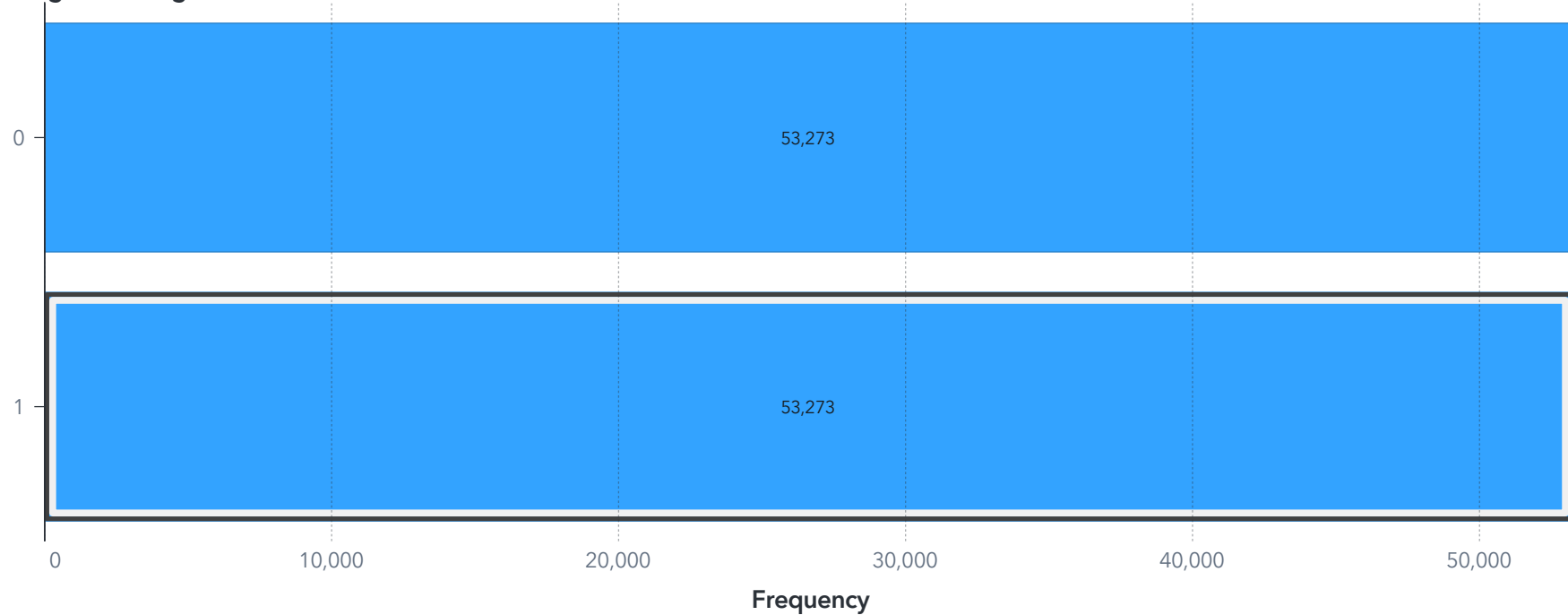


Frequency of Target Gift Flag

Target Gift Flag

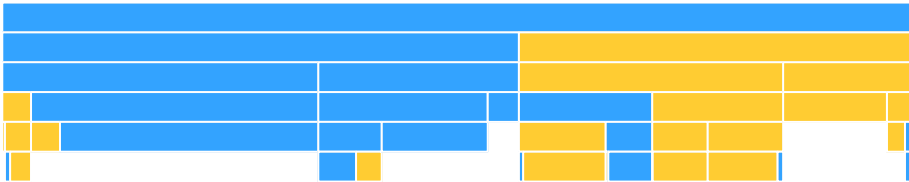
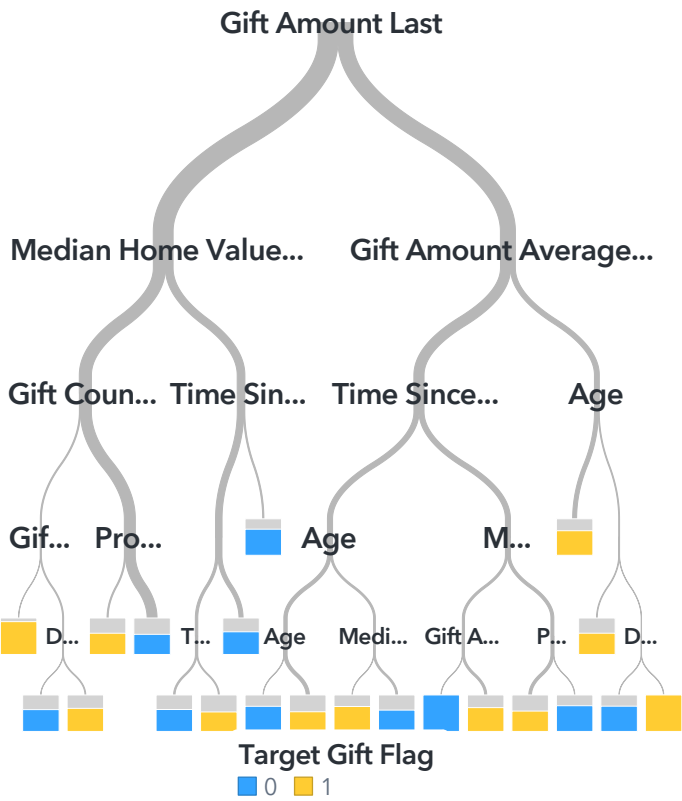


