creditscore_card

"Scorecard" Results

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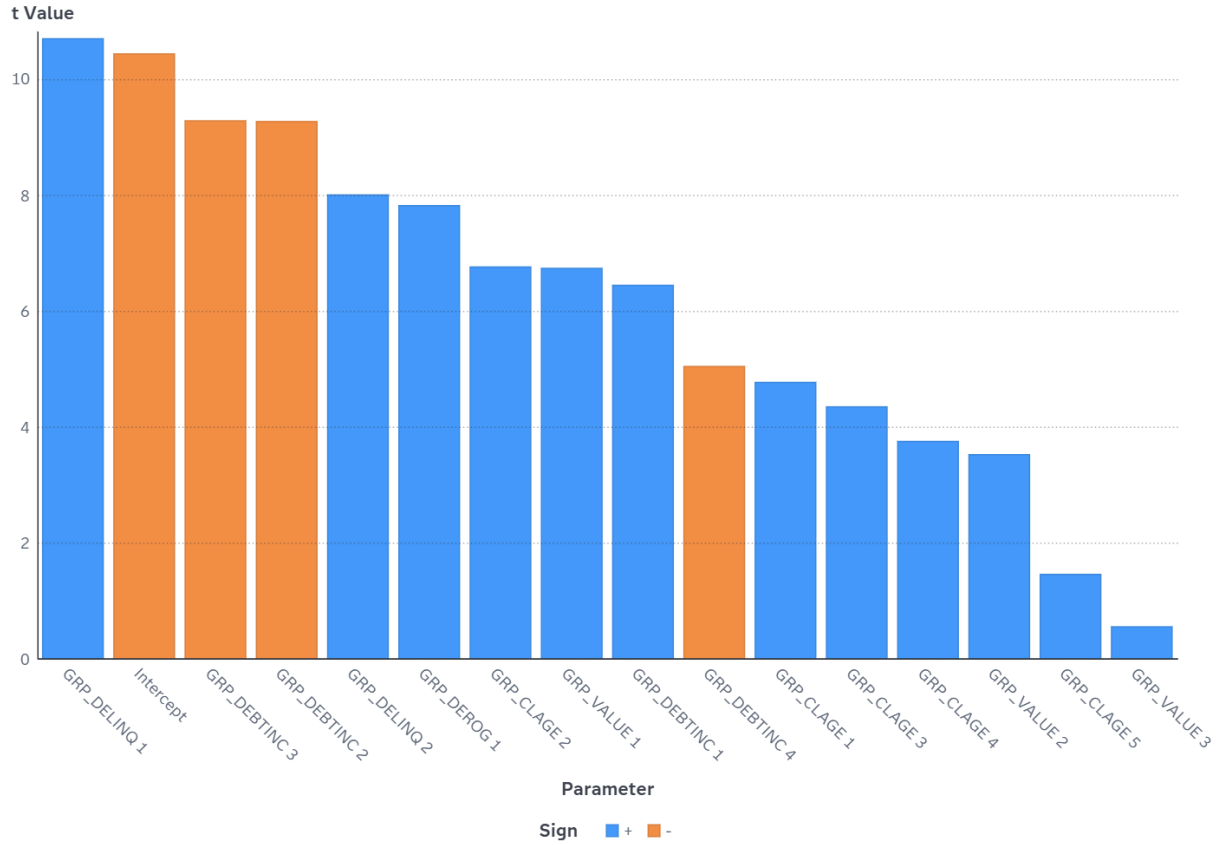
Contents

t Values by Parameter



This plot displays the absolute value of the t value for each parameter estimate in the logistic regression model. Larger values indicate more significant parameters. The bar that represents the parameter is colored by the sign of the estimate. Bars that are colored as positive (+) correspond to a positive parameter estimate, which indicates an increase in the predicted probability of the event as the parameter value increases. Bars that are colored as negative (-) correspond to a negative parameter estimate, which indicates a decrease in the predicted probability of the event as the parameter value increases. The most significant parameter is GRP_DELINQ 1 with a t value of 10.7.

