NurulAiniLativah_00000052204_IS529_AL_UAS

Creation Date: Wednesday, December 21, 2022 09:03:50 PM
Author: nurul.lativah@student.umn.ac.id

NU FURNITURE

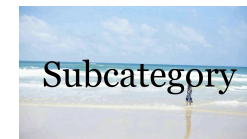MAPS

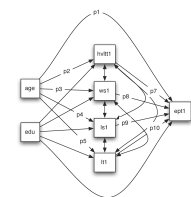SALES

CUSTOMERS

SubCategory

PATH ANALYSIS

Region

OrderQuantity
7.6K
≤1.5K

Region
- Africa
- Canada
- Caribbean
- Central
- Central Asia
- East
- EMEA
- North
- North Asia
- Oceania
- South
- Southeast Asia
- West

Map data © OpenStreetMap

A1.1

Customers

CUSTOMER
All About Customer Nu Furniture

Region by Country

Map data © OpenStreetMap

Region
- ■ Africa
- ■ Canada
- ■ Caribbean
- ■ Central
- ■ Central Asia
- ■ East
- ■ EMEA
- ■ North
- ■ North Asia
- ■ Oceania
- ■ South
- ■ Southeast Asia
- ■ West

⚠ A2.1

UnitPrice by OrderDate grouped by ShipMode

UnitPrice

ShipMode
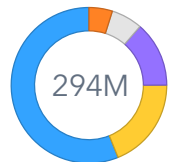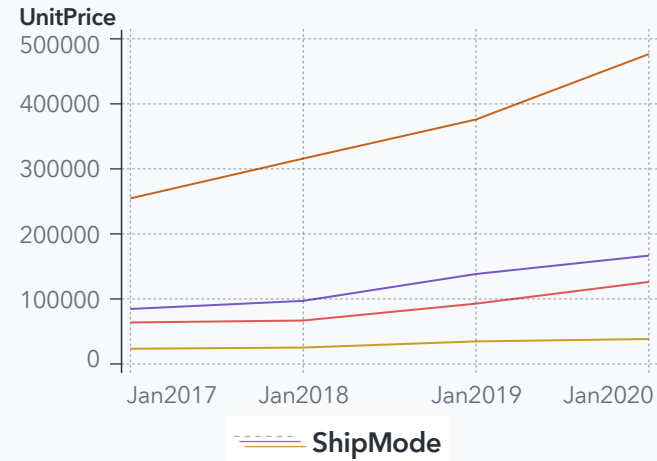
Customer ▲
Aaron Bergman
Aaron Hawkins
Aaron Smayling
Adam Bellavance
Adam Hart
Adam Shillingsburg
Adrian Barton
Adrian Hane
Adrian Shami
Aimee Bixby
Alan Barnes

294M

ShippingCost
911K

Sales

SALES
This is where you would enter description text.
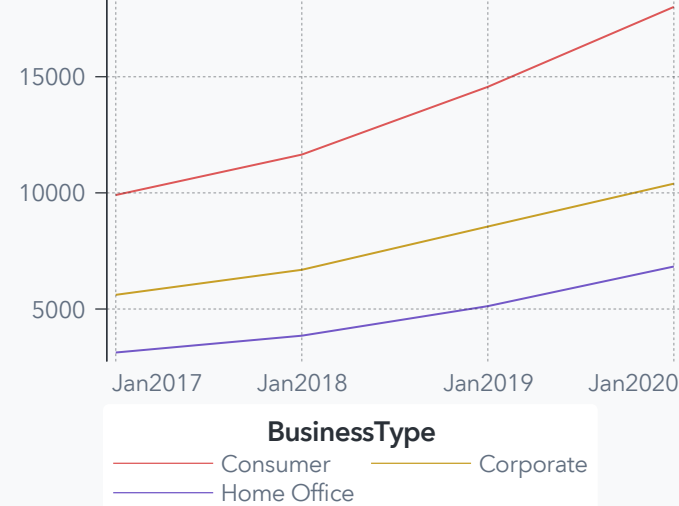
Region by Country

Map data © OpenStreetMap

Region
- Africa
- Canada
- Caribbean
- Central
- Central Asia
- East
- EMEA
- North
- North Asia
- Oceania
- South
- Southeast Asia
- West

⚠ A3.2

OrderQuantity

15000

10000

5000

Jan2017   Jan2018   Jan2019   Jan2020

BusinessType
— Consumer   — Corporate
— Home Office

OrderQuantity

20000

15000

10000

5000

0

(miss...   Art   Bookca...   Furnish...   Storage   Tables
Applian...   Binders   Chairs   Paper   Supplies

