

## Fasion Company BI

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Author: [evangeline.suciadi@student.umn.ac.id](mailto:evangeline.suciadi@student.umn.ac.id)

## Style Mode Analytics Homepage

StyleMode.

10/17



### Product Performance & Sales Insights

This dashboard enables the business to analyze sales data and product performance over time, helping to identify which clothing types are the most popular and what purchasing trends look like



### Brand & Style Analysis

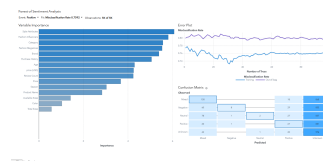
It provides guidance on which brands resonate with various demographics, helping to optimize collaborations with influencers and decide which brands to feature more prominently.

### Customer Feedback & Satisfaction

With these insights, the company can improve customer satisfaction, tailor products to better meet customer needs, and enhance overall brand perception. Additionally, by analyzing trends in feedback over time, the company can predict future satisfaction trends and prepare proactive measures.

### Seasonal & Demographic Insights Dashboard

helps the company plan product assortments, promotions, and marketing efforts aligned with customer preferences across different seasons and demographic groups.



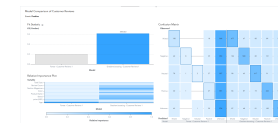
### Forest of Predicting Customer Reviews

The model is trained to predict sentiment categories (Positive, Negative, Neutral, etc.) based on customer reviews and various features of fashion products.



### Gradient Boosting of Predicting Customer Reviews

The model is trained to predict sentiment categories



### ML Models Comparison

the Gradient Boosting model appears to outperform the Random Forest model based on the fit statistic and variable importance, suggesting it may provide more accurate predictions for classifying customer reviews.

### Chosen ML Models Demo

prediction results using a Gradient Boosting machine learning model to classify customer