Decision Tree

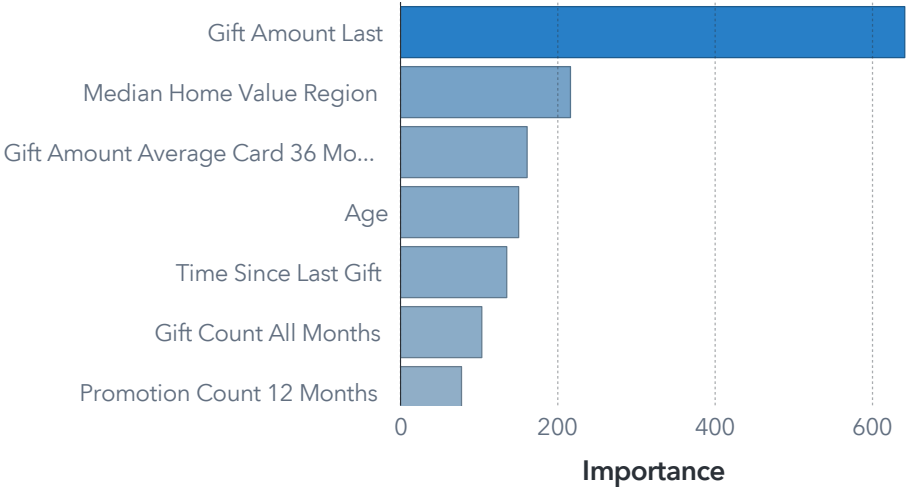
Decision Tree of Target Gift Flag

Decision Tree Target Gift Flag (event=1) Validation KS (Youden) 0.1773 Observations Used 106,546