SubcategoryName

⚠ A3.3

Art

Appliances

Chairs
Furnishings
Bookcases
Tables
Supplies
Paper

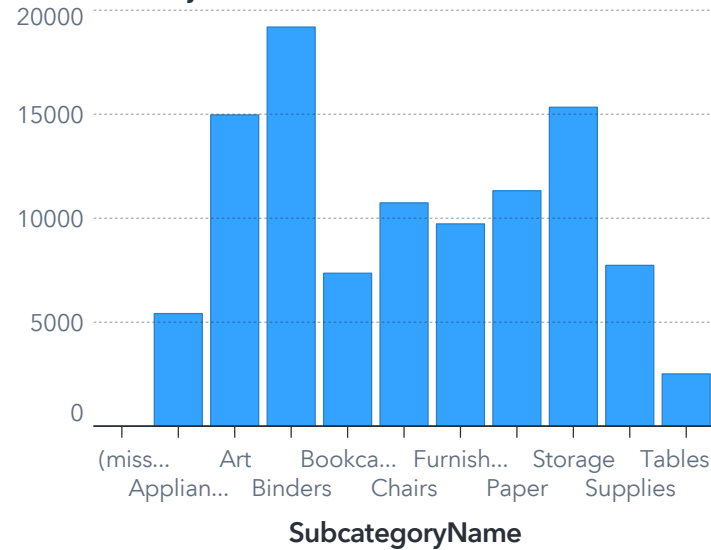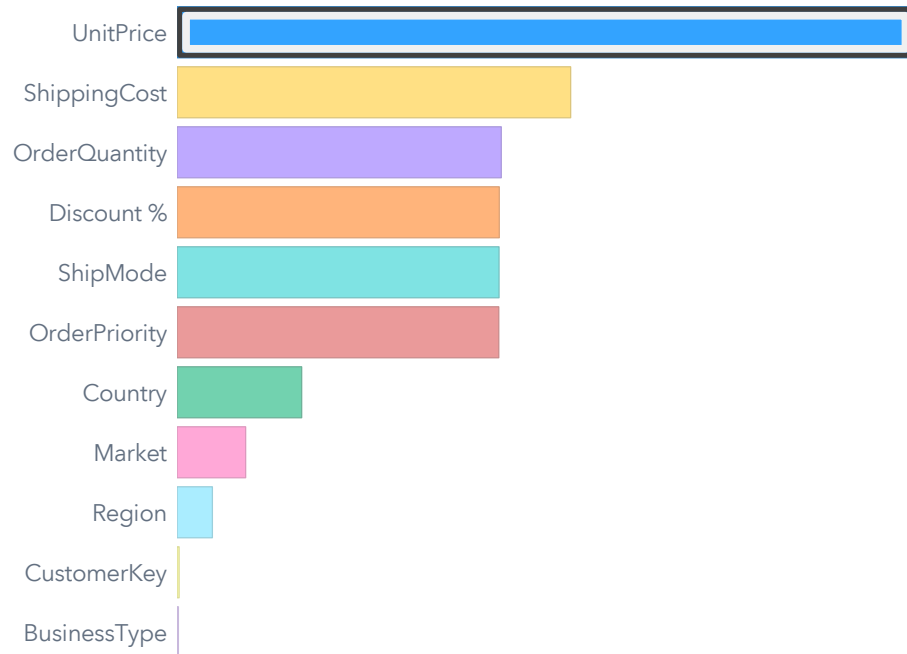## Binders

Storage

⚠ A3.1

2.4M

911K

SubCategory

What are the characteristics of SubcategoryName?

Binders is the most common value representing 17.15% (5.5K of 32K) of SubcategoryName. The three most related factors are UnitPrice, ShippingCost, and OrderQuantity.
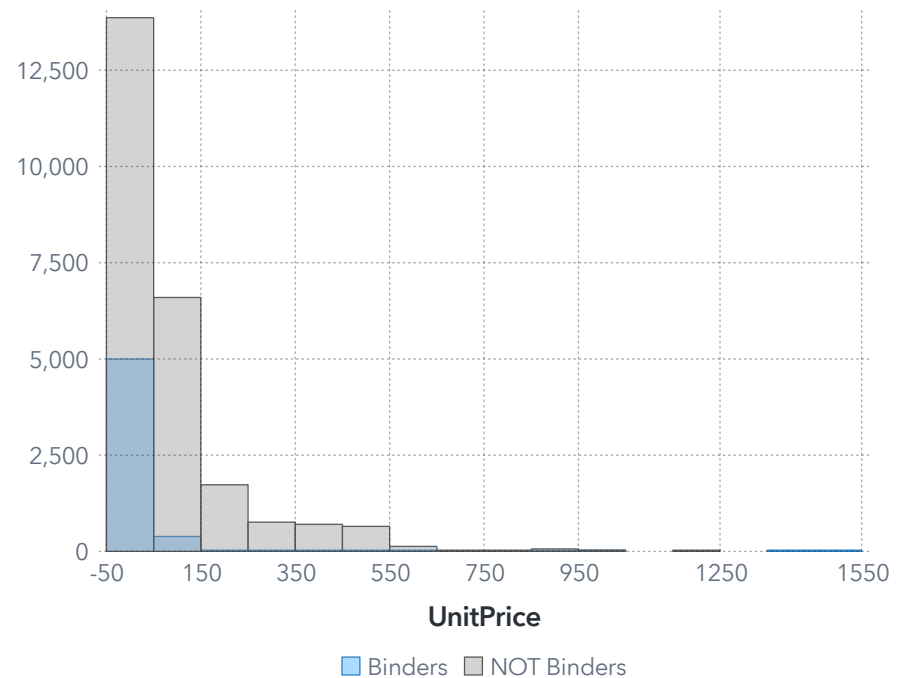
Binders, Storage and Art are much more common than all other SubcategoryName values, together representing 45.50%. Tables is much less common than all other SubcategoryName values, representing 2.21%.