## Dashboard 1

**Product  
Performance &  
Sales Insights  
Dashboard**  
tracks historical data and

**Frequency of Clothes  
Size**

Frequency

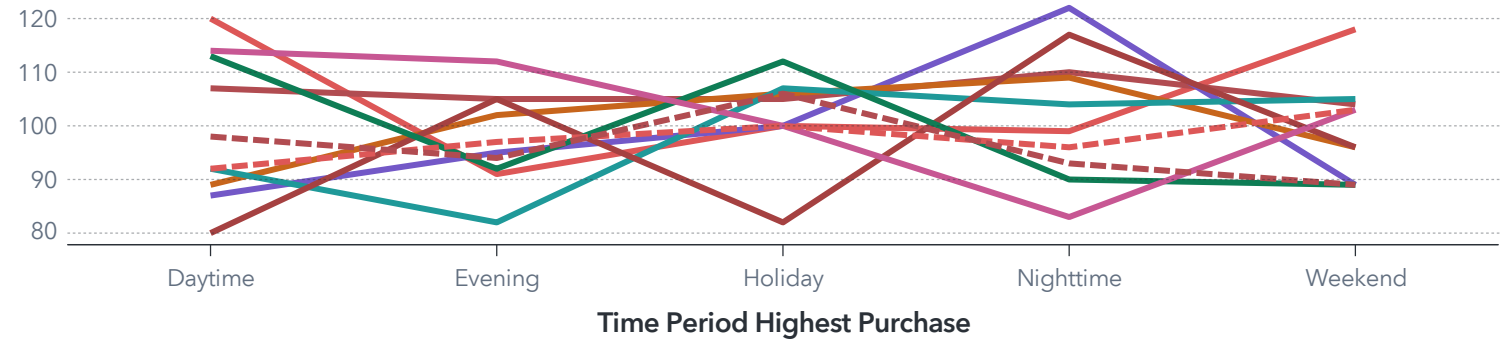


**Available Sizes**

■ S ■ L ■ XL ■ M

Time Period Highest Purchase by Clothing Type

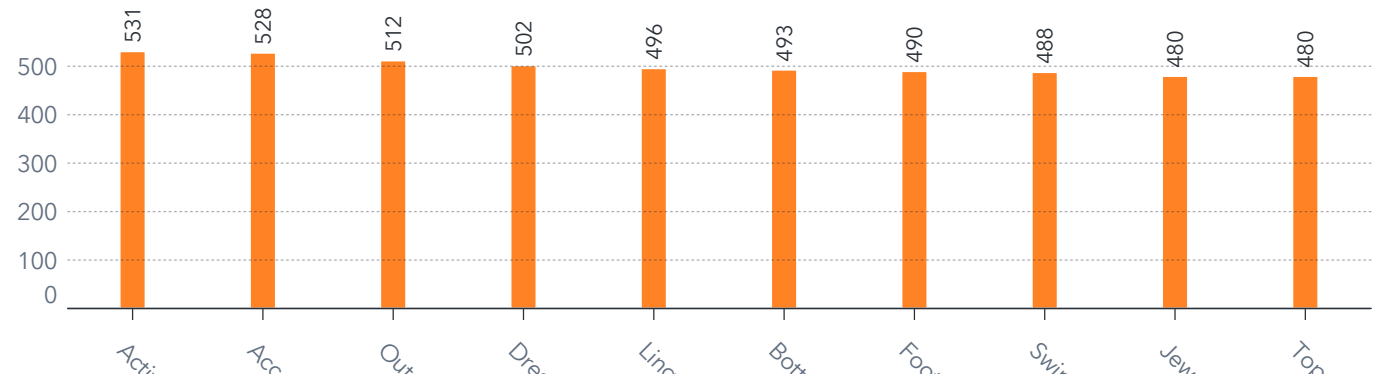
Frequency



**Category**

— Accessories — Activewear — Bottoms — Dresses — Footwear  
— Jewelry — Lingerie — Outerwear — Swimwear — Tops