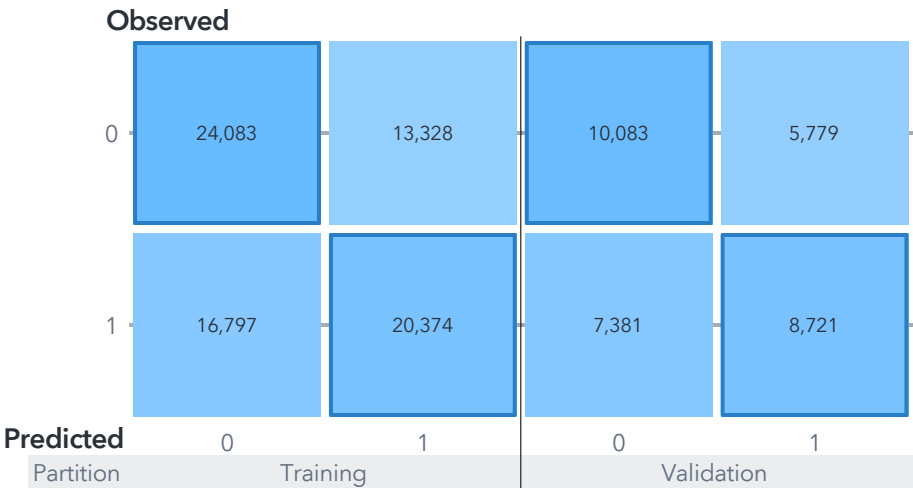
Tree



Variable Importance



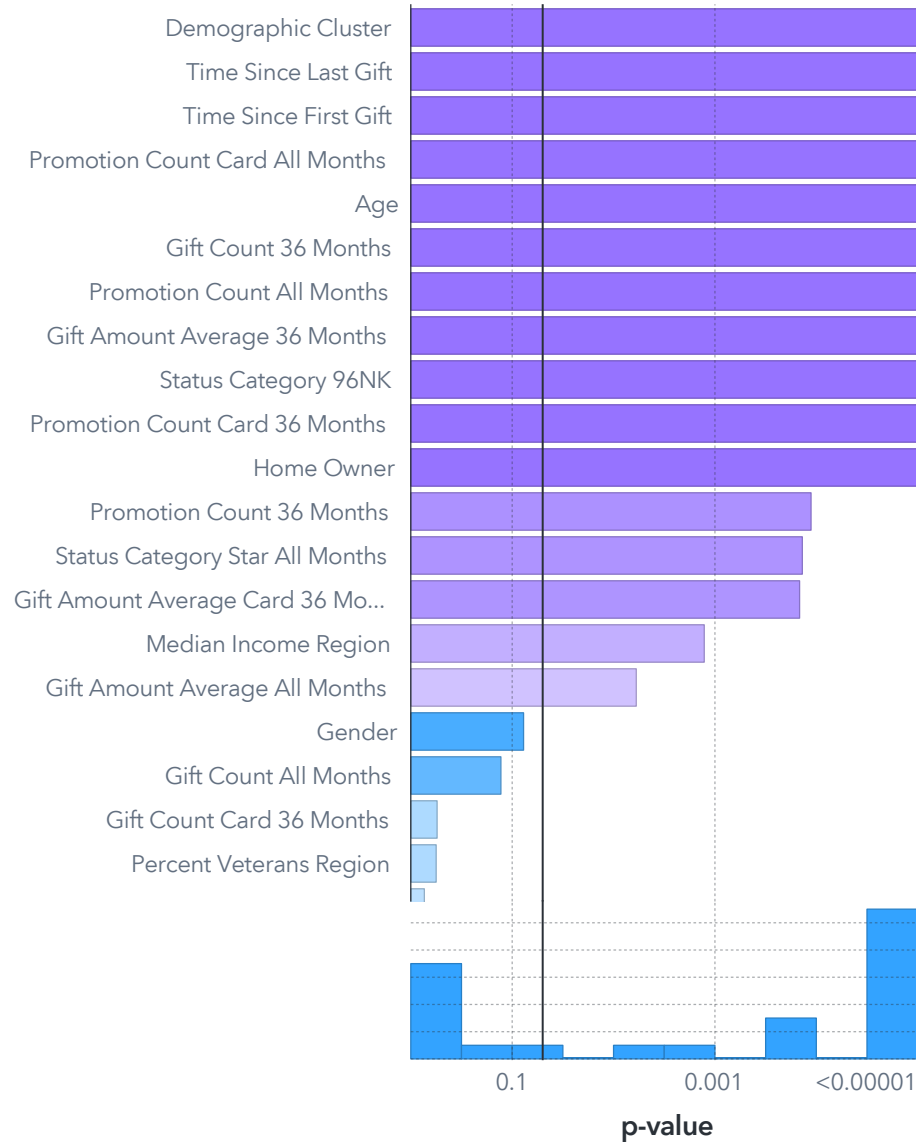
Confusion Matrix



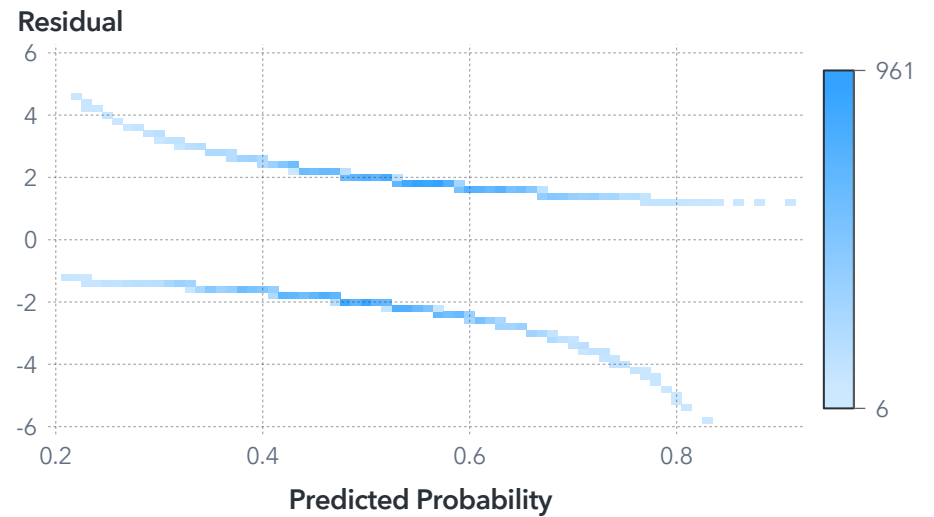
Logistic Regression

Logistic Regression **Target Gift Flag** (event=1) Validation KS (Youden) **0.1749** Observations Used **64,988** Unused **41,558**