What factors are most related to SubcategoryName?

What is the relationship between SubcategoryName and UnitPrice?

The average UnitPrice is 27 when SubcategoryName is Binders, with a minimum of 1.7 and a maximum of 1.9K. The average UnitPrice is 91 when SubcategoryName is NOT Binders, with a minimum of 1.4 and a maximum of 1.6K. Average UnitPrice is 79, and it ranges from 1.4 to 1.9K.
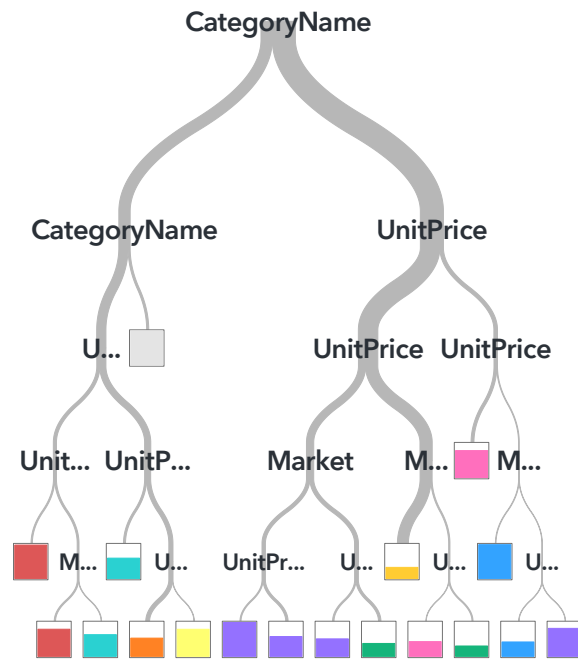
Path Analysis
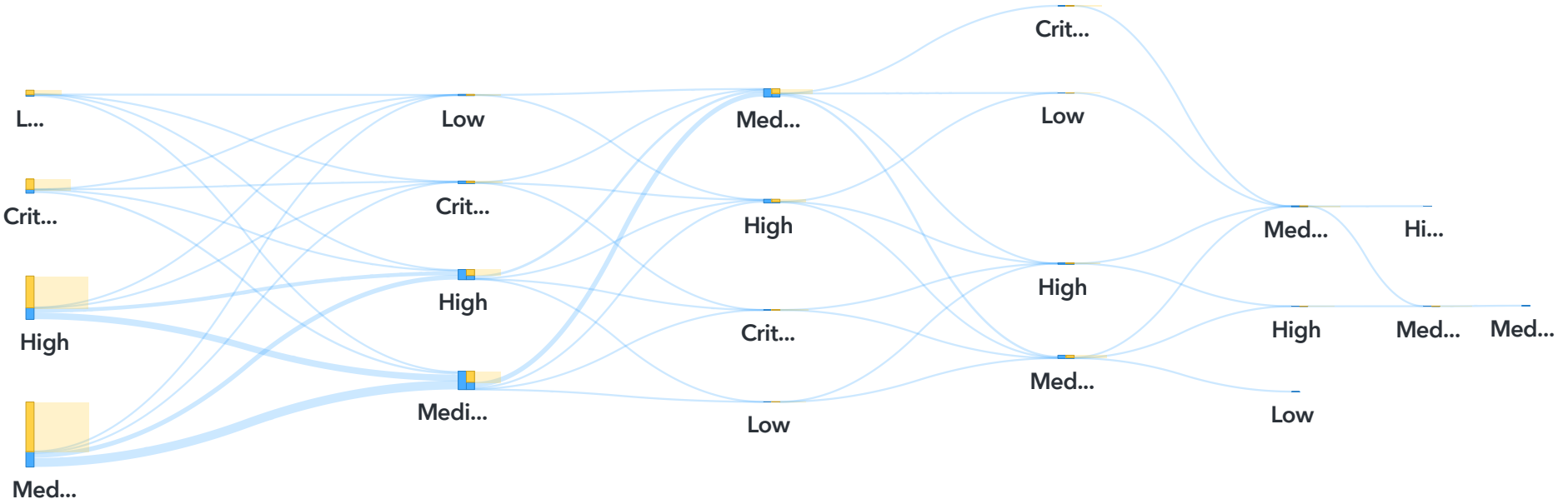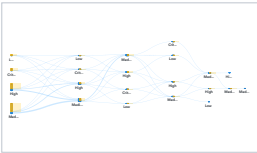
Path Frequency by Link

