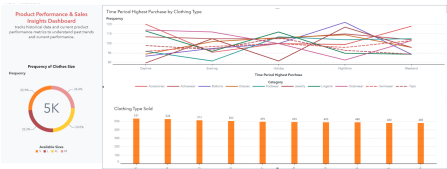


Fasion Company BI

Creation Date: Monday, 16 December 2024, 04:25:39

Author: evangeline.suciadi@student.umn.ac.id

Style Mode Analytics Homepage - Data Visualization



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



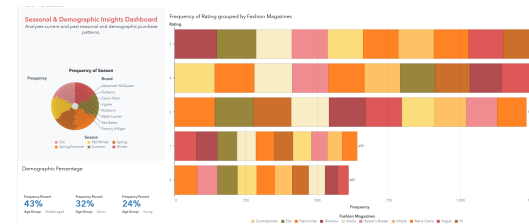
Brand & Style Analysis

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

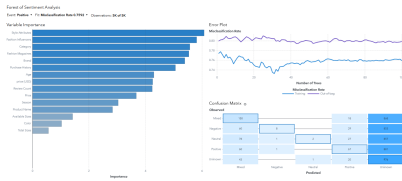
With these insights, the company can improve customer satisfaction, tailor products to better meet customer needs, and enhance overall brand perception. Additionally, by analyzing trends in feedback over time, the company can predict future satisfaction trends and prepare proactive measures.



Seasonal & Demographic Insights Dashboard

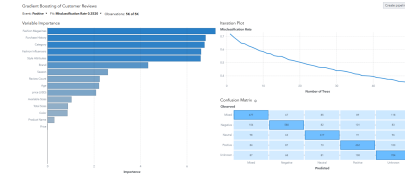
helps the company plan product assortments, promotions, and marketing efforts aligned with customer preferences across different seasons and demographic groups.

Style Mode Analytics Homepage - Data Modelling



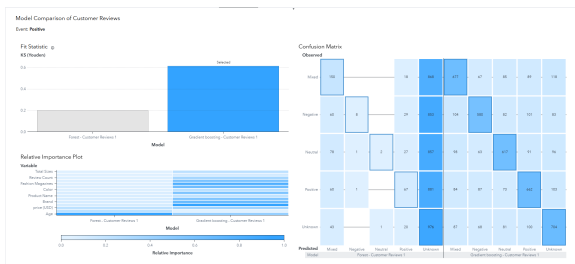
Forest of Predicting Customer Reviews

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 (Positive, Negative, Neutral, etc.) based on customer reviews and various features of fashion products.



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 reviews. In this case, the predicted sentiment is "Positive."