Parameter Estimates

Effect	Parameter	t Value	Sign
GRP_DELINQ	GRP_DELINQ 1	10.7000	+
Intercept	Intercept	10.4386	-
GRP_DEBTINC	GRP_DEBTINC 3	9.2860	-
GRP_DEBTINC	GRP_DEBTINC 2	9.2736	-
GRP_DELINQ	GRP_DELINQ 2	8.0090	+
GRP_DEROG	GRP_DEROG 1	7.8247	+
GRP_CLAGE	GRP_CLAGE 2	6.7674	+
GRP_VALUE	GRP_VALUE 1	6.7438	+
GRP_DEBTINC	GRP_DEBTINC 1	6.4516	+
GRP_DEBTINC	GRP_DEBTINC 4	5.0529	-
GRP_CLAGE	GRP_CLAGE 1	4.7784	+
GRP_CLAGE	GRP_CLAGE 3	4.3570	+
GRP_CLAGE	GRP_CLAGE 4	3.7613	+
GRP_VALUE	GRP_VALUE 2	3.5332	+
GRP_CLAGE	GRP_CLAGE 5	1.4706	+
GRP_VALUE	GRP_VALUE 3	0.5671	+
GRP_CLAGE	GRP_CLAGE 6		+
GRP_DELINQ	GRP_DELINQ 3		+
GRP_DEBTINC	GRP_DEBTINC 5		+
GRP_VALUE	GRP_VALUE 4		+
GRP_DEROG	GRP_DEROG 2		+

Estimate	Absolute Estimate	Standard Error	Chi-Square
2.4572	2.4572	0.2296	114.4909
-2.2670	2.2670	0.2172	108.9635
-1.7636	1.7636	0.1899	86.2304
-2.1086	2.1086	0.2274	85.9993
1.1260	1.1260	0.1406	64.1445

Estimate	Absolute Estimate	Standard Error	Chi-Square
1.1839	1.1839	0.1513	61.2255
1.3523	1.3523	0.1998	45.7973
4.4050	4.4050	0.6532	45.4788
1.1252	1.1252	0.1744	41.6231
-1.3364	1.3364	0.2645	25.5319
1.3734	1.3734	0.2874	22.8332
0.8817	0.8817	0.2024	18.9838
0.8891	0.8891	0.2364	14.1472
0.6244	0.6244	0.1767	12.4837
0.2890	0.2890	0.1965	2.1626
0.0733	0.0733	0.1292	0.3216
0	0		
0	0		
0	0		
0	0		
0	0		

Pr > Chi-Square	Degrees of Freedom
0.0000	1
0.0000	1
0.0000	1
0.0000	1
0.0000	1
0.0000	1
0.0000	1
0.0000	1
0.0000	1
0.0000	1
0.0000	1

Pr > Chi-Square	Degrees of Freedom
0.0000	1
0.0002	1
0.0004	1
0.1414	1
0.5707	1
	0
	0
	0
	0
	0

Selection Summary

Step	Effect Entered	Number of Effects	SBC
0	Intercept	1	3,580.9520
1	GRP_DEBTINC	2	2,487.7370
2	GRP_DELINQ	3	2,430.5993
3	GRP_VALUE	4	2,355.0107
4	GRP_DEROG	5	2,274.7933
5	GRP_CLAGE	6	2,245.1261

Optimal SBC
0
0
0
0
0
1

Regression Fit Statistics

Statistic	Description	Training	Validation
M2LL	-2 Log Likelihood	2,113.7689	1,036.1632
AIC	AIC (smaller is better)	2,145.7689	1,068.1632
AICC	AICC (smaller is better)	2,145.9218	1,068.4704
SBC	SBC (smaller is better)	2,244.6809	1,155.9848
ASE	Average Square Error	0.0883	0.0872