3.4K

2

Drop Off   ■ 0   ■ 1

A4.1

Decision Tree

Decision Tree **SubcategoryName**   Event: **Bookcases**   Fit: **KS (Youden) 0.8823**   Observations: **31,929 of 31,929**
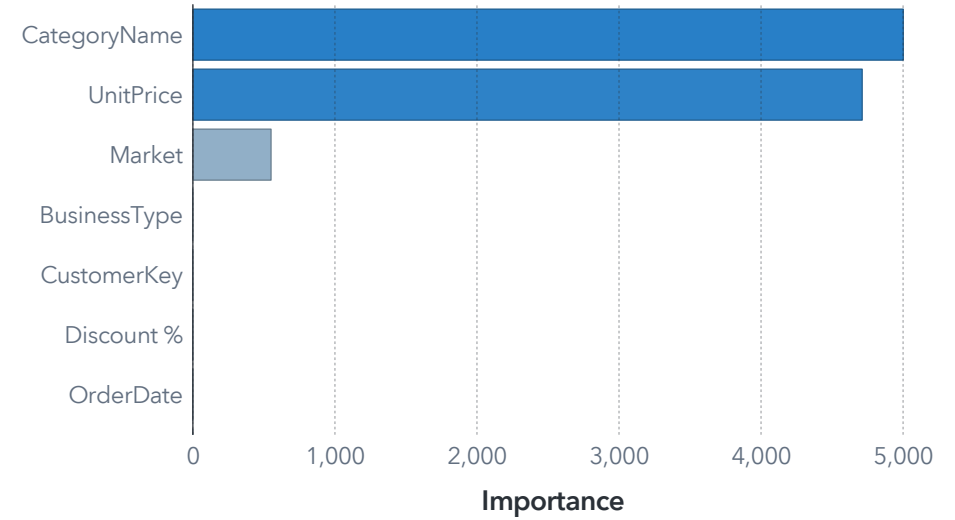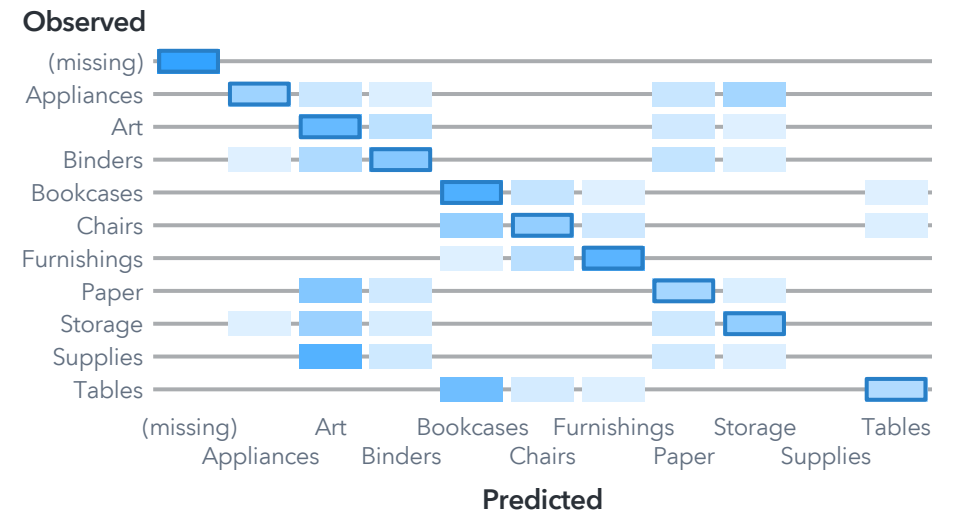
Tree

SubcategoryName

- ☐ (missing)
- ■ Appliances
- ■ Art
- ■ Binders
- ■ Bookcases
- ■ Chairs
- ■ Furnishings
- ■ Paper
- ■ Storage
- ■ Supplies
- ■ Tables

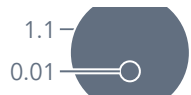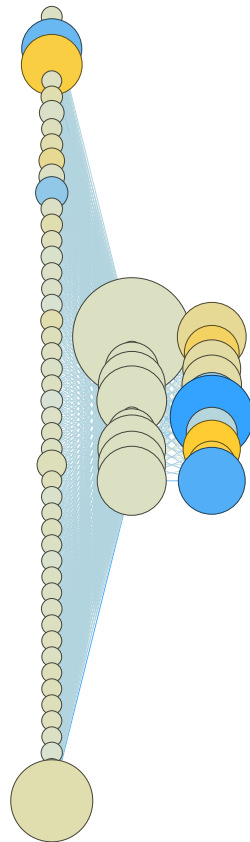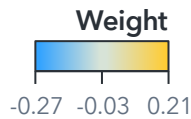## Variable Importance