Dashboard 1

Product Performance & Sales Insights Dashboard
tracks historical data and

Frequency of Clothes Size

Frequency

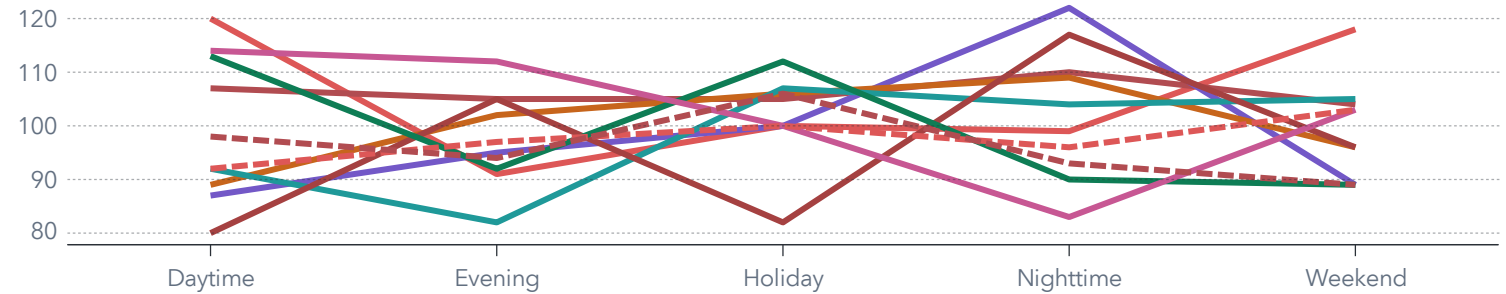


Available Sizes

S L XL M

Time Period Highest Purchase by Clothing Type

Frequency

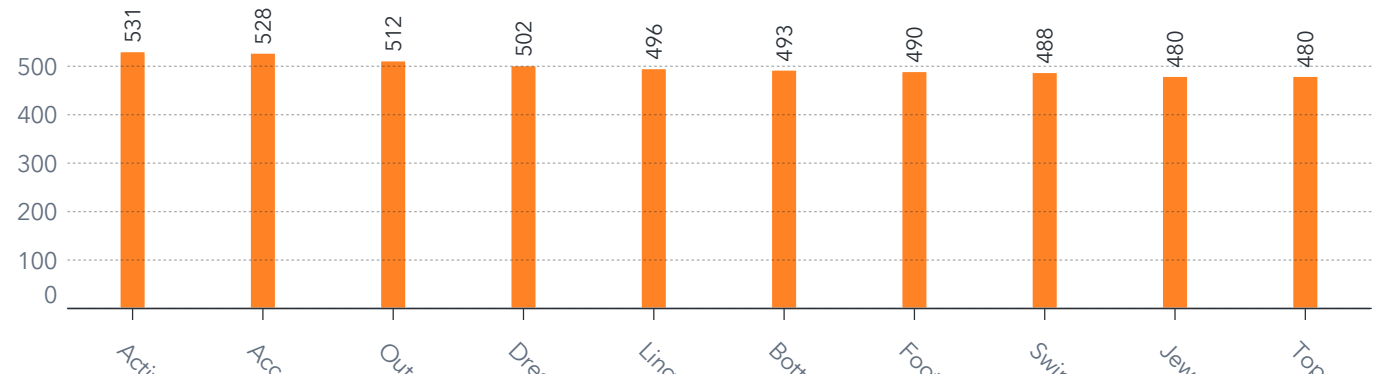


Time Period Highest Purchase

Category

Accessories Activewear Bottoms Dresses Footwear
Jewelry Lingerie Outerwear Swimwear Tops