Clothing Type Sold

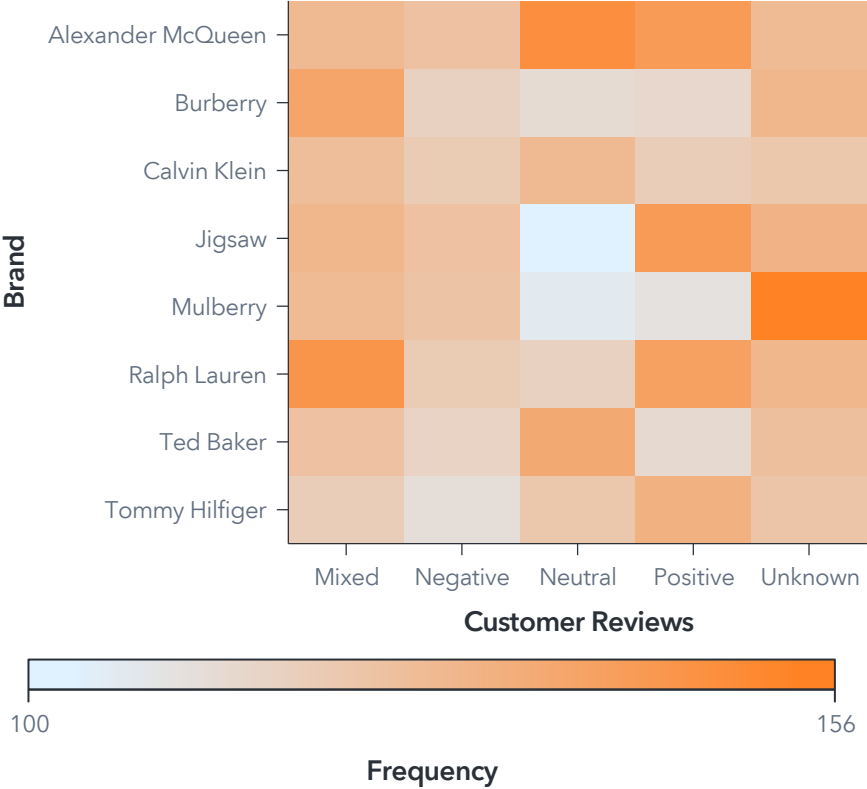


Customer Feedback & Satisfaction Dashboard

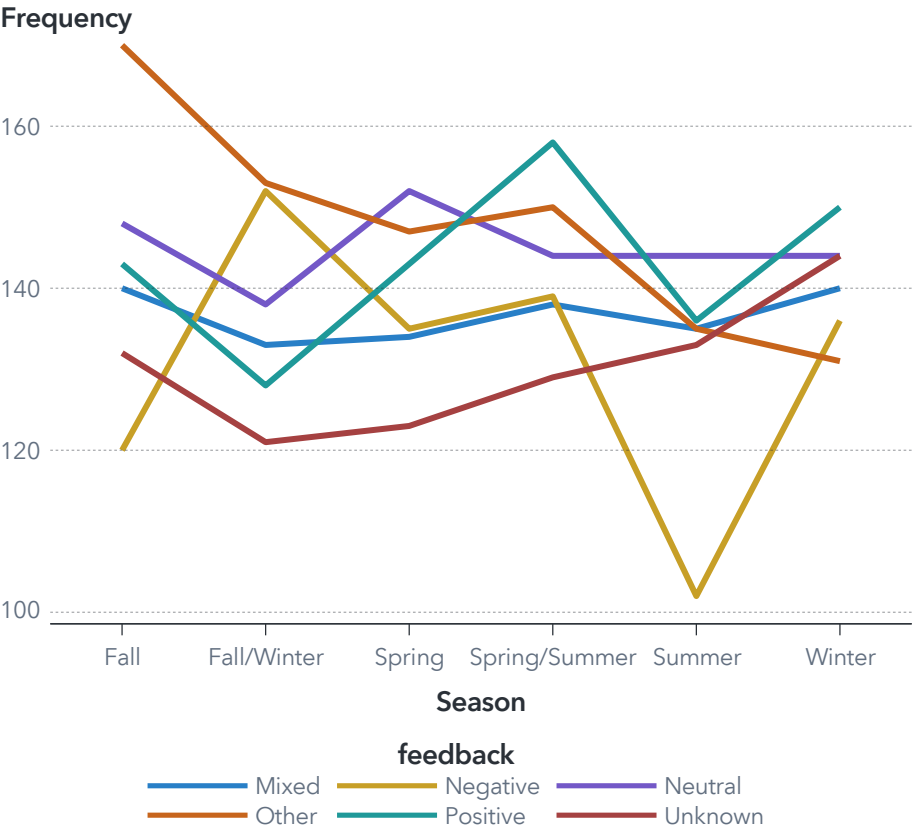
Analyze customer reviews to understand product perception and consumer satisfaction levels

Frequency  
1K  
Customer Reviews: Unknown

Customer Reviews Sentiment Distribution



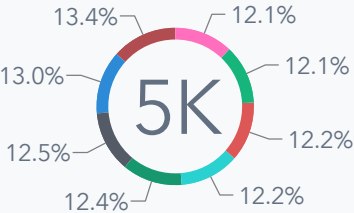
Frequency of Season grouped by feedback



Brand & Style  
Analysis Dashboard

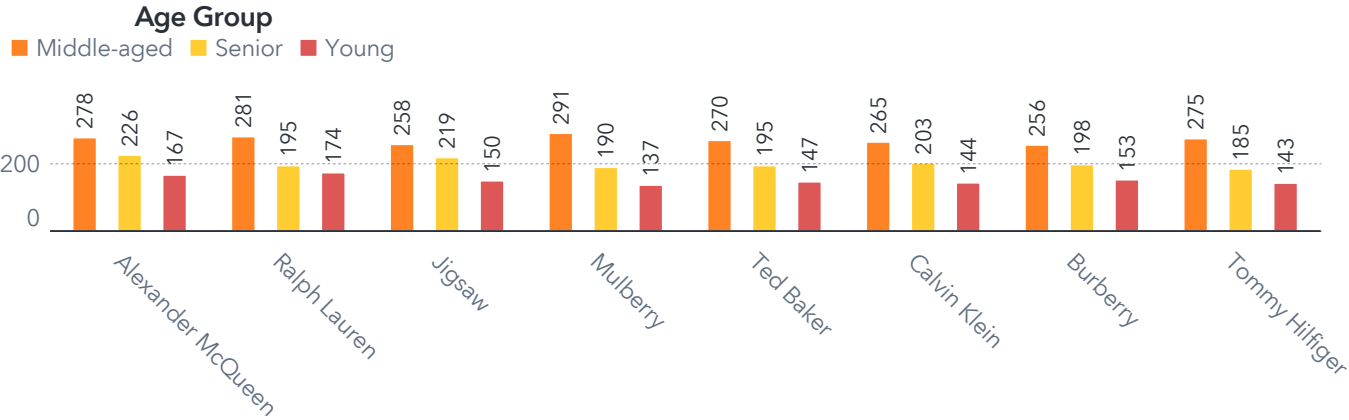
Evaluate brand performance and style preferences, providing insights into which brands and styles resonate the