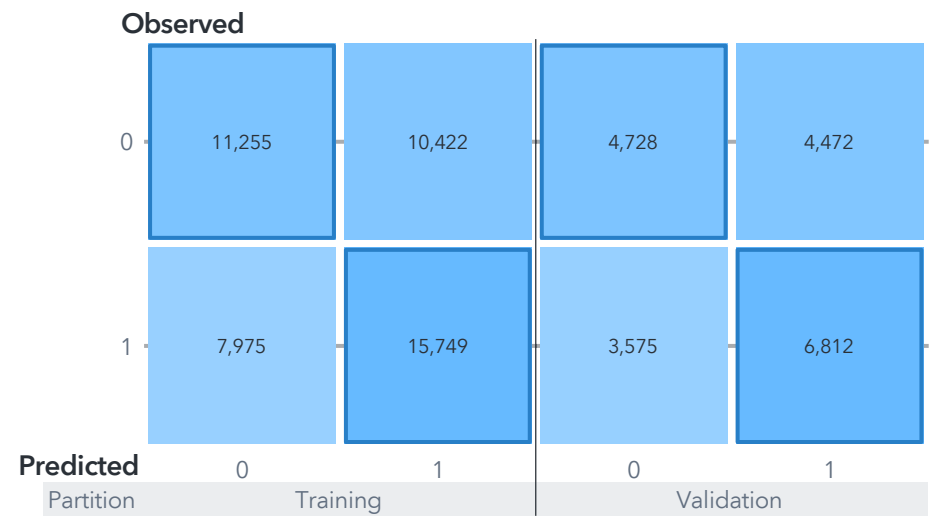
Fit Summary



Residual Plot



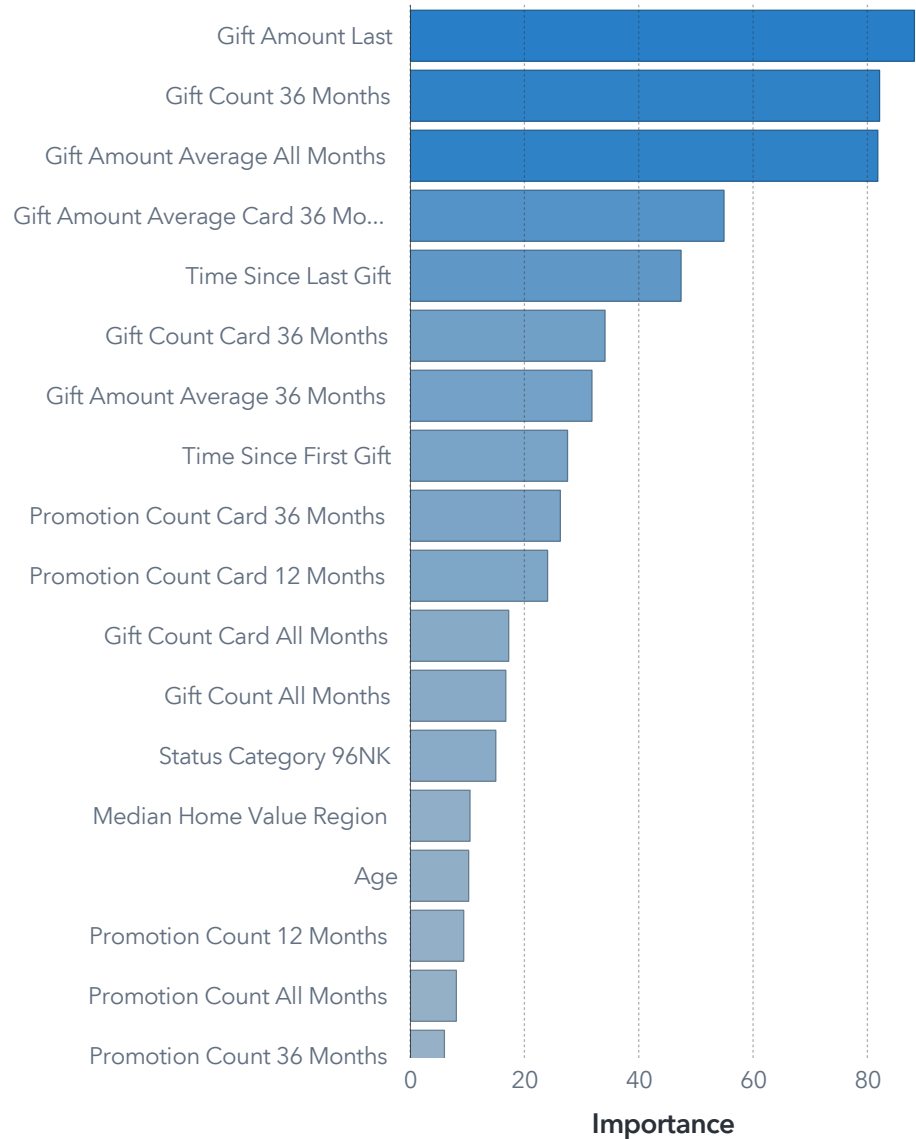
Confusion Matrix



Forest

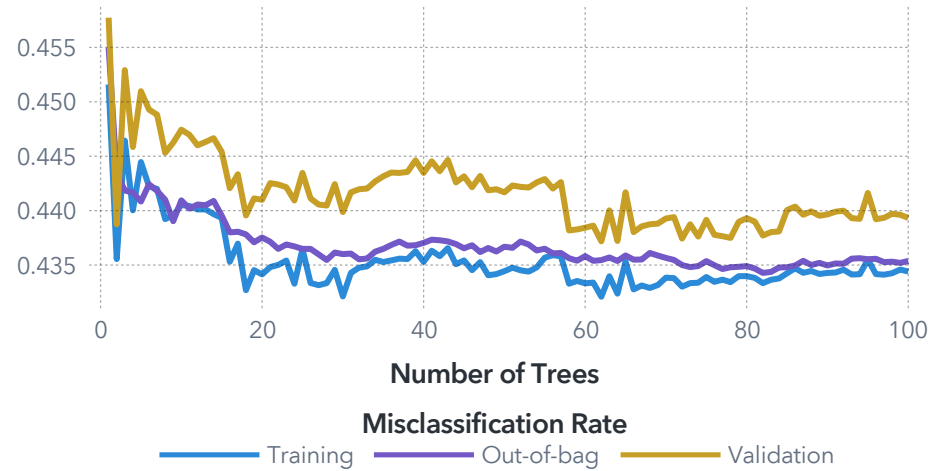
Forest **Target Gift Flag** (event=1) Validation KS (Youden) **0.1584** Observations Used **106,546**