Clothing Type Sold

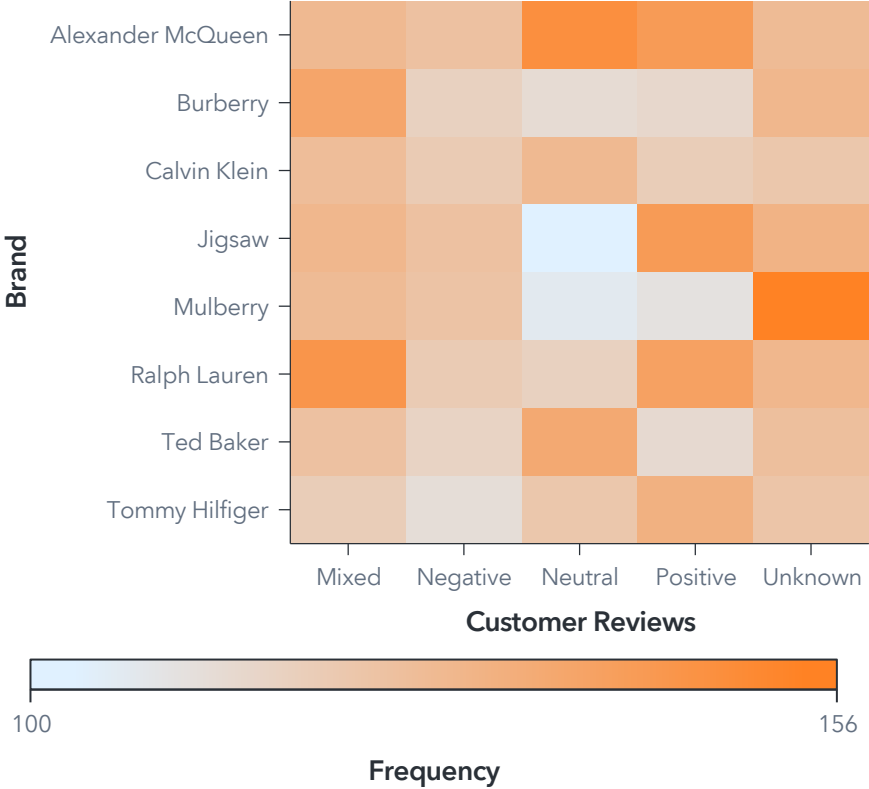


Customer Feedback & Satisfaction Dashboard

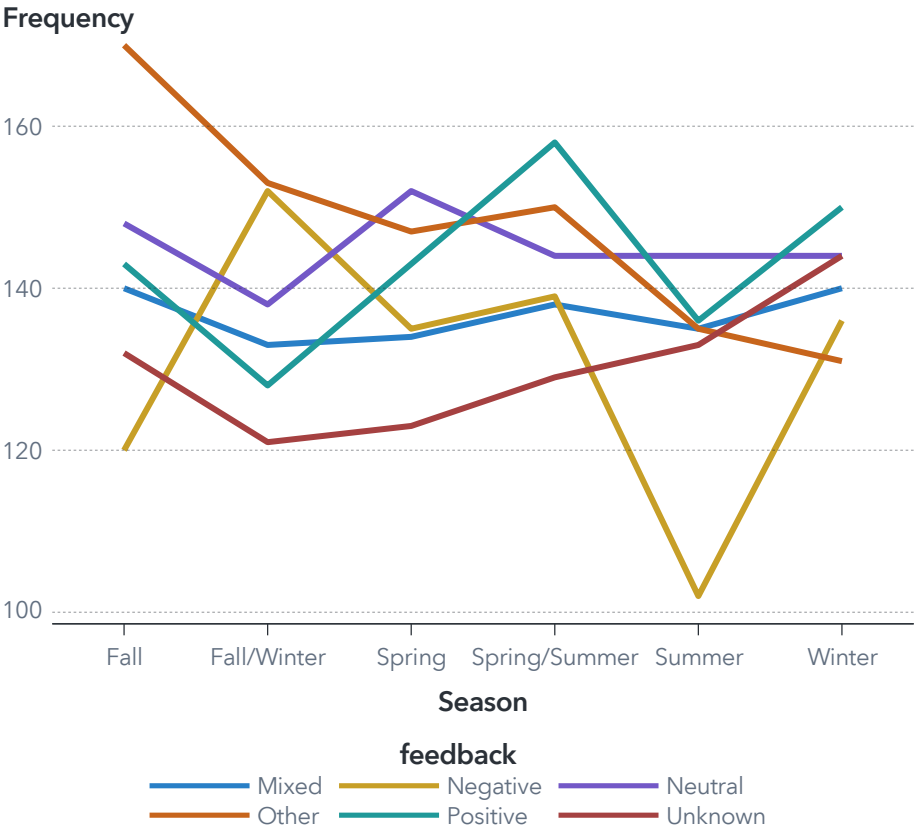
Analyze customer reviews to understand product perception and consumer satisfaction levels

