Customer Feedback Analytics

Nile

Our Team

Xiaofan Zhang
5609131

Jiarui Tian
5613345

Eleftherios Katsikas
5621379

Tanya Lakhani
5651131

Rohith Veerapaneni
5653818

Vaishnavi Kodavaluru
5664339

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Executive Summary

Executive Summary

Objective:

- Boost Positive Reviews
- Improve Customer Engagement
- Optimize Resources

Approach:
Leverage data engineering and machine learning to process and analyse Nile's products and customer datasets, ensuring accurate and actionable predictions
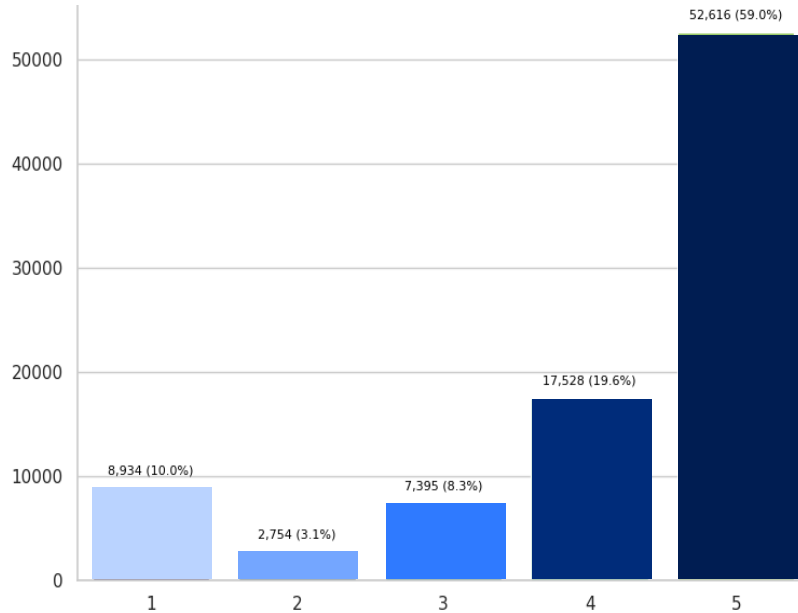
Business Impact
Improve customer engagement, maintain customer loyalty, leading to stronger market positioning and efficiently distribute marketing resources.
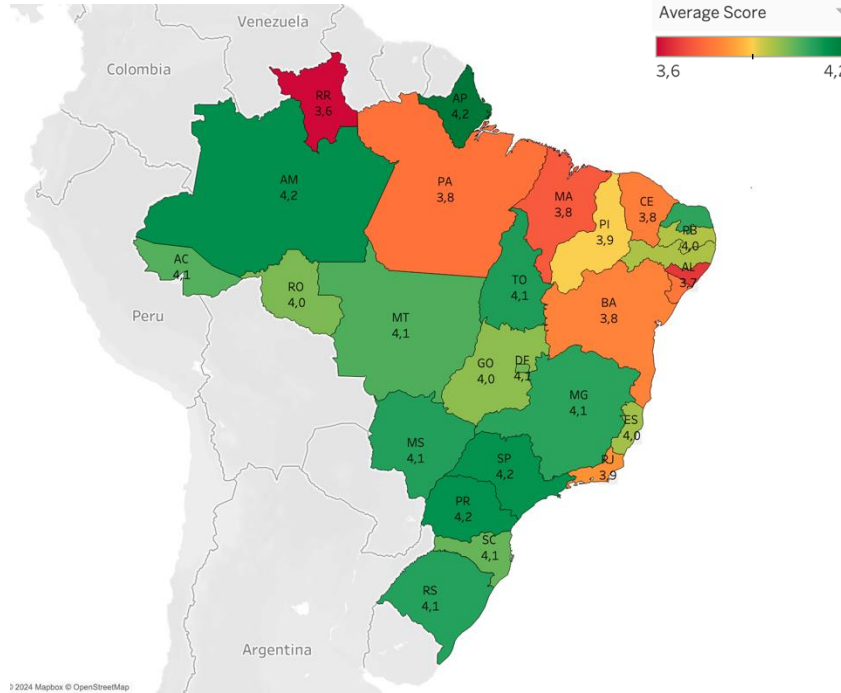
02