Variable Importance



Error Plot

Misclassification Rate



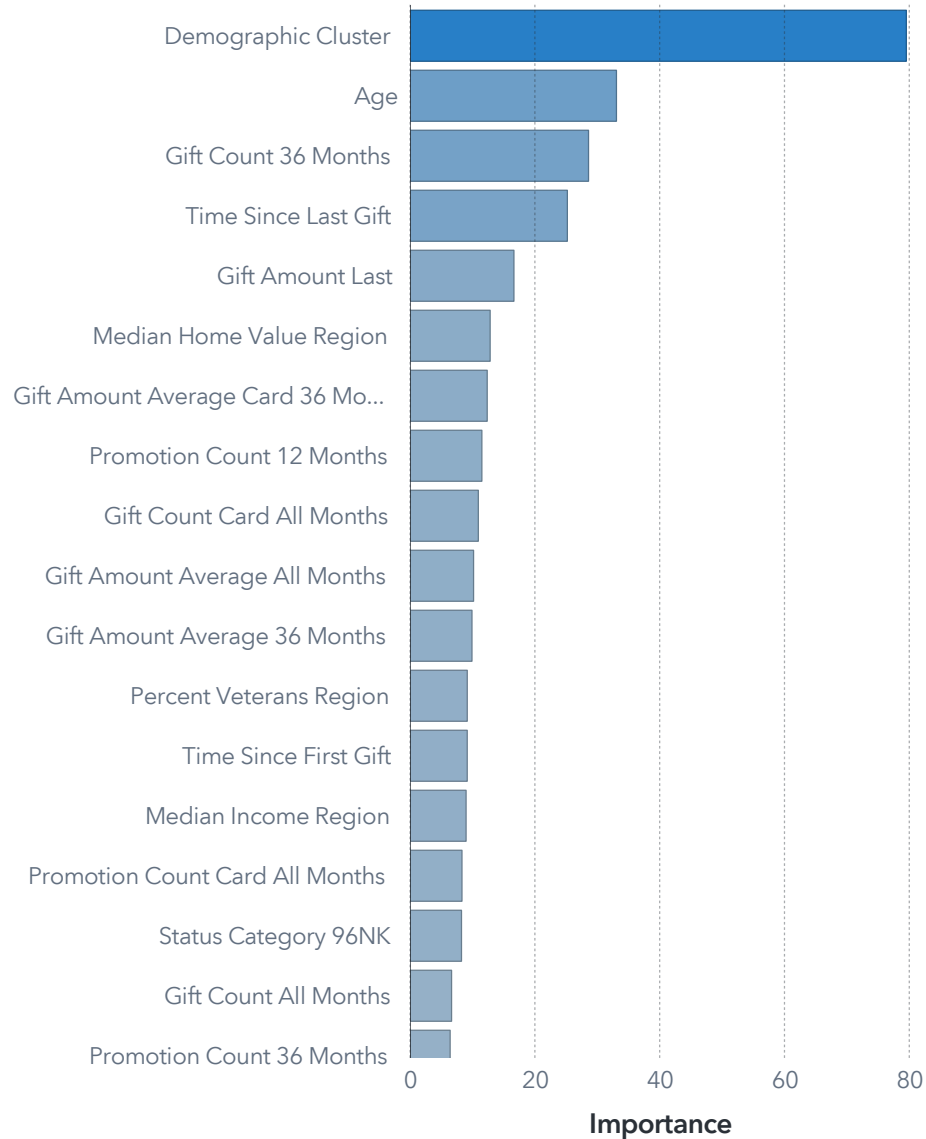
Confusion Matrix

		Observed	
Predicted	Partition	0	1
		0	1
0	Training	32,300	5,111
	Validation	13,570	2,292
1	Training	27,288	9,883
	Validation	11,751	4,351

Gradient Boosting

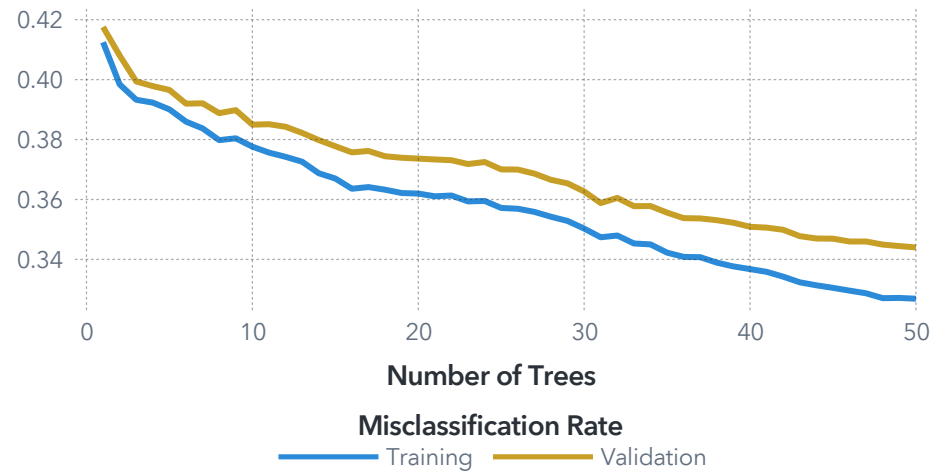
Gradient Boosting **Target Gift Flag** (event=1) Validation KS (Youden) **0.3148** Observations Used **106,546**