Frequency
1K
Customer Reviews: Unknown

Customer Reviews Sentiment Distribution



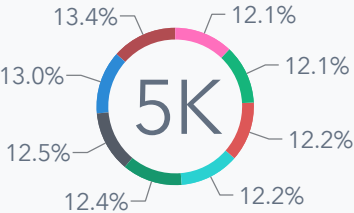
Frequency of Season grouped by feedback



Brand & Style Analysis Dashboard

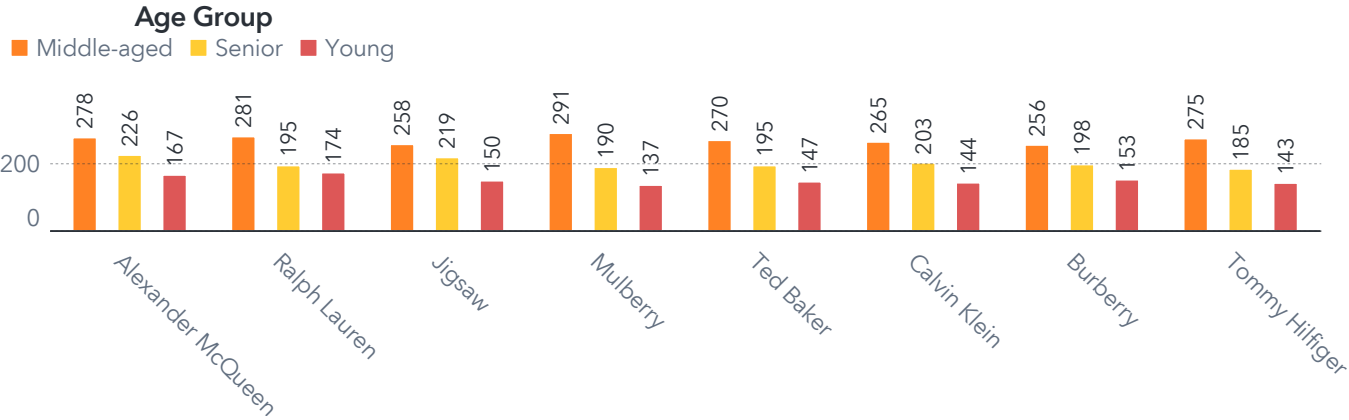
Evaluate brand performance and style preferences, providing insights into which brands and styles resonate the