Explanatory Data Analysis

Review Scores Distribution

Key Points

- **78.6%** of the reviews are positive

- **10%** of orders, equating to around 9,000 orders, experienced significant customer dissatisfaction, as reflected in their 1-star reviews
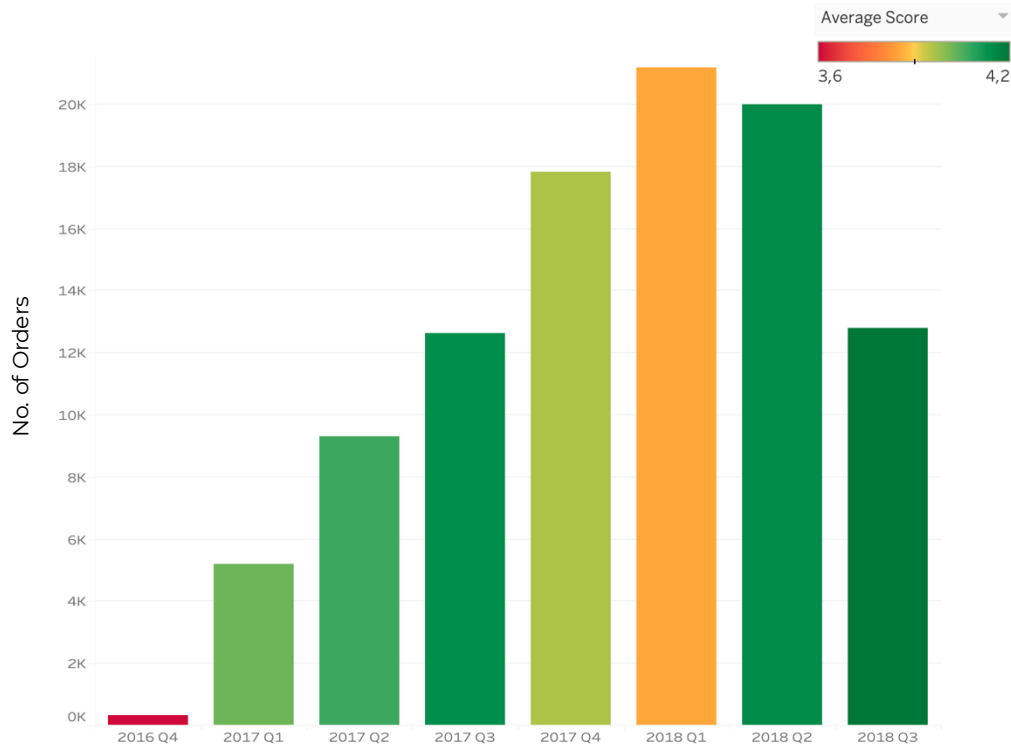
Review By State

Key Points

- **26%** of locations underperform; targeting these areas could boost satisfaction

- Customer satisfactions varies across locations

- Western states perform better in general

- Northeastern locations suggest opportunities for imporvement
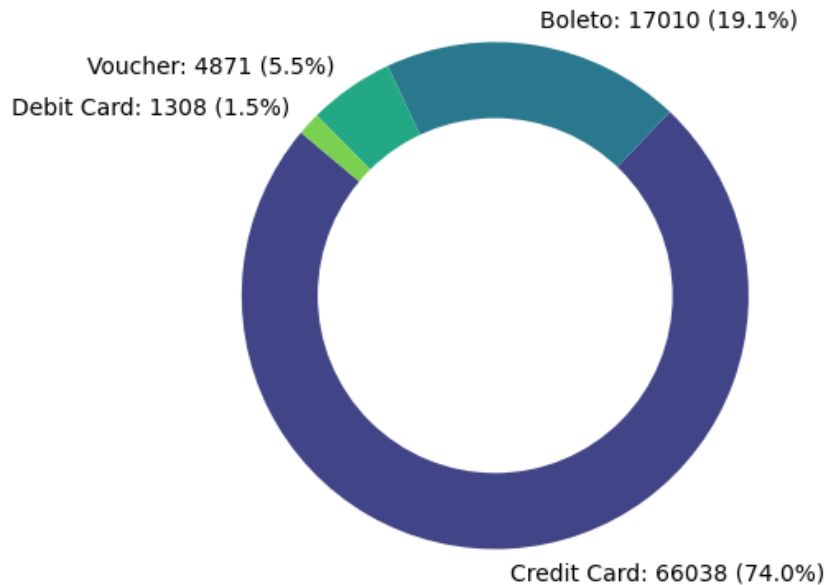
Year by Year Performance

