

AB INBEV: OPTIMAL PRODUCT RECOMMENDATION RANKING FRAMEWORK

Team Supermodels: Iris Brook, Emily Hahn, Mackenzie Lees, Pranav Girish

Mentor: Heather Fraser

AB InBev Team: Aditya Nanda, Rohan Jain, Subhro Mukherjee



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- 1. Our Journey**
- 2. Final Model**
- 3. Results**
- 4. Discussion**

AGENDA



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OUR JOURNEY



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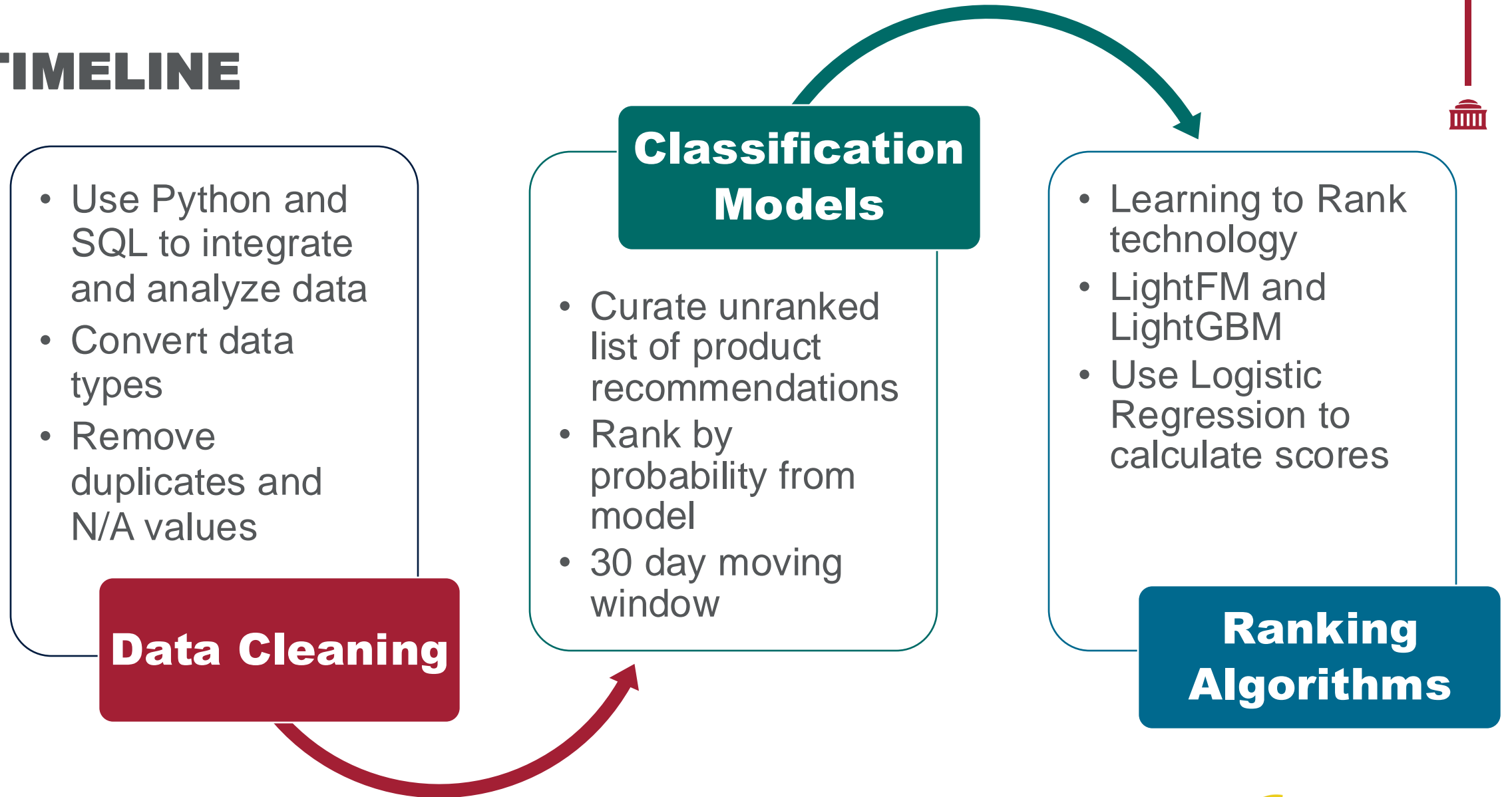
THE PROBLEM:

Task: Improve personalized and dynamic recommendations on BEES e-commerce platform using app behavior data

Method: Create a ranking algorithm for recommendations and assess precision



TIMELINE





FINAL MODEL

A large, white, stylized number '20' is positioned on the left side of the slide, partially overlapping the geometric background.