Frequency of Brand  
Frequency

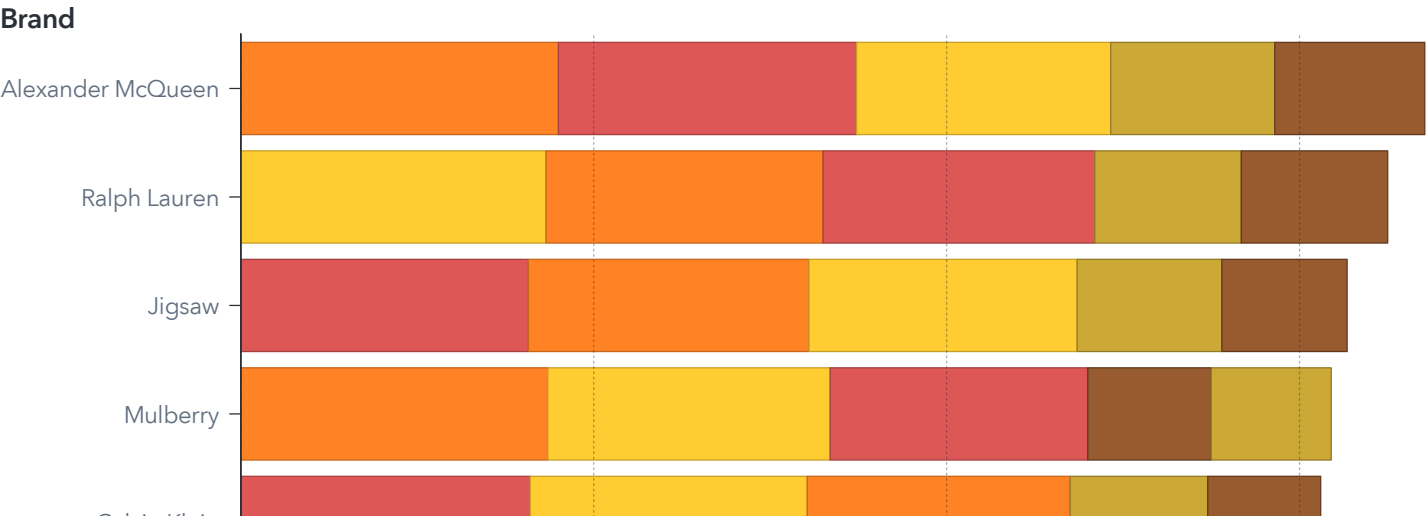


Brand

Clothing Brand per Age Sold



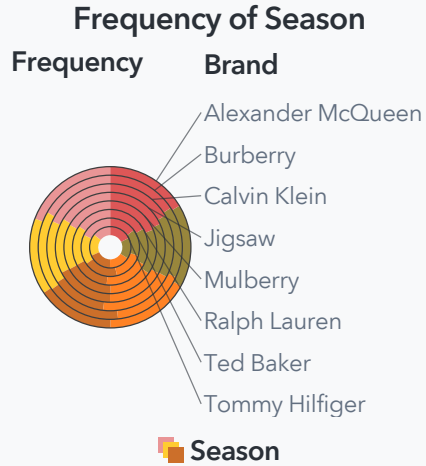
Frequency of Brand grouped by Rating



Dashboard 4

Seasonal & Demographic Insights Dashboard