Key Points

- **2018 Q1** has the highest number of orders

- Both **2017 & 2018 Q3** have better average review score

- The last quarter of **2016 Q4** had the lowest average review score
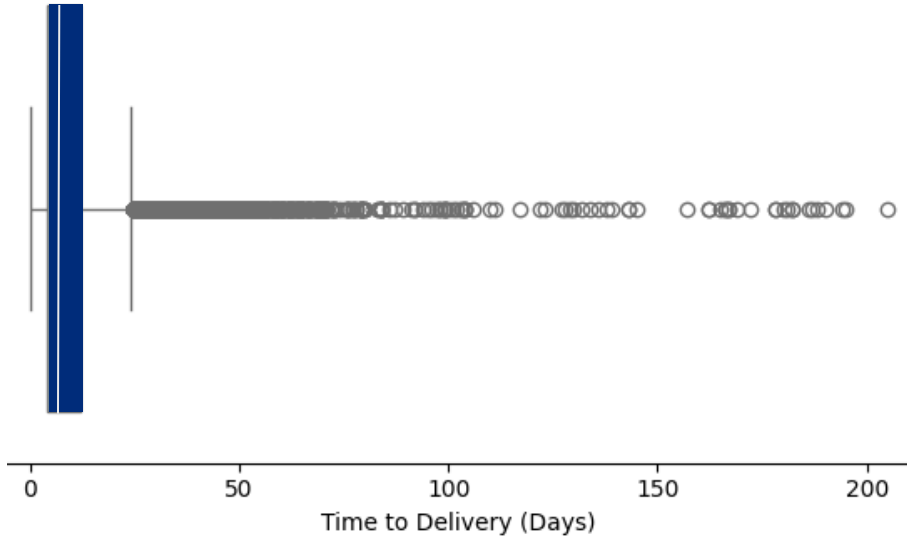
Payment Type proportion

Boleto: 17010 (19.1%)

Voucher: 4871 (5.5%)

Debit Card: 1308 (1.5%)

Credit Card: 66038 (74.0%)

Key Points

- **74%** percent of customer payed using credit cards

- Boleto was widely used as an alternative

Delivery Time Distribution

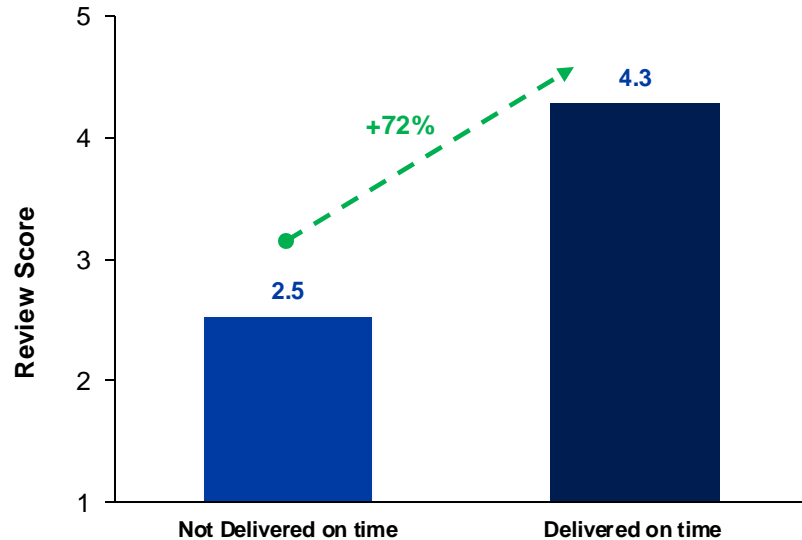Time to Delivery (Days)