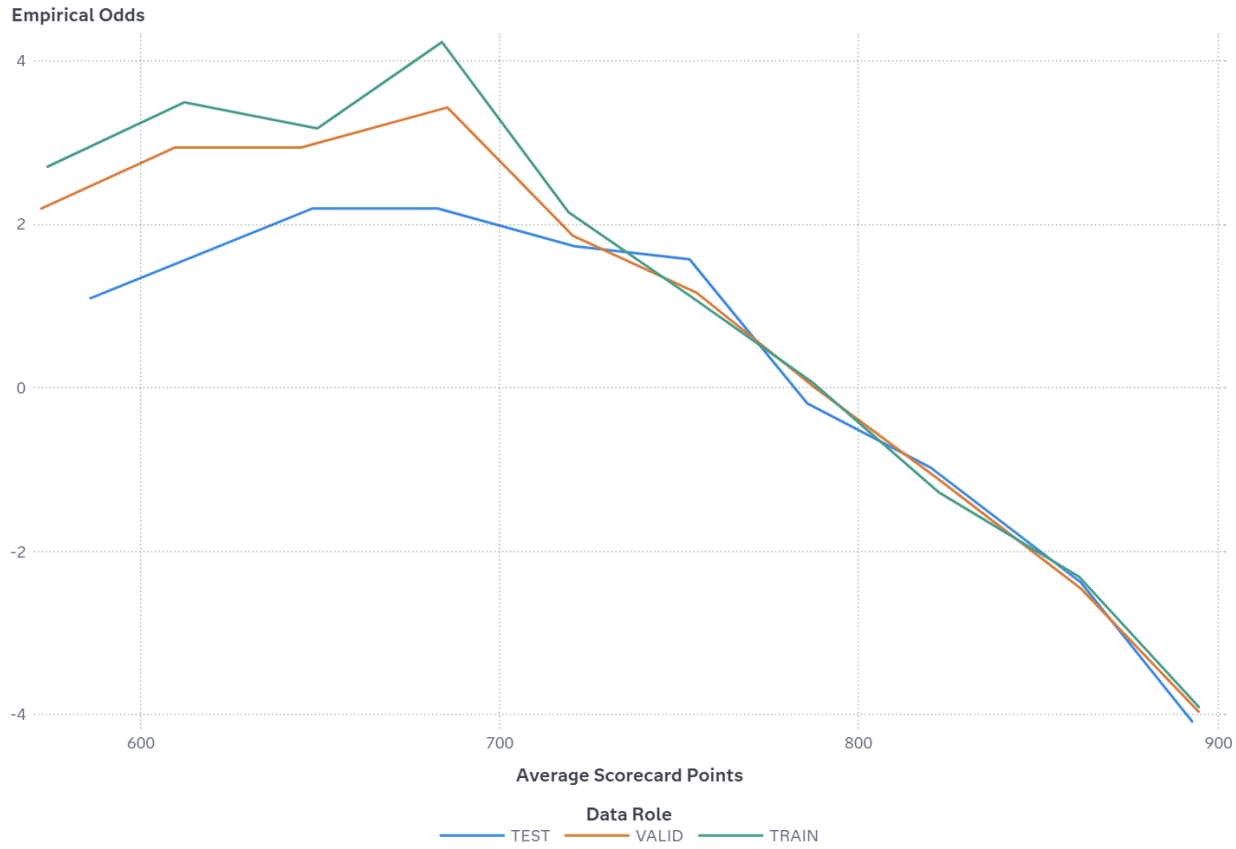
Testing
348.7890
380.7890
381.7285
451.0328
0.0880

Scorecard

Scorecard

		Group	Scorecard Points	Weight of Evidence	Event Rate BAD = 1	Percent	Coefficient
CLAGE	_MISSING_	1	131	-0.31	25.32	5.17	1.37
	CLAGE < 106.49	2	131	-0.48	30.06	19.14	1.35
	106.49 <= CLAGE < 144.07	3	145	-0.29	25.05	18.42	0.88
	144.07 <= CLAGE < 172.17	4	145	-0.11	22.58	9.36	0.89
	172.17 <= CLAGE < 247.97	5	162	0.28	14.59	29.21	0.29
	247.97 <= CLAGE	6	171	0.81	10.14	18.69	0.00
DEBTINC	_MISSING_	1	138	-1.89	62.04	21.26	1.13
	DEBTINC < 30.33	2	231	1.45	5.31	23.71	-2.11
	30.33 <= DEBTINC < 39.91	3	221	1.22	6.70	39.55	-1.76
	39.91 <= DEBTINC < 41.48	4	209	0.78	8.74	7.87	-1.34
	41.48 <= DEBTINC	5	171	-0.35	28.41	7.62	0.00
DELINQ	12 | 15 | 3 | 4 | 5 | 6 | 7 | 8	1	100	-2.11	66.78	4.90	2.46
	1 | 2	2	138	-0.87	36.95	15.17	1.13
	0 | _MISSING_ | _UNKNOWN_	3	171	0.45	13.85	79.93	0.00
DEROG	0 | _MISSING_ | _UNKNOWN_	2	171	0.26	16.06	87.84	0.00
	1 | 10 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9	1	136	-1.31	48.00	12.16	1.18
VALUE	_MISSING_	1	43	-4.54	93.75	1.88	4.41
	VALUE < 49362	2	152	-0.58	31.84	10.12	0.62
	49362 <= VALUE < 79087	3	168	0.07	18.56	28.47	0.07
	79087 <= VALUE	4	171	0.27	16.26	59.53	0.00