Confusion Matrix

Neural Networrk

Network

Neuron Absolute Average
1.1
0.01

Weight
Neuron...
-0.27 -0.03 0.21

Link Absolute
3.6
0
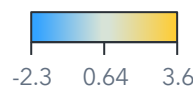
Link
-2.3 0.64 3.6

⚠ A5.1

Relative Importance Plot

	Importance
UnitPrice	
CategoryName	
ShippingCost	
Market	
StateName	
Region	
OrderQuantity	

Importance

Confusion Matrix

Observed

Observed	Appliances	Art	Binders	Bookcases	Chairs	Furnishings	Paper	Storage	Supplies	Tables
Appliances	429	51	359				46	673		
Art	1	1,007	3,170				12	283		
Binders	70	566	4,615				51	173		
Bookcases				805	1,218	109				9
Chairs				487	1,183	1,263				42
Furnishings				3	210	2,542				
Paper		279	2,701				70	89		
Storage	48	598	1,849				67	2,017		
Supplies	11	354	1,734				1	97		
Tables				325	226	56				100

Predicted

8

Bayesian Network

Bayesian Network **SubcategoryName**   Event: **Bookcases**   Fit: **KS (Youden) 0.8259**   Observations: **29,999 of 31,929**
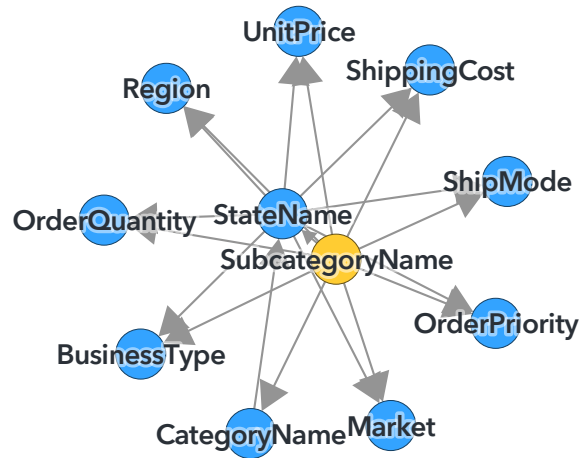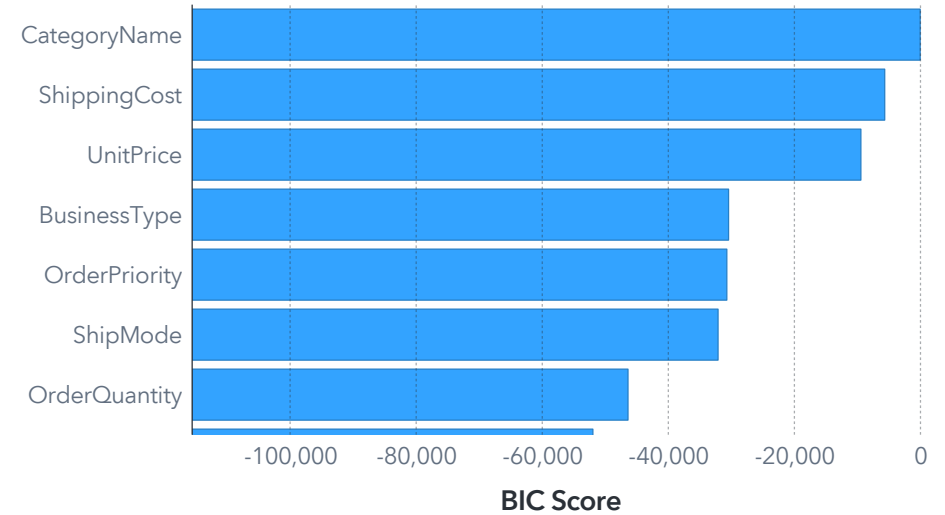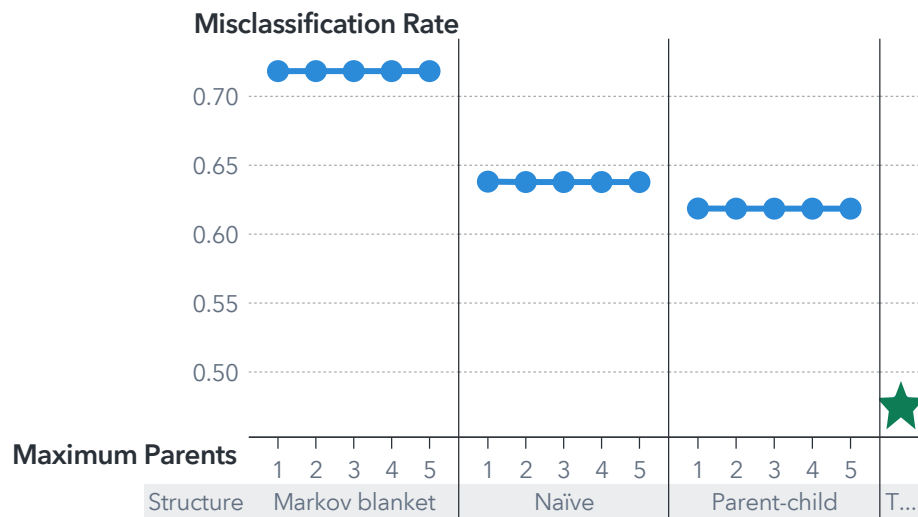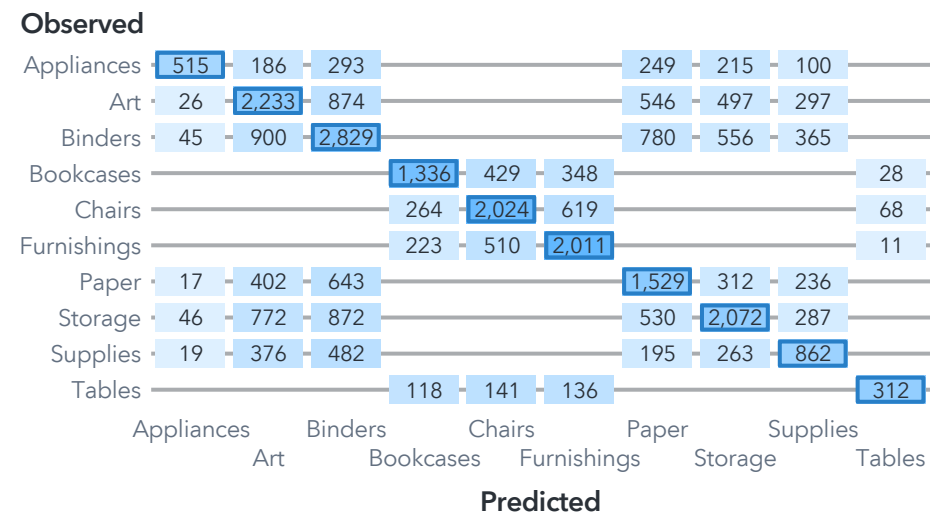
Network