Variable Importance

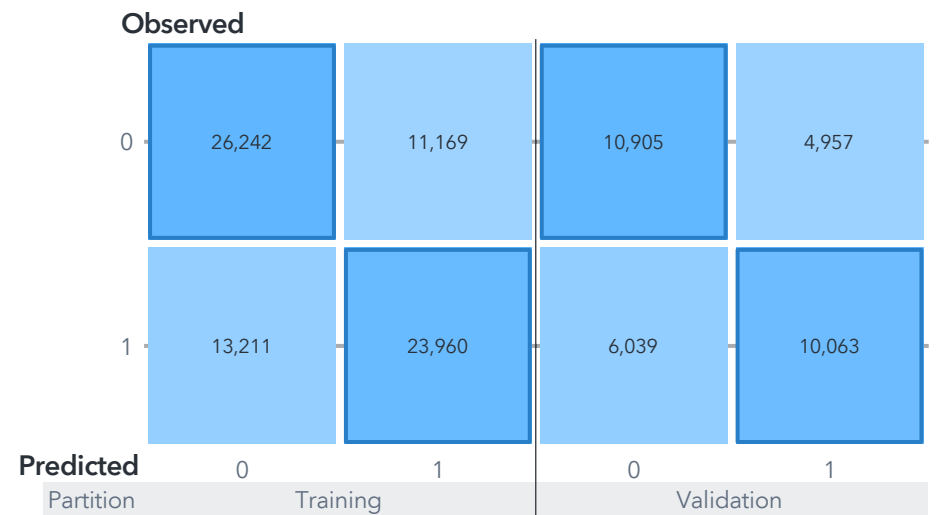


Iteration Plot

Misclassification Rate



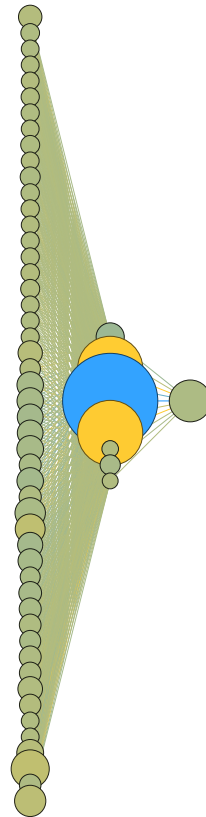
Confusion Matrix



Neural Network

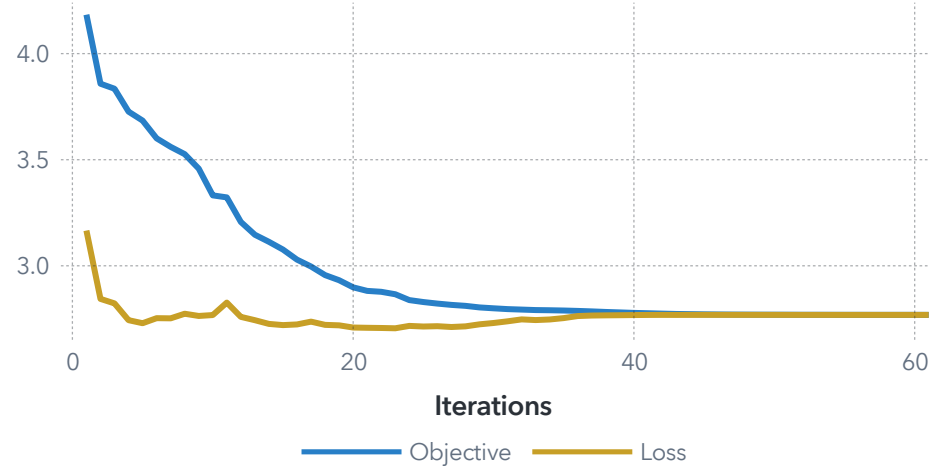
Neural Network **Target Gift Flag** (event=1) Validation KS (Youden) **0.0000** Observations Used **64,988** Unused **41,558**