Key Points

- Most orders delivered between 0 to 10 day to the customer

- A significant number of orders exceed 20 days of delivery

- If a customer doesn't receive the product on time it can lead to negative reviews that are not linked with the product quality
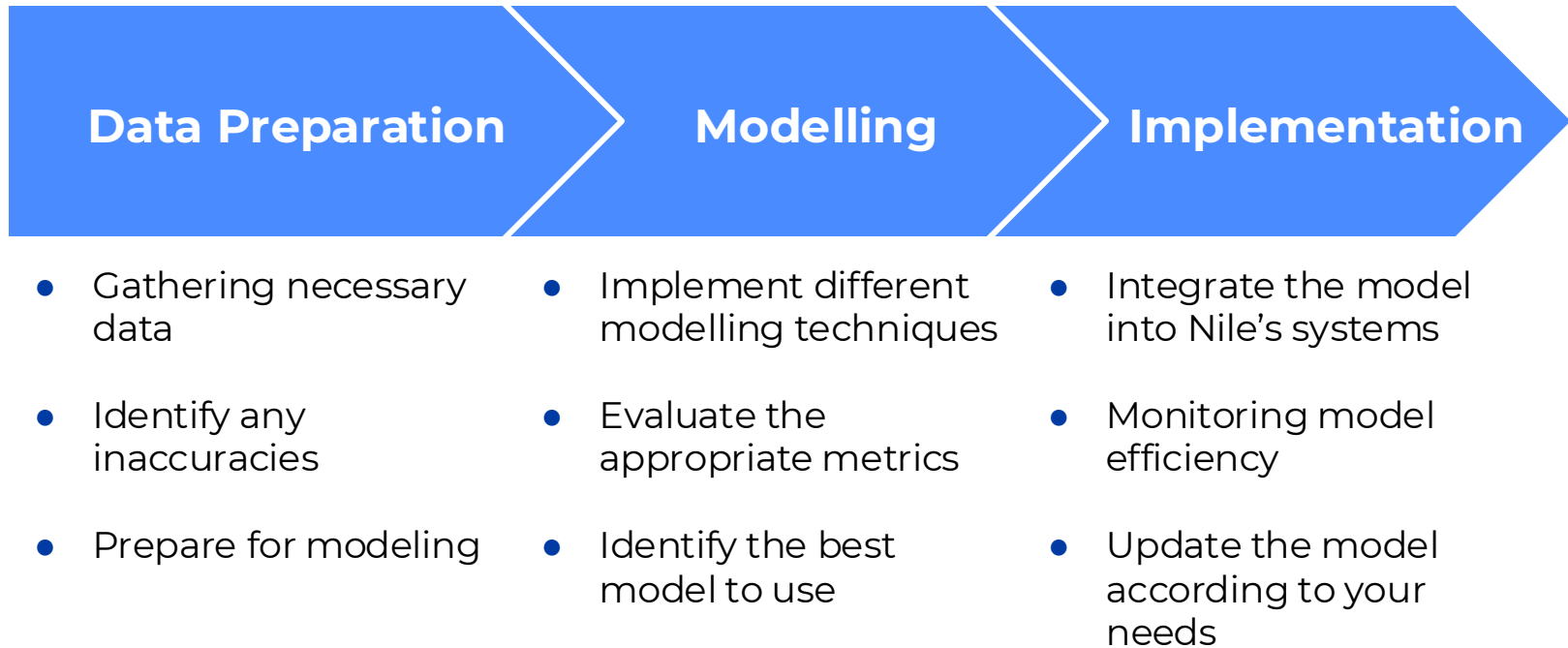
Delivery Time

Key Points

- Lower review scores for orders that have not been delivered on time

- The average review scores for orders delivered on time were 72% higher compared to those that were not.

- Orders exceeding 20 days have a 72% lower review score, showing the critical link between delivery

03

Our Model

Workflow Steps...

Data Preparation

- Gathering necessary data
- Identify any inaccuracies
- Prepare for modeling

Modelling

- Implement different modelling techniques
- Evaluate the appropriate metrics
- Identify the best model to use