Variables in Network

BIC Score

Model Selection

Misclassification Rate

Maximum Parents

| Structure | Markov blanket | Naïve | Parent-child | T... |

Confusion Matrix

Observed

	Appliances	Art	Binders	Bookcases	Chairs	Furnishings	Paper	Storage	Supplies	Tables
Appliances	515	186	293				249	215	100	
Art	26	2,233	874				546	497	297	
Binders	45	900	2,829				780	556	365	
Bookcases				1,336	429	348				28
Chairs				264	2,024	619				68
Furnishings				223	510	2,011				11
Paper	17	402	643				1,529	312	236	
Storage	46	772	872				530	2,072	287	
Supplies	19	376	482				195	263	862	
Tables				118	141	136				312

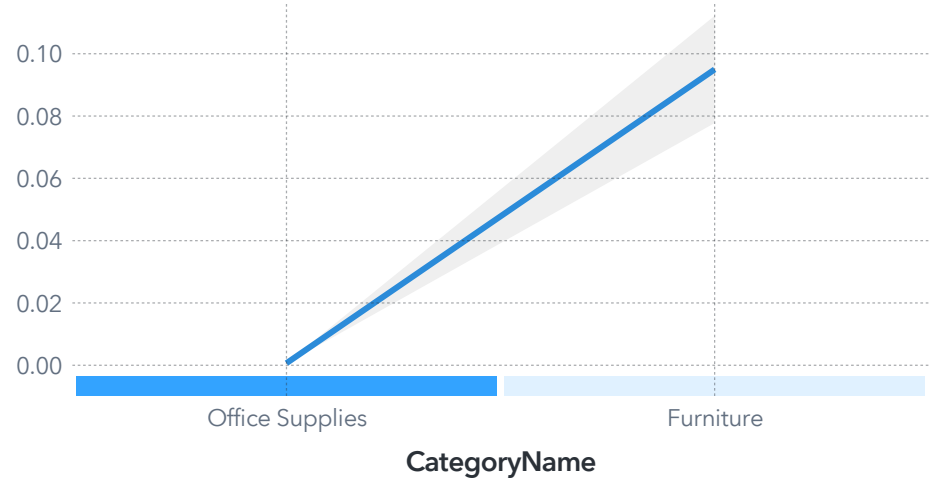**Predicted**

Gradient Bosting

Gradient Boosting **SubcategoryName**   Event: **Bookcases**   Fit: **KS (Youden) 0.9134**   Observations: **31,929 of 31,929**
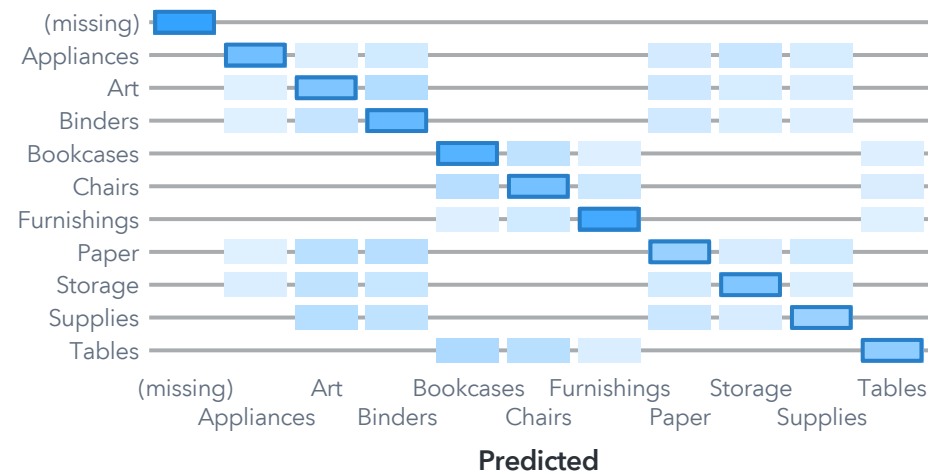
Variable Importance
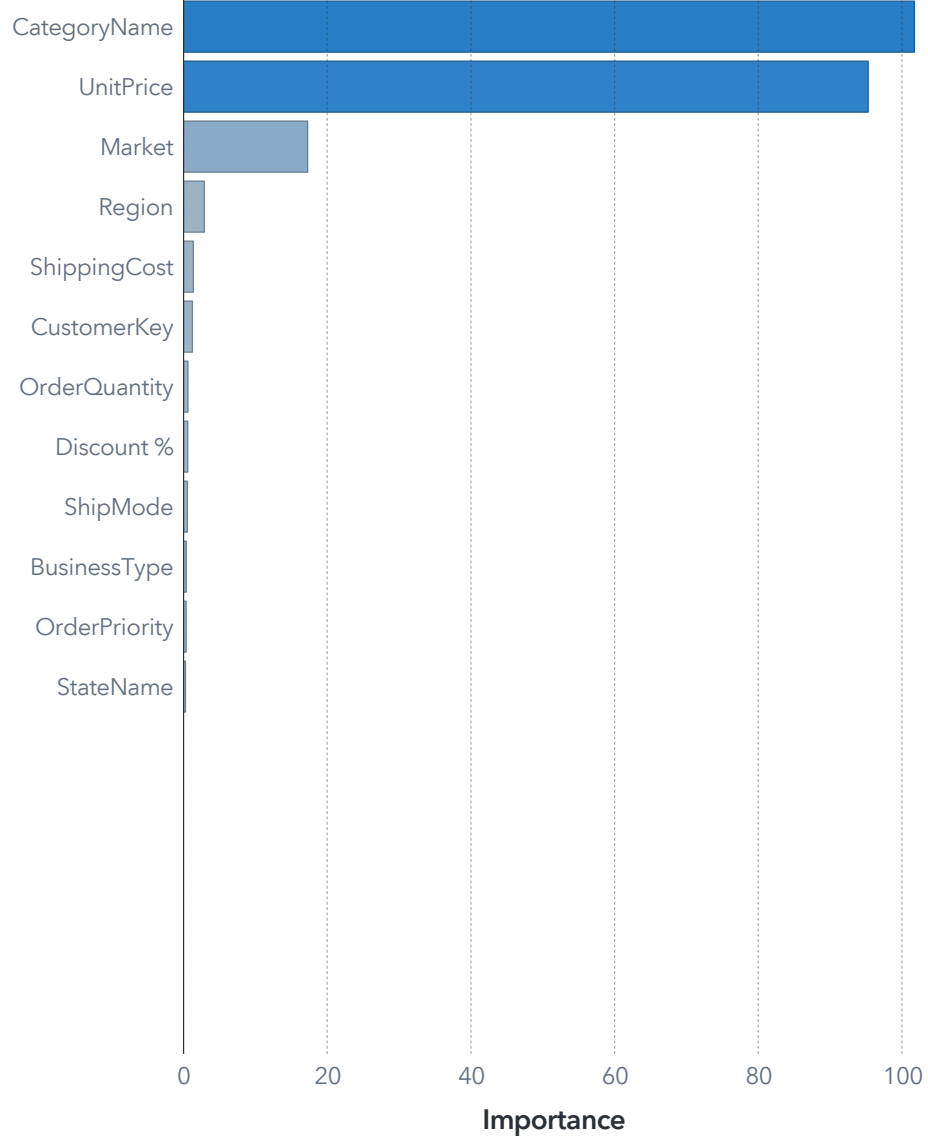
Partial Dependence