Frequency of Brand Frequency

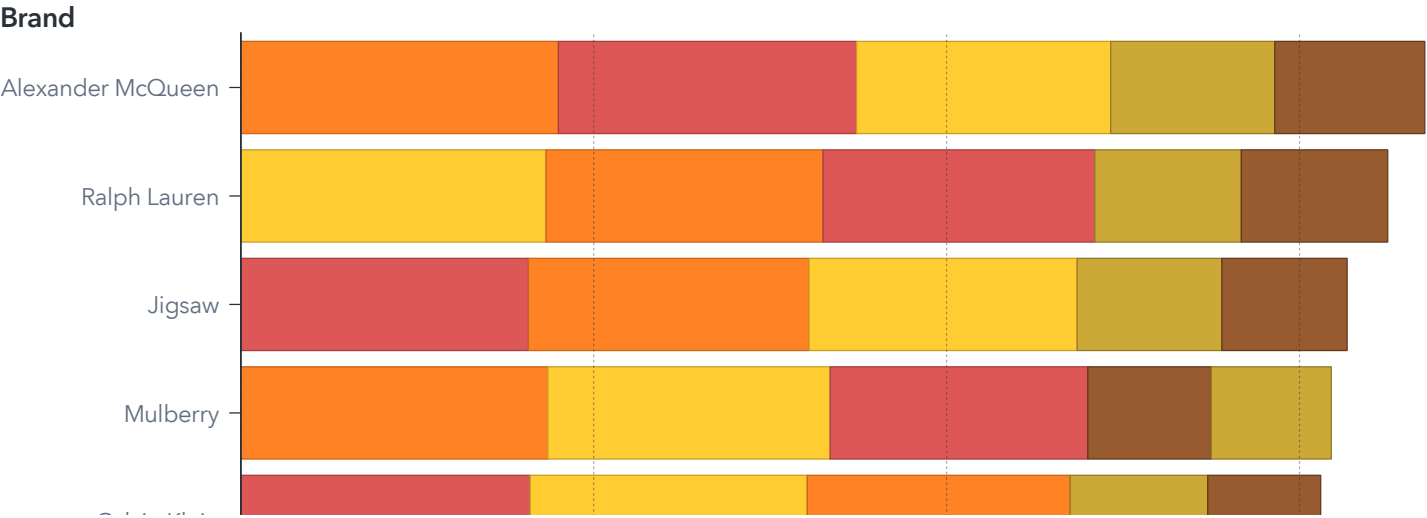


Brand

Clothing Brand per Age Sold



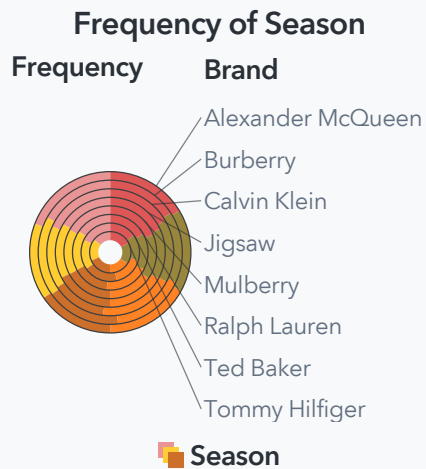
Frequency of Brand grouped by Rating



Dashboard 4

Seasonal & Demographic Insights Dashboard

Analyzes current and past seasonal



Demographic Percentage

Frequency Percent
43%

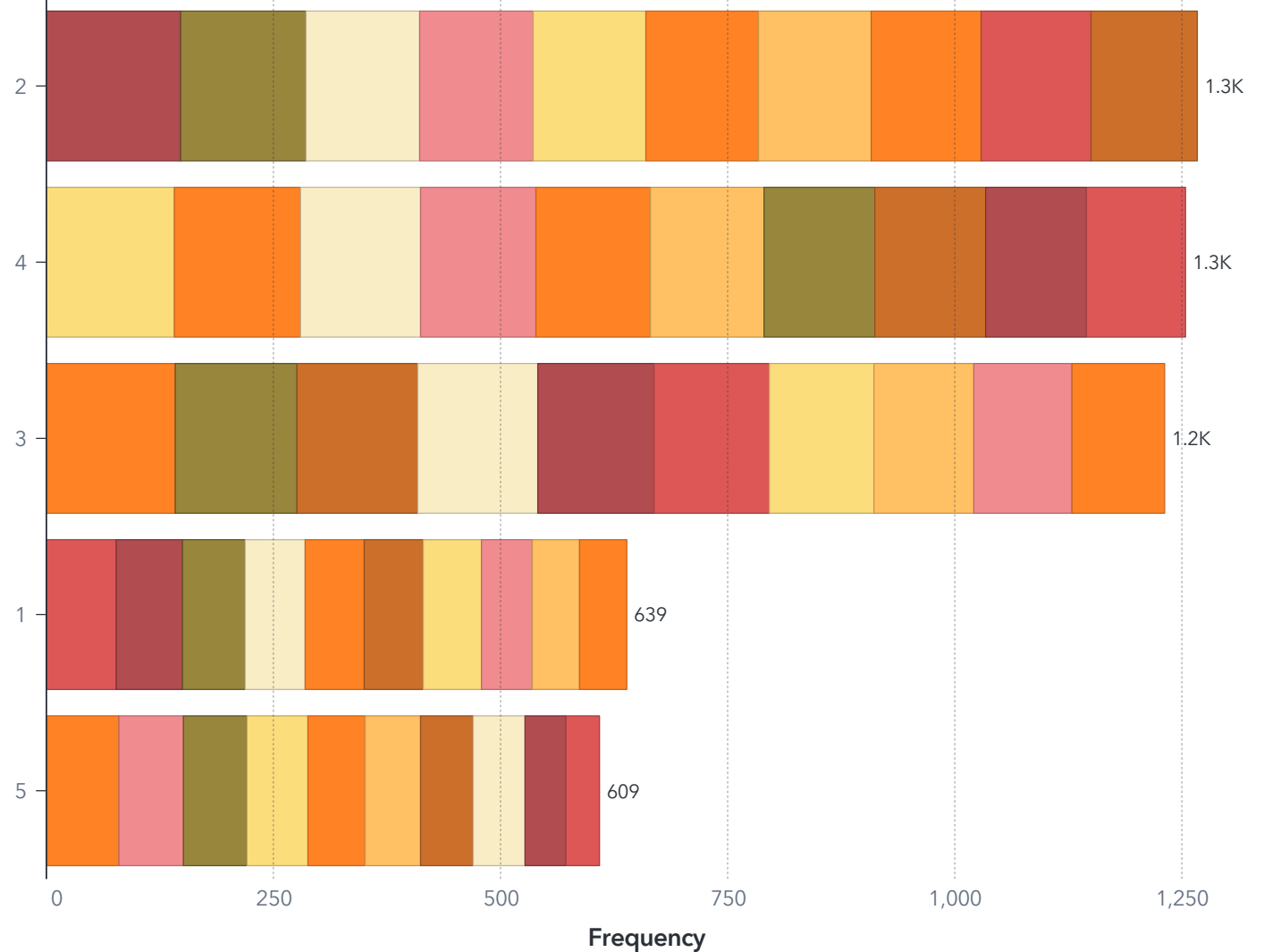
Age Group: Middle-aged

Frequency Percent