Analyzes current and past seasonal

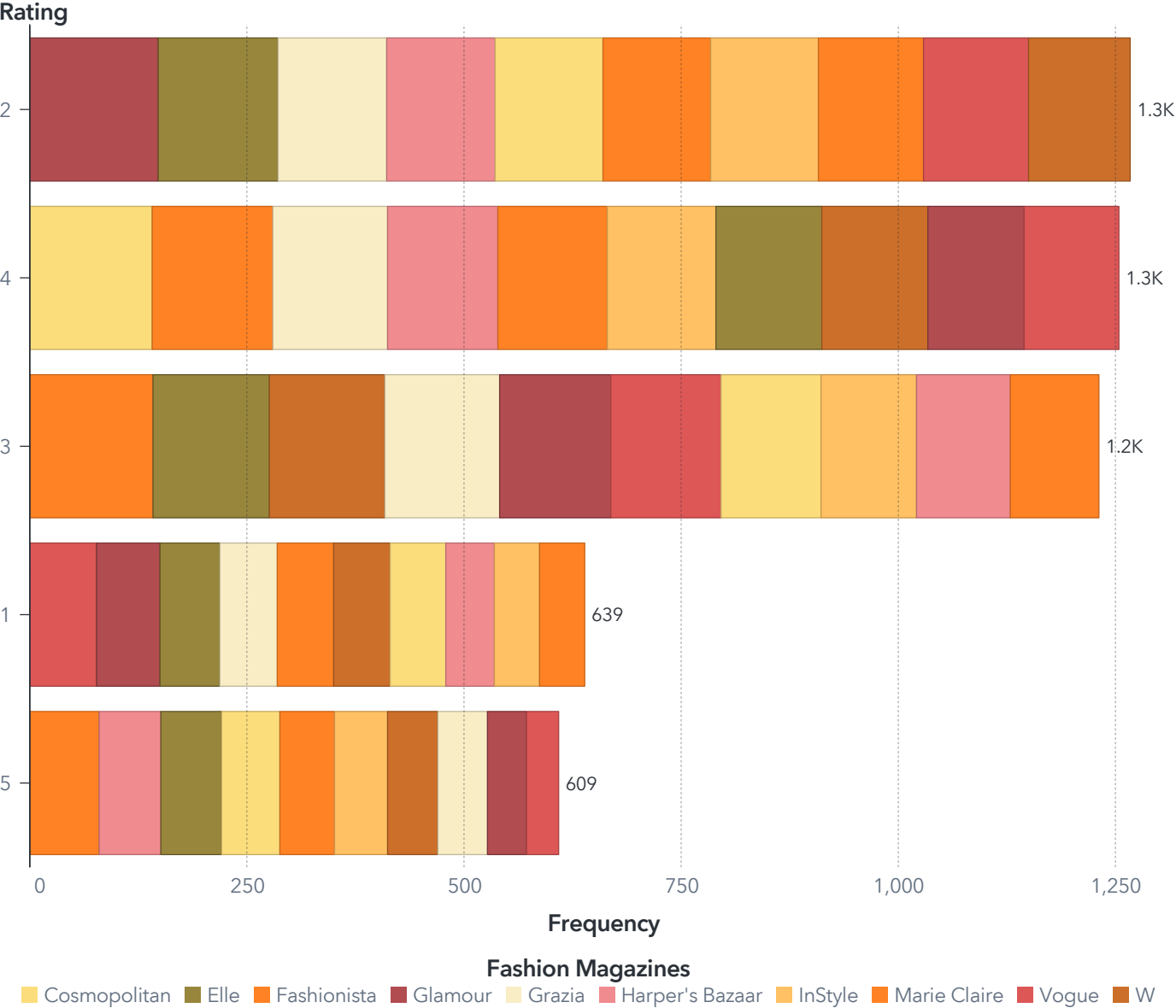


Demographic Percentage

Frequency Percent  
43%  
Age Group: Middle-aged

Frequency Percent  
32%  
Age Group: Senior

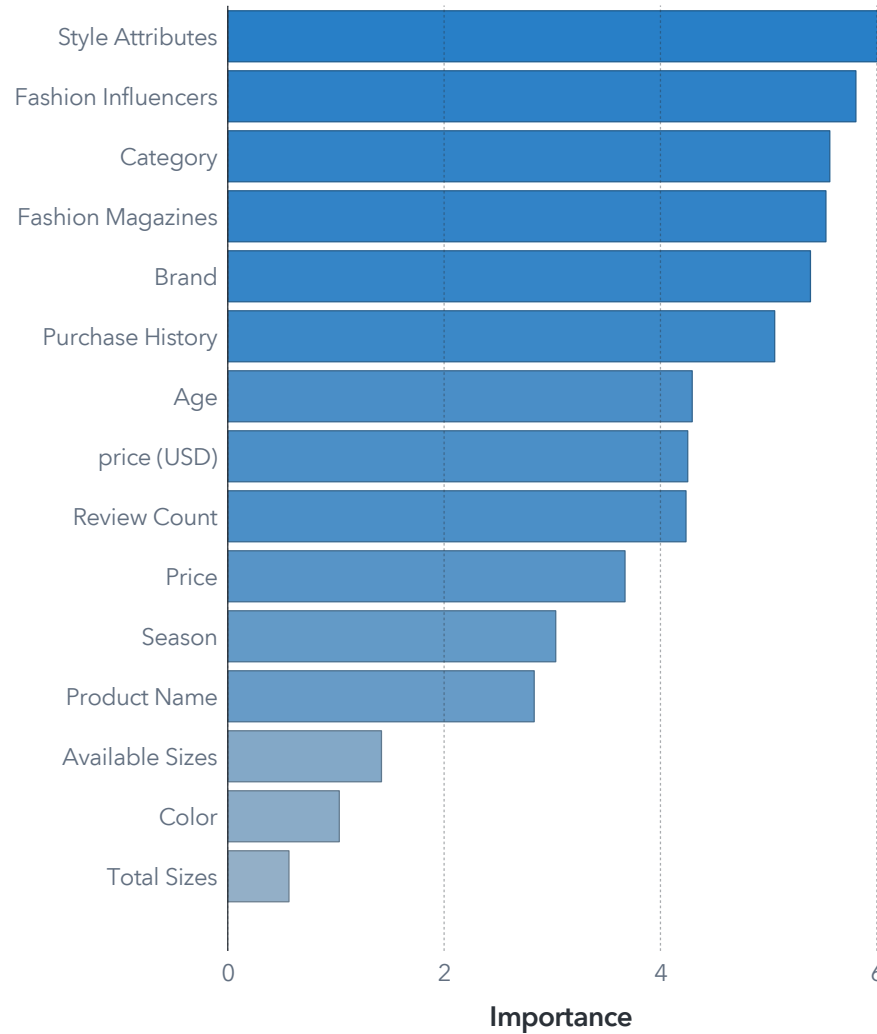
