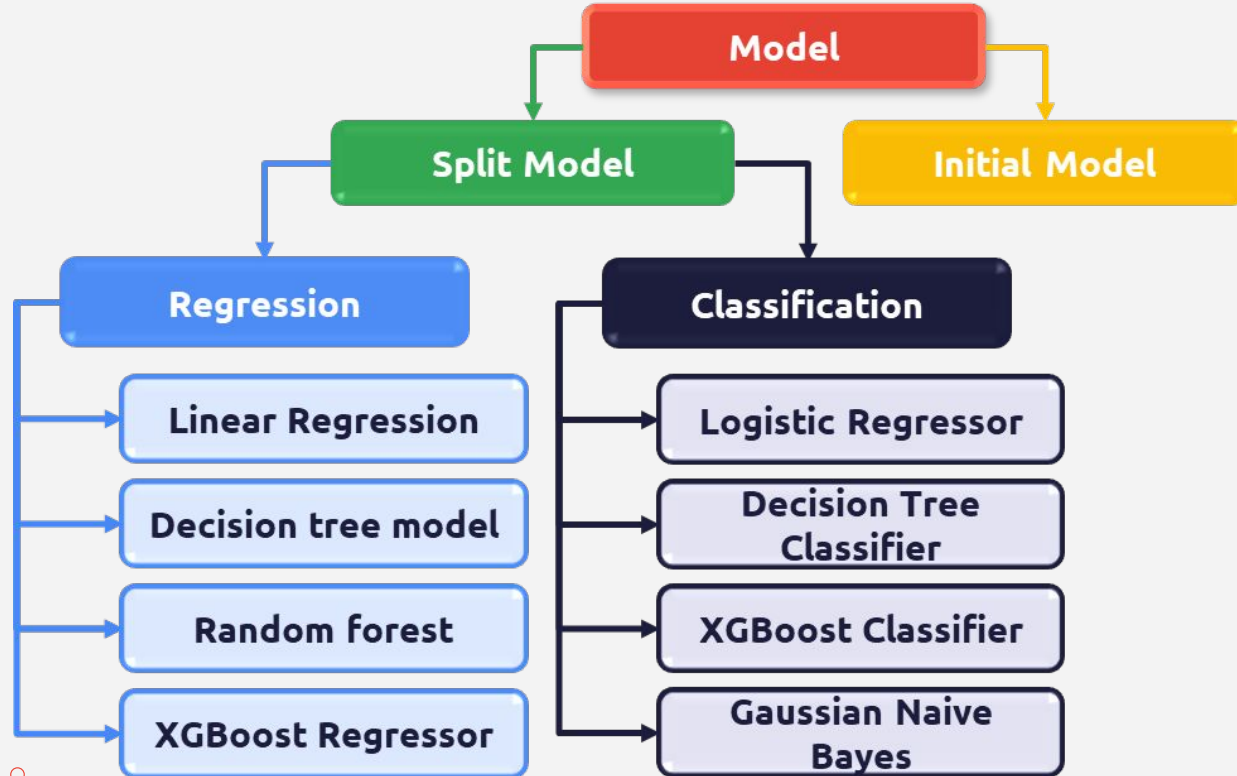
Finding Future purchases for customer (8-90 days)

#First Revenue

3. Modeling Approach

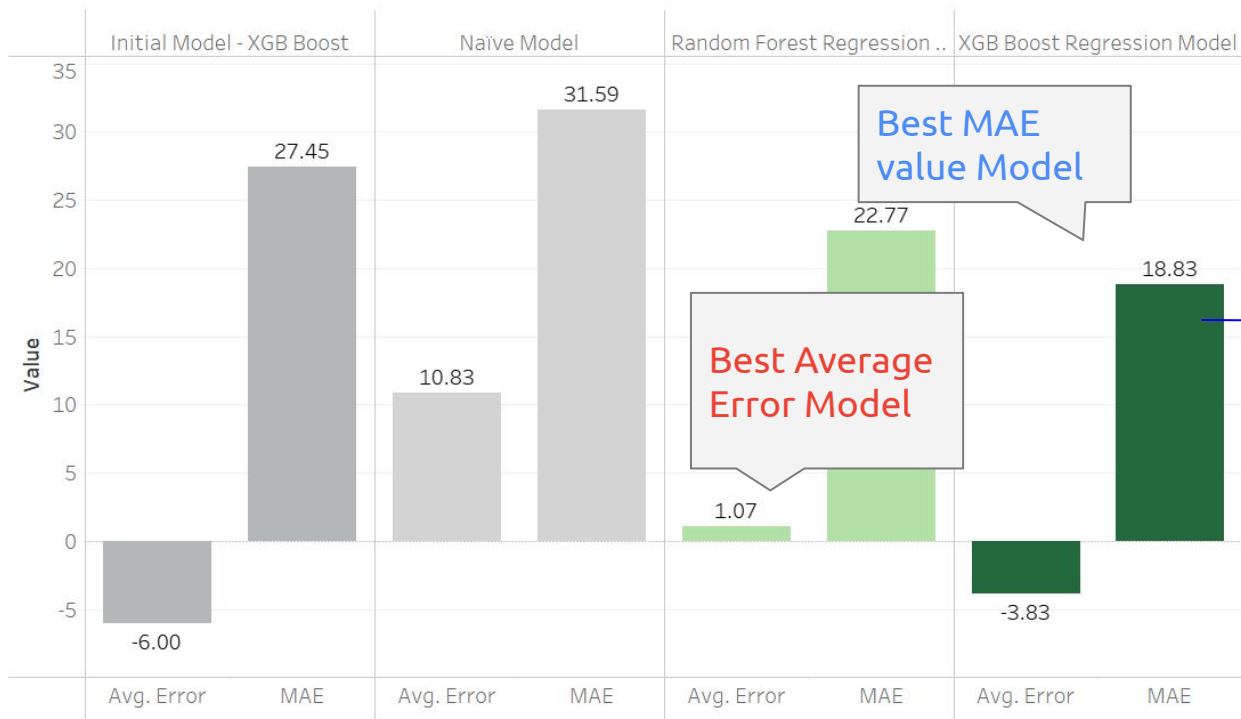


3. Modeling Approach



Evaluation & Results

Final Model Predictions



Model Name

- Initial Model - XGB Bo..
- Naïve Model
- Random Forest Regre..
- XGB Boost Regression..

Best MAE
value Model

Best Average
Error Model

18%

Improvement in
prediction of CLV

Learning & Improvements



Impact

- Improved Customer Segmentation
- Better Budget allocation to right channels - **Direct Channel**
- Higher bids to **Electronics, Office, Lifestyle** products with higher new customer rates
- Higher future profit



Learning

- Understanding of BigQuery ML
- Drivers of Google Smart Bidding
- Importance of Customer lifetime value focused model over return on investment model.



From The Team...



Oyinkansola Awosika



Ishita Sengupta



Pranjali Joshi



Upasana Mohapatra



Hitika Hirani



Shreyas Bhargava

Thank You!