32%

Age Group: Senior

Frequency of Rating grouped by Fashion Magazines

Rating



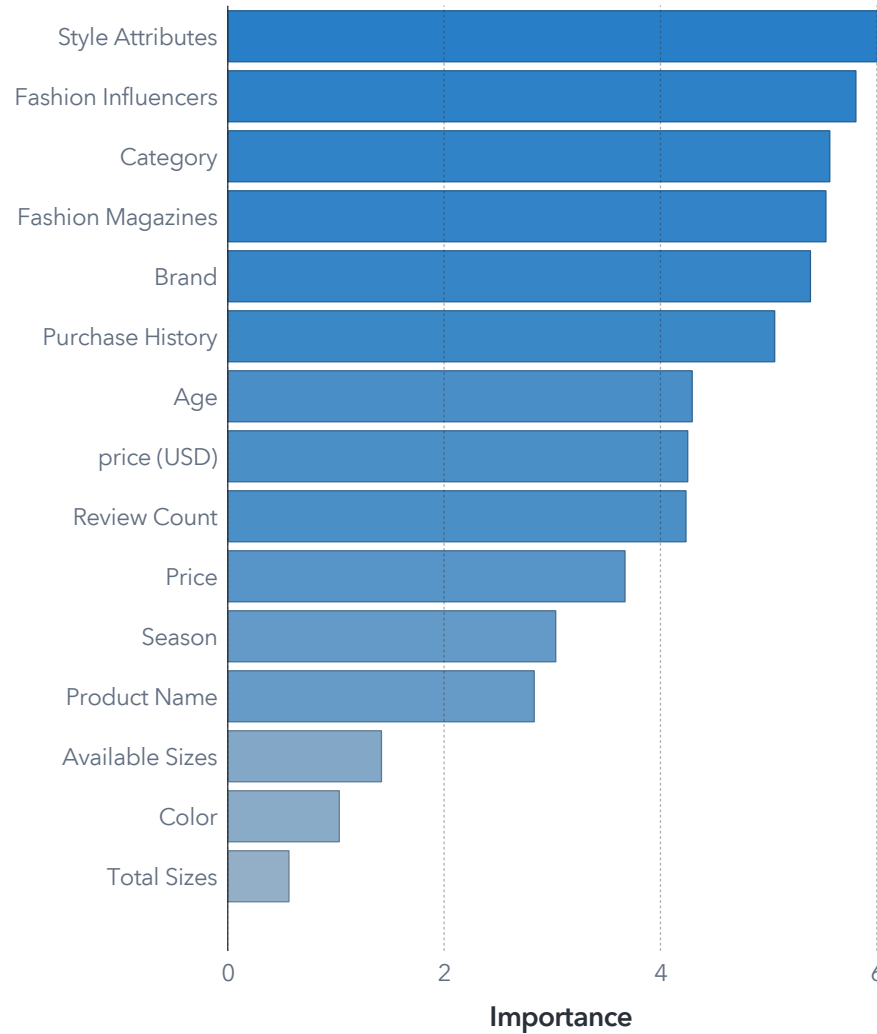
Fashion Magazines

Cosmopolitan Elle Fashionista Glamour Grazia Harper's Bazaar InStyle Marie Claire Vogue W

Forest of Predicting Sentiment Analysis

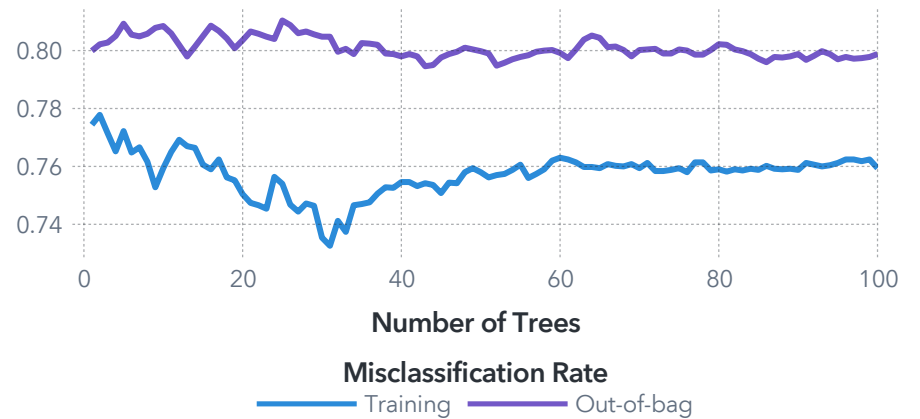
Event: **Positive** Fit: **Misclassification Rate 0.7592** Observations: **5K of 5K**