Frequency of Rating grouped by Fashion Magazines



## Forest of Predicting Sentiment Analysis

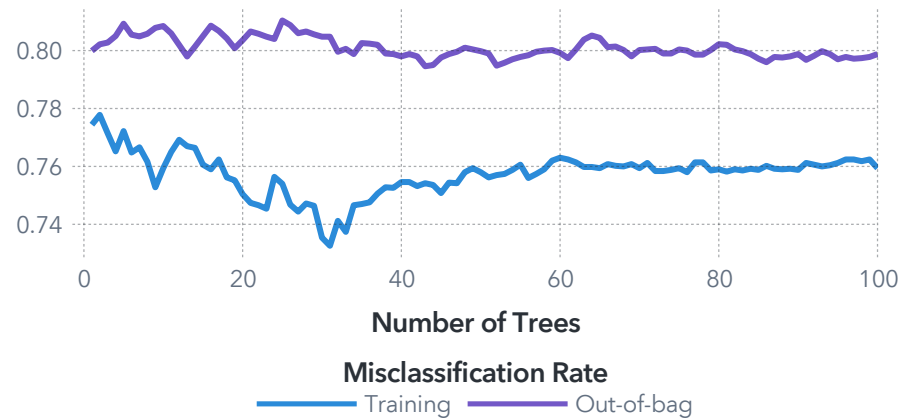
Event: **Positive** Fit: **Misclassification Rate 0.7592** Observations: **5K of 5K**