Network



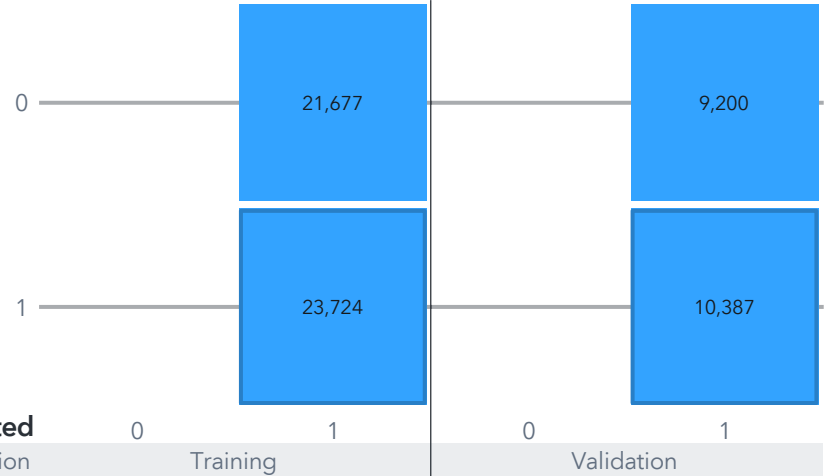
Iteration Plot

Objective / Loss



Confusion Matrix

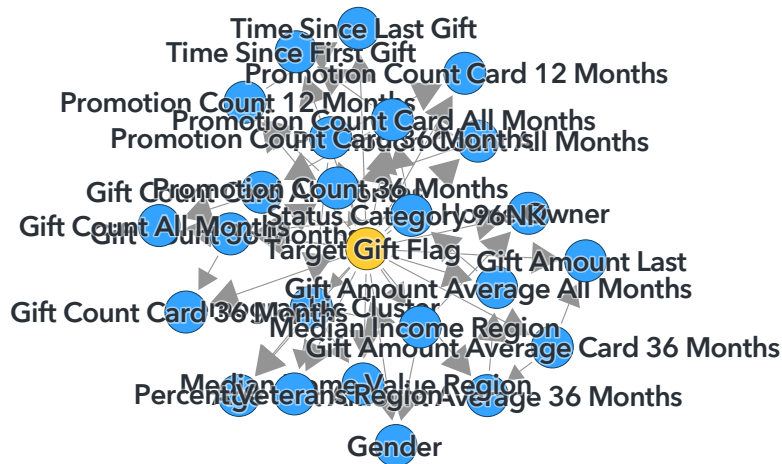
Observed



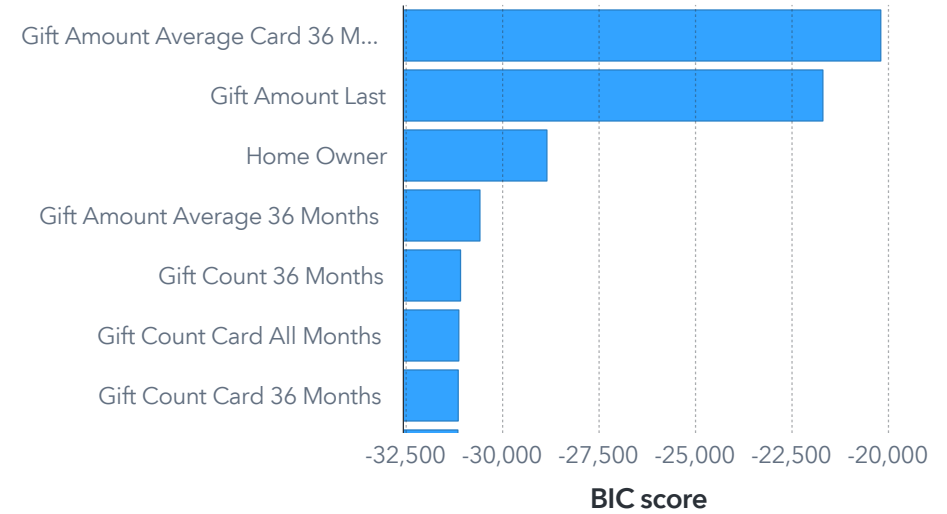
Bayesian Network

Bayesian Network **Target Gift Flag** (event=1) Validation KS (Youden) **0.4112** Observations Used **64,988** Unused **41,558**