Variable Importance



Error Plot

Misclassification Rate



Confusion Matrix

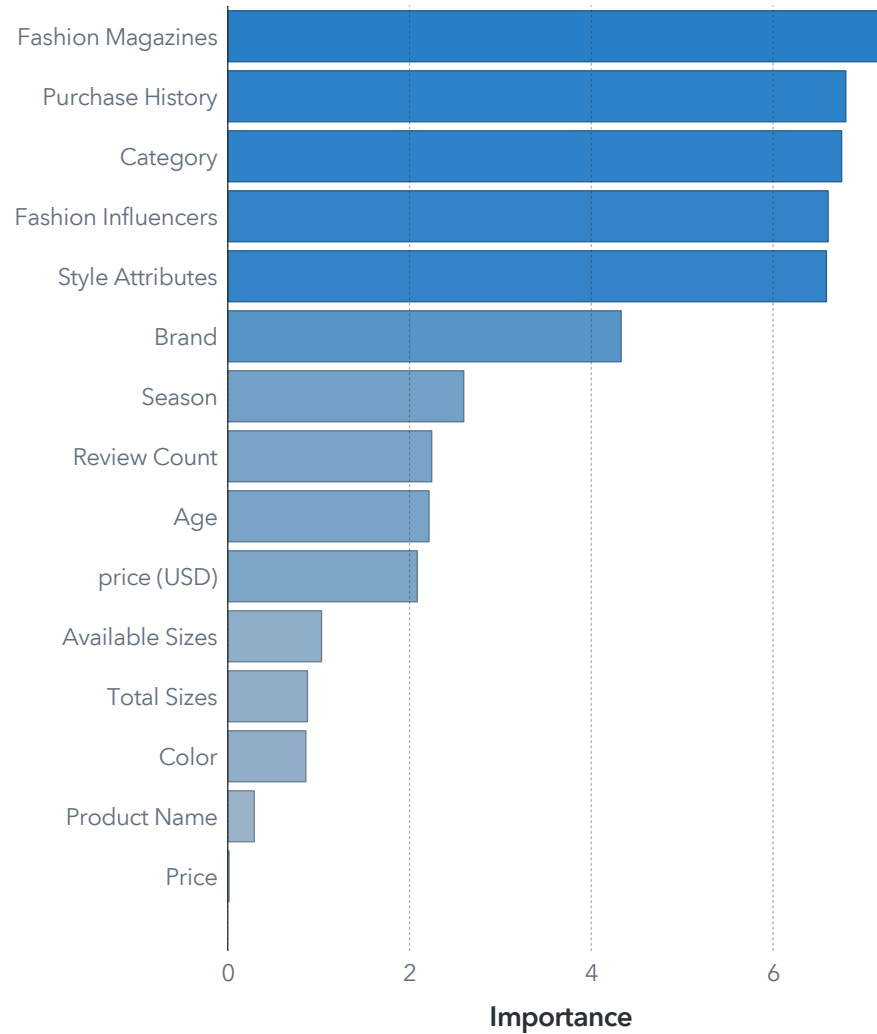
Observed

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	1	67	881
Unknown	43	1	1	20	976