### Variable Importance



### Error Plot

#### Misclassification Rate



### Confusion Matrix

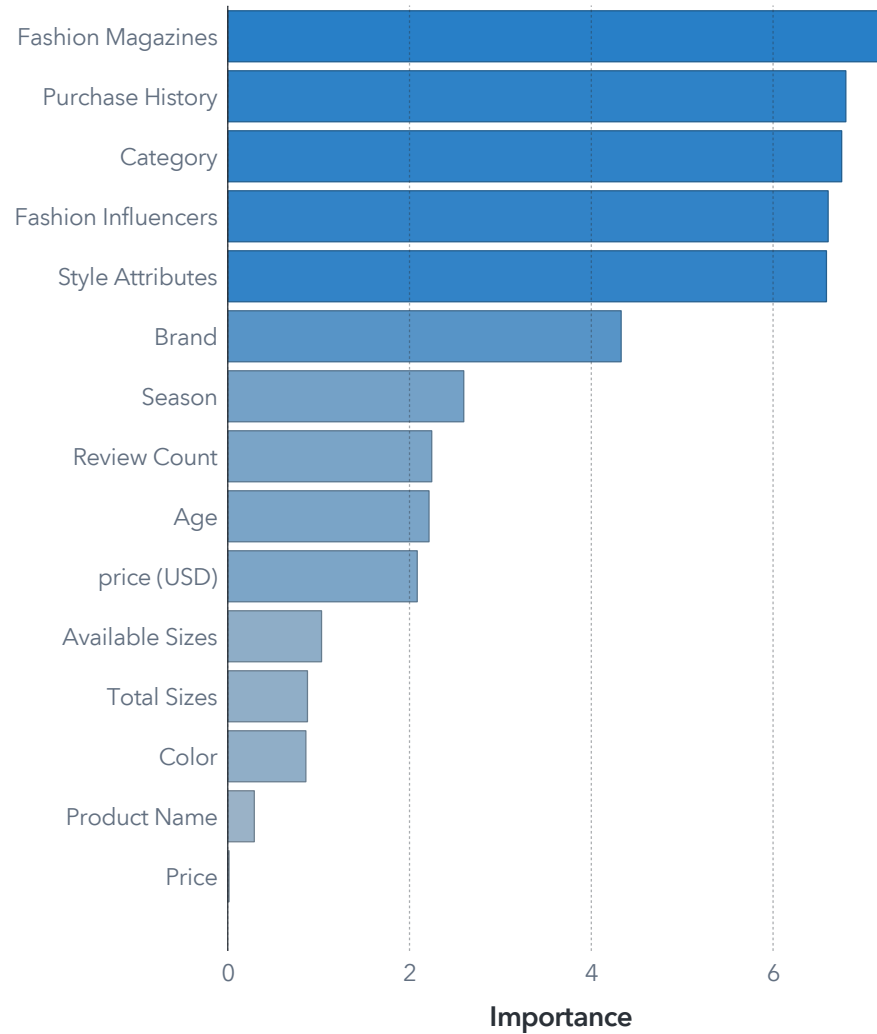
#### Observed

Observed	Predicted				
	Mixed	Negative	Neutral	Positive	Unknown
Mixed	150	8	2	18	868
Negative	60	8	1	29	853
Neutral	78	1	2	27	857
Positive	60	1	67	881	
Unknown	43	1	20	976	

## Gradient Boosting of Predicting Customer Reviews

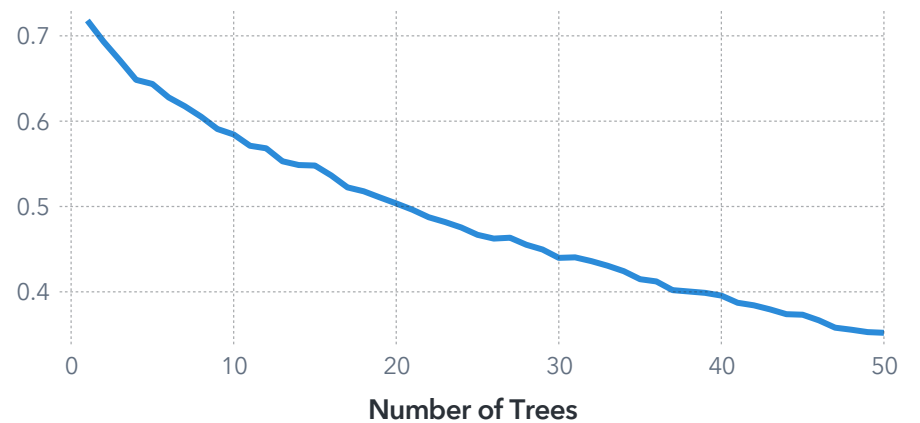
Event: **Positive** Fit: **Misclassification Rate 0.3520** Observations: **5K of 5K**

### Variable Importance



### Iteration Plot

**Misclassification Rate**



### Confusion Matrix

**Observed**

	Mixed	Negative	Neutral	Positive	Unknown
Mixed	677	67	85	89	118
Negative	104	580	82	101	83
Neutral	98	63	617	91	96
Positive	84	87	73	662	103
Unknown	87	68	81	100	704
	Mixed	Negative	Neutral	Positive	Unknown