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Data Selection and Feature Engineering

Counts of interaction data and significant features (ex. product information)

Counts based on a 30-day rolling window



Data Preprocessing

Split data using time-split

Resampling using the Synthetic Minority Over-sampling Technique (SMOTE)



Ranking Using LightGBM

Logistic Regression for scores

Optimizes Normalized Discounted Cumulative Gain with LambdaRank





30

RESULTS



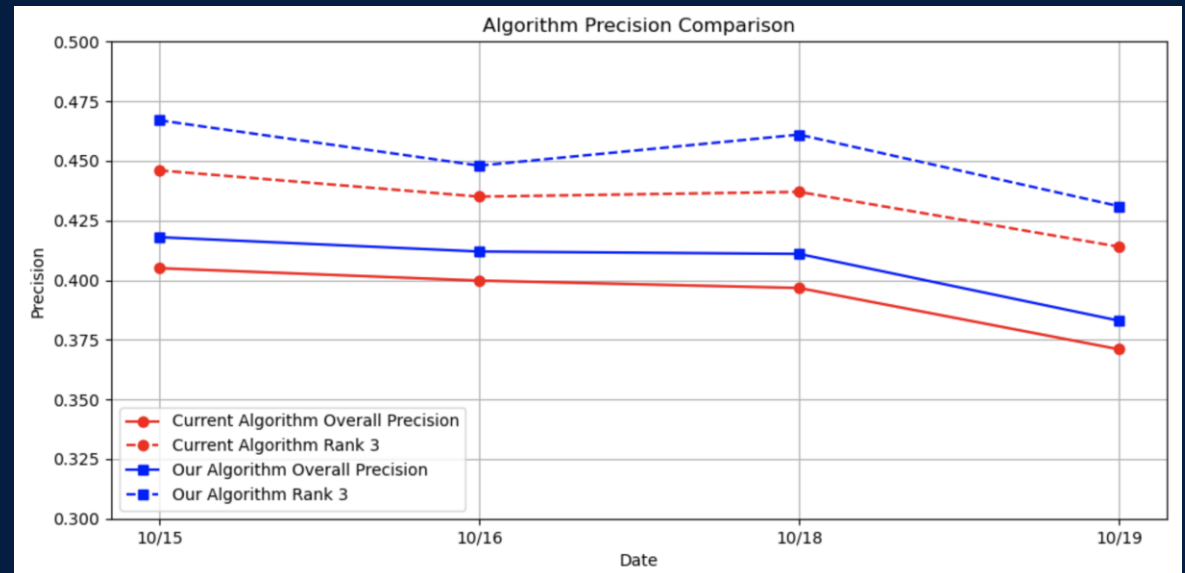
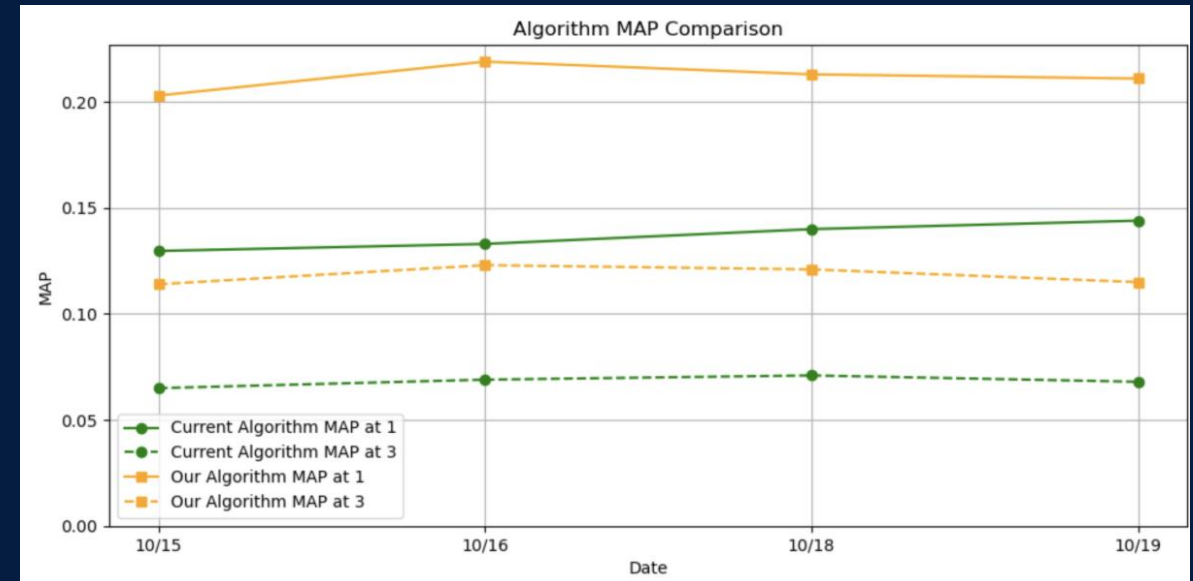
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UPSELL

- Mean Average Precision (MAP):
 - **8% point increase at rank 1**
 - Current model: 14%
 - **5% point increase at rank 1-3**
 - Current model: 7%

SUGGESTED ORDER

- **1% point increase in overall precision**
 - Current model: 30-40%
- **2% point increase in rank 1-3 precision**
 - Current model: 35-45%





no

DISCUSSION



DISCUSSION



Interaction Data

Customer interactions are correlated to purchase behaviors



Future Models

Integrate live interaction data into existing models for better predictions



A/B Testing

Understand impact of improved recommendations on sales and future customer interactions

THANK YOU!

QUESTIONS?



Mackenzie Lees

mlees28@mit.edu



Emily Hahn

ech232@mit.edu



Pranav Girish

pranav7@mit.edu



Iris Brook

irisb211@mit.edu