Gradient Boosting of Predicting Customer Reviews

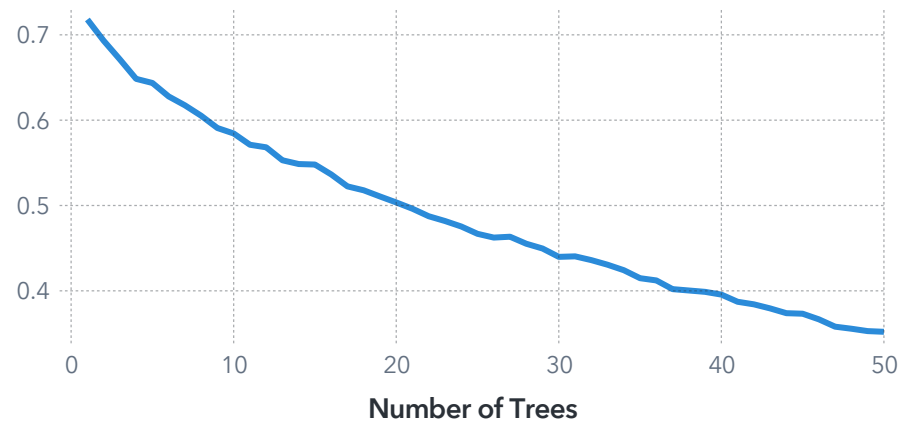
Event: **Positive** Fit: **Misclassification Rate 0.3520** Observations: **5K of 5K**

Variable Importance



Iteration Plot

Misclassification Rate



Confusion Matrix

Observed

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

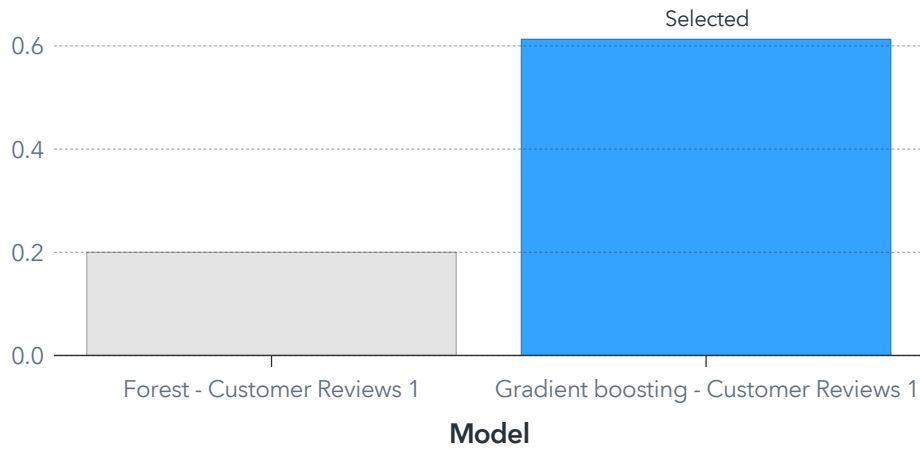
comparison

Model Comparison of Customer Reviews

Event: **Positive**

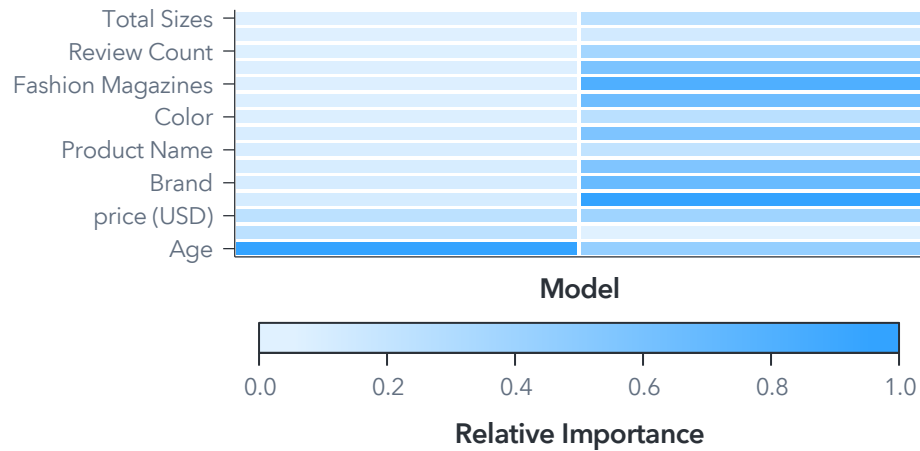
Fit Statistic

KS (Youden)



Relative Importance Plot

Variable



Confusion Matrix

Observed

	Mixed	Negative	Neutral	Positive	Unknown				
						Mixed	Negative	Neutral	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
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	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.