Implementation

- Integrate the model into Nile's systems
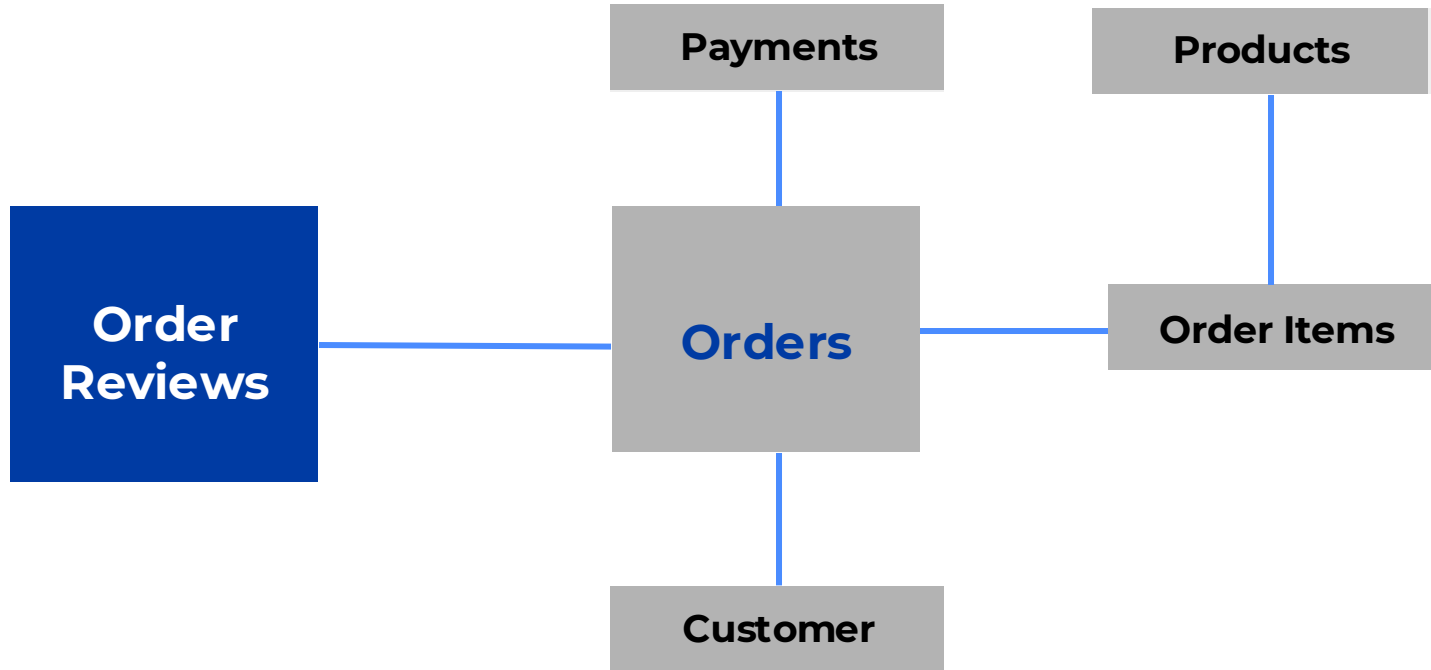- Monitoring model efficiency
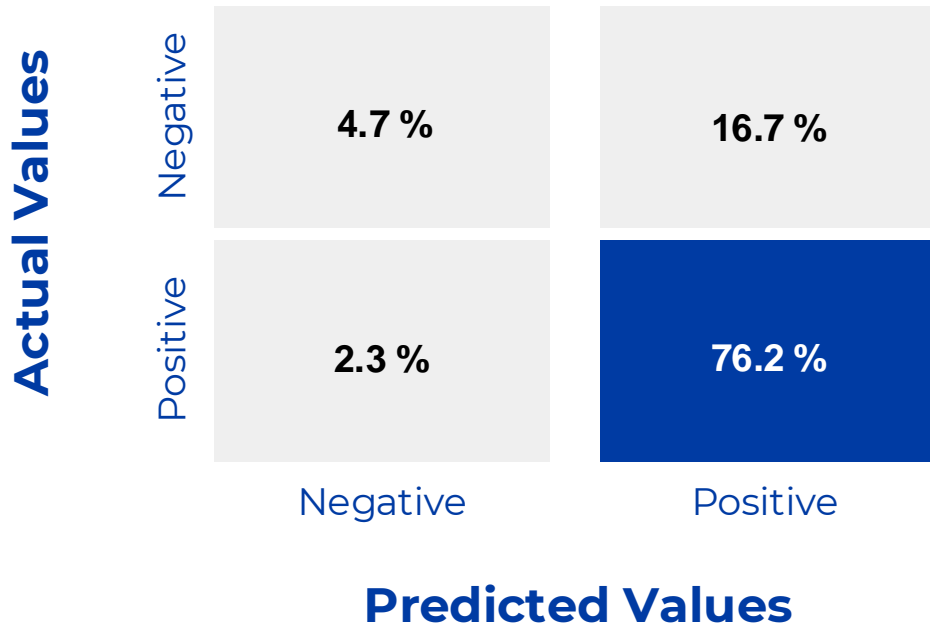- Update the model according to your needs

Dataflow Structure

Proposed Model

X-Gradient Boosted Decision Trees

o   Highly accurate and efficient for classification problems

o   Handles large datasets and complex patterns efficiently

o   Targets only customers with a high likelihood of leaving positive reviews.