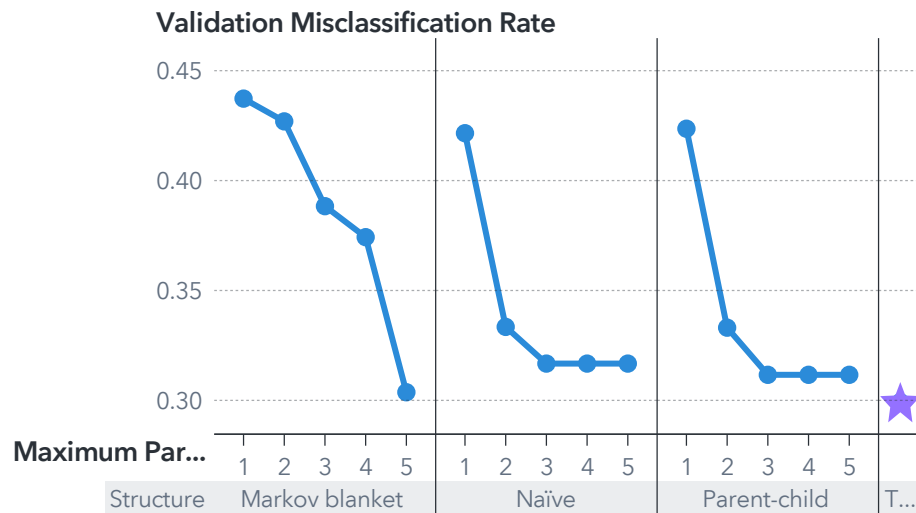
Network



Variables in Network



Model Selection



Confusion Matrix

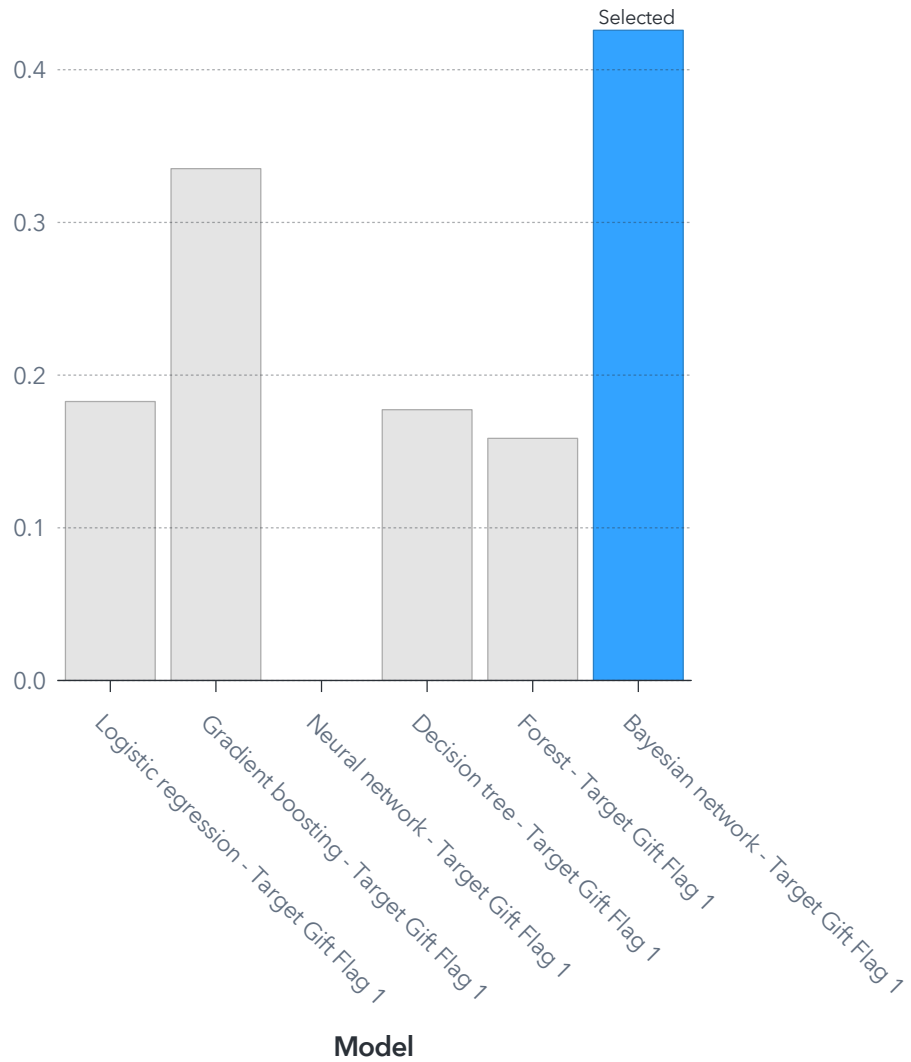
		Observed			
Predicted	Partition	Training		Validation	
		0	1	0	1
0		15,978	5,699	6,649	2,551
1		7,141	16,583	3,309	7,078

Model Comparison

Model Comparison **Target Gift Flag** (event=1)

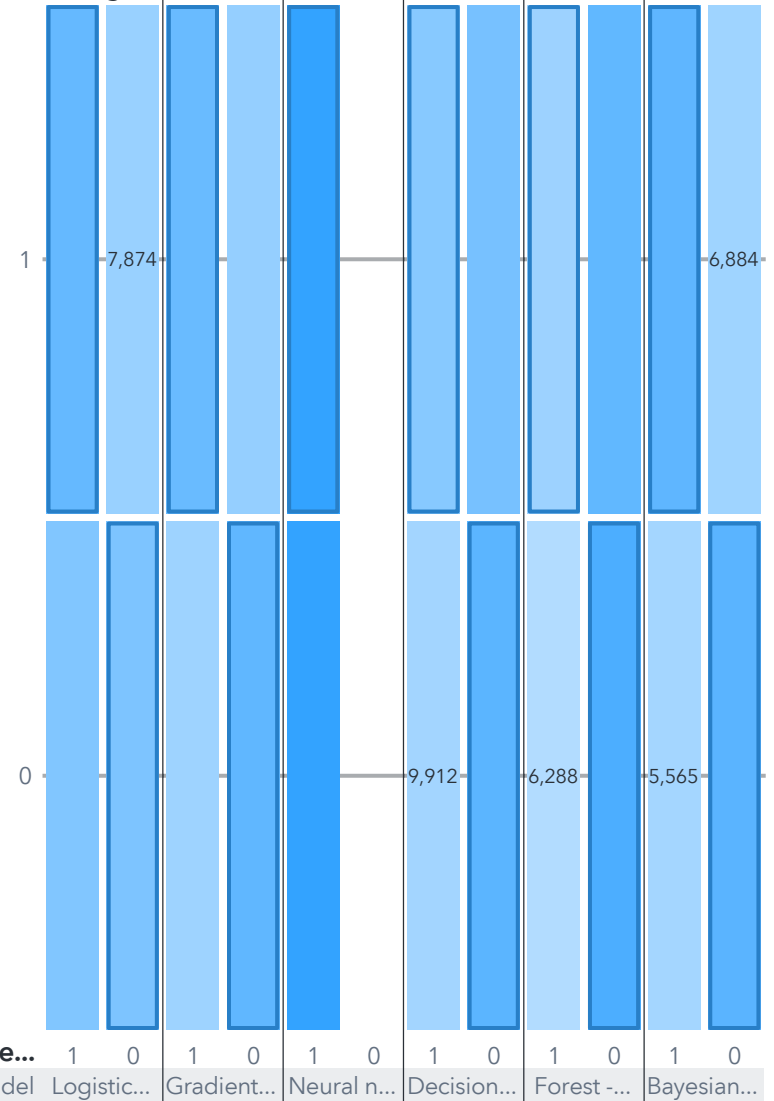
Fit Statistic

Validation: KS (Youden)



Confusion Matrix

Training: Observed



⚠ A1.1

Appendix

A1.1 Fit Statistic

Warnings:

Neural network - Target Gift Flag 1: One or more of the neuron layers has too many neurons to display and has been truncated.
Number of observations for all models do not match.