**Predicted**



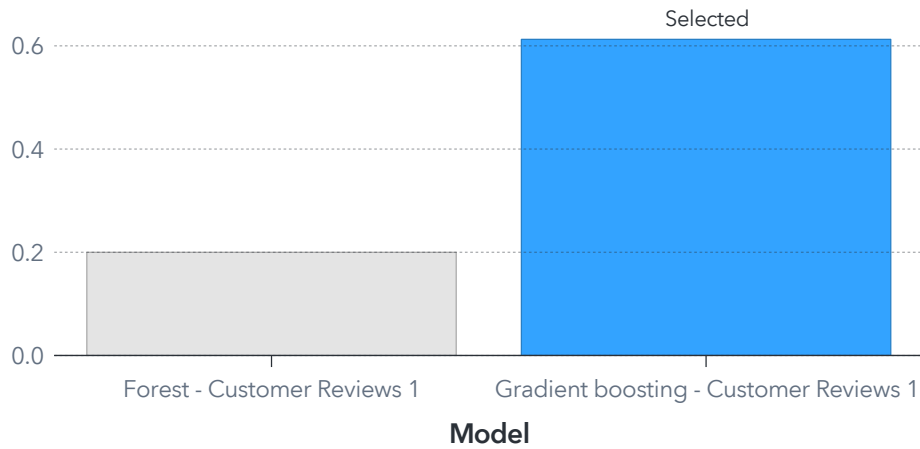
## comparison

### Model Comparison of Customer Reviews

Event: **Positive**

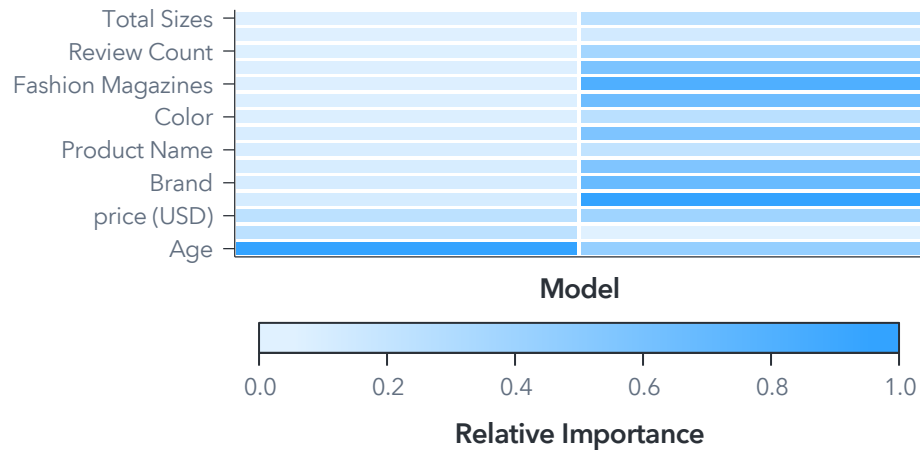
#### Fit Statistic

**KS (Youden)**



#### Relative Importance Plot

**Variable**



#### Confusion Matrix

**Observed**

	Observed				Predicted					
	Mixed	Negative	Neutral	Positive	Mixed	Negative	Neutral	Positive	Unknown	
Mixed	150			18	868	677	67	85	89	118
Negative	60	8		29	853	104	580	82	101	83
Neutral	78	1	2	27	857	98	63	617	91	96
Positive	60	1		67	881	84	87	73	662	103
Unknown	43		1	20	976	87	68	81	100	704
Predicted	Mixed	Negative	Neutral	Positive	Unknown	Mixed	Negative	Neutral	Positive	Unknown
Model	Forest - Customer Reviews 1					Gradient boosting - Customer Reviews 1				

## ML result

What values for the most important factors should be used to predict?

Style Attributes

Bohemian

Fashion Magazines

Elle

Fashion Influencers

Kendall Jenner

Category

Activewear

Brand

Alexander McQueen

Season

Spring/Summer

What is the prediction for Customer Reviews?

# Positive

The predicted Customer Reviews, Positive, is the 3 most common Customer Reviews value in observed cases. Most observed cases (20.80%) are Unknown, while 20.18% are Positive. The prediction is based on an automatically selected Gradient Boosting model.