Model Performance

Actual Values

	Negative	Positive
Negative	4.7 %	16.7 %
Positive	2.3 %	76.2 %

Negative — Positive

Predicted Values

Key Points

- The overall accuracy of the model prediction is : **81%**

- Our model has high focus on correctly identifying positive reviews

- Ensures minimal missed opportunities for targeting likely reviewers

- The model is customized according to Nile's data structure needs

Implementation plan

Deployment

- Integrate the model into Nile's CRM system using API's

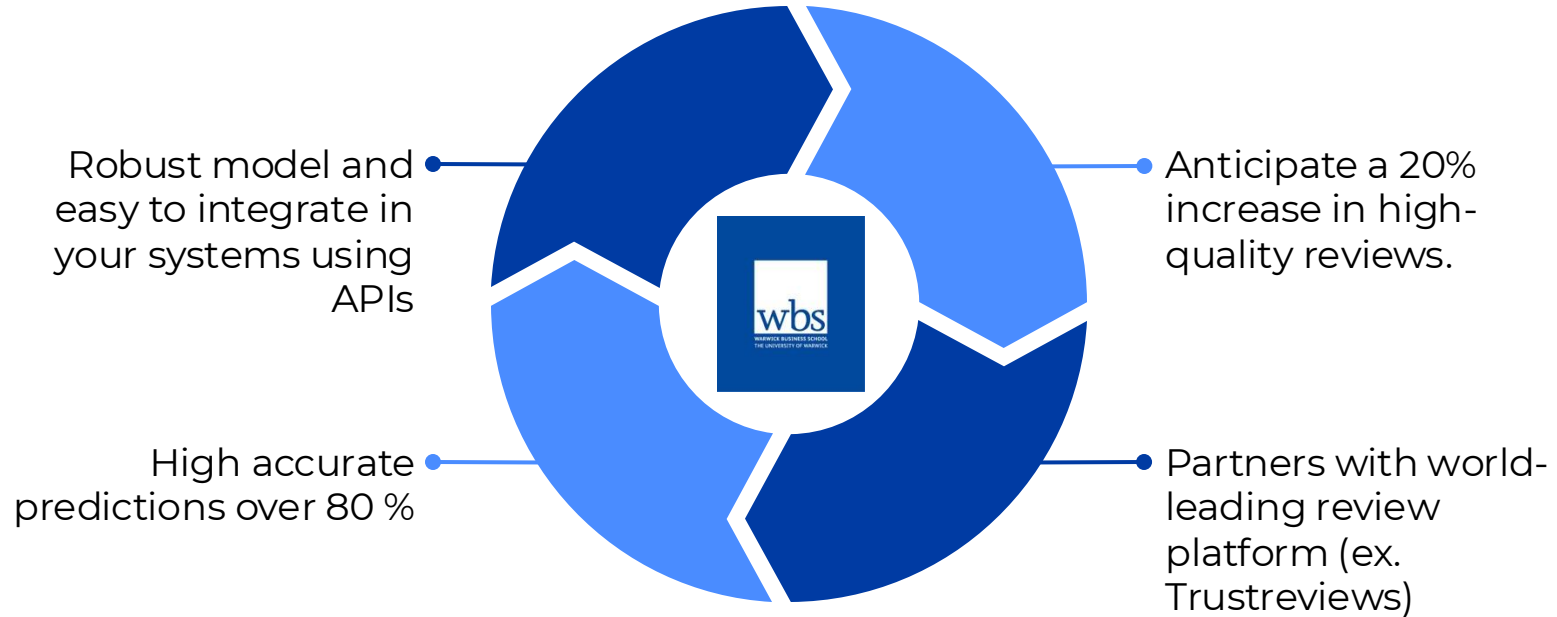- Identify customers most likely to leave positive reviews

Testing

- Pilot the targeting approach in select regions

- Monitor and adjust based on initial results

Scaling

- Roll out the strategy across the platform

- Continuously refine the model with new data

Why Us?

Robust model and easy to integrate in your systems using APIs

Anticipate a 20% increase in high-quality reviews.

High accurate predictions over 80 %

Partners with world-leading review platform (ex. Trustreviews)

04

Areas of Improvement

Recommendations

Business

- Develop targeted strategies to address unmet needs of dissatisfied customers

- Introduce well-structured retention incentives tailored for satisfied customers to boost loyalty

- Support seamless communication between data analytics teams and business units

Technical

- Link customer reviews directly to individual products rather than orders

- Increase the depth of data collection at multiple stages of the customer purchase journey to improve prediction accuracy

- Establish data validation and cleaning protocols to maintain high data quality

Thanks

Warwick Business School
MSc Business Analytics
Analytics In Practice *IB9BW0*