Predicted Probability
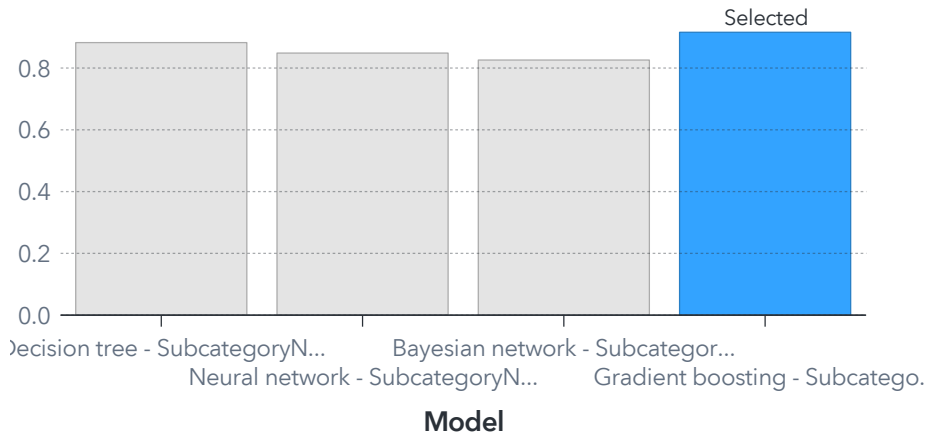

Confusion Matrix

Observed

Model Comparison

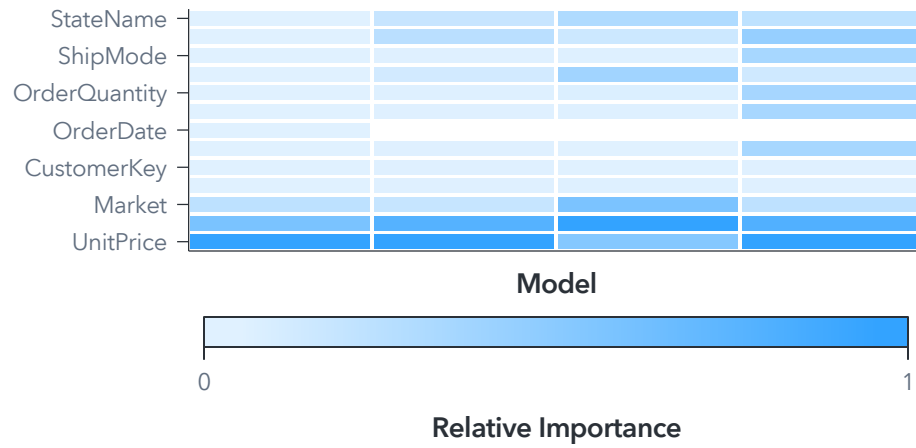*Model Comparison* **SubcategoryName**   Event: **Bookcases**

Fit Statistic

KS (Youden)

⚠ A6.1

Relative Importance

Variable

Relative Importance

⚠ A6.2

Confusion Matrix

Observed

Appendix

A1.1   All Region

Alternative text: OrderQuantity by Country

Warnings: Some features may not be displayed on the map because of missing location information in the data.
No matches were found for supplied geography data items: Cote d'Ivoire, Democratic Republic of the Congo, Hong Kong, Macedonia, Myanmar (Burma), Republic of the Congo, Vietnam.

Filters: Region IN { ALL }

A2.1   Region by Country

Warnings: Some regions in the map have multiple classification values. Only the first value is displayed.
No matches were found for supplied geography data items: Cote d'Ivoire, Democratic Republic of the Congo, Hong Kong, Macedonia, Myanmar (Burma), Republic of the Congo, Vietnam.

A3.1   Word cloud - SubcategoryName 1

Warnings: The word cloud contains missing or invalid values that cannot be properly displayed.

A3.2   Region by Country

Warnings: Some regions in the map have multiple classification values. Only the first value is displayed.
No matches were found for supplied geography data items: Cote d'Ivoire, Democratic Republic of the Congo, Hong Kong, Macedonia, Myanmar (Burma), Republic of the Congo, Vietnam.

A3.3   Pie - ShipMode 2

Warnings: The pie chart contains some negative or missing values that cannot be displayed.

A4.1   Path analysis - OrderPriority 1

Warnings: An artificial sequence order was generated for 120 paths that contains simultaneous events.

A5.1   Network

Warnings: One or more of the neuron layers has too many neurons to display and has been truncated. The independent variable layer is truncated from 1,094 to 50 neurons.

A6.1   Fit Statistic

Warnings: Neural network - SubcategoryName 1: One or more of the neuron layers has too many neurons to display and has been truncated. The independent variable layer is truncated from 1,094 to 50 neurons.
Number of observations for all models do not match.

A6.2   Relative Importance

Warnings: Neural network - SubcategoryName 1: One or more of the neuron layers has too many neurons to display and has been truncated. The independent variable layer is truncated from 1,094 to 50 neurons.
Number of observations for all models do not match.