Empirical Odds Plot



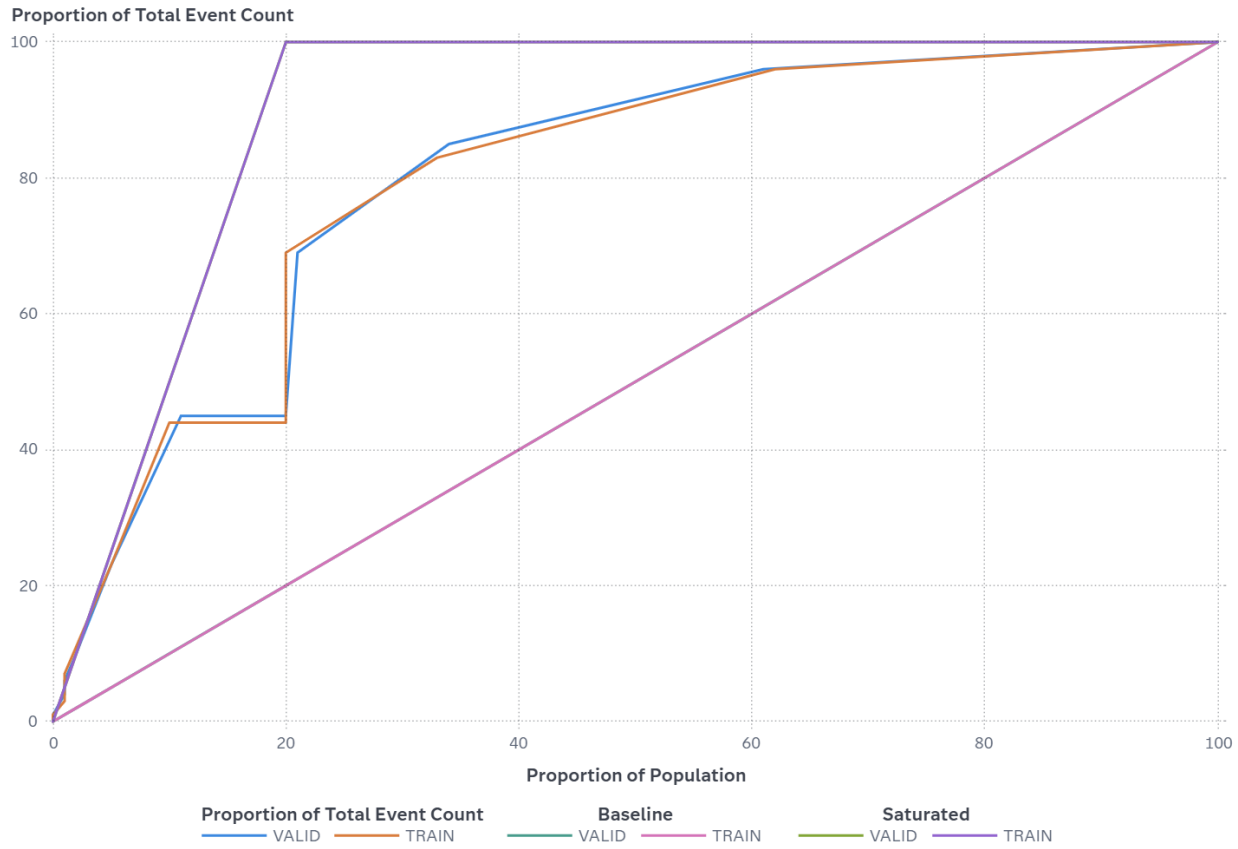
This plot is used to evaluate the calibration of the scorecard. The chart plots the observed odds in a score bucket against the average score value in each bucket. The odds are calculated as the logarithm of the number of events divided by the number of non-events for each scorecard bucket range. Thus, a steep negative slope would imply that the odds of an event decreases as the score increases.

In the VALIDATE partition, the bucket " Score >= 877" has an average scorecard value of 894.7 points and the odds of an event occurring in this bucket is -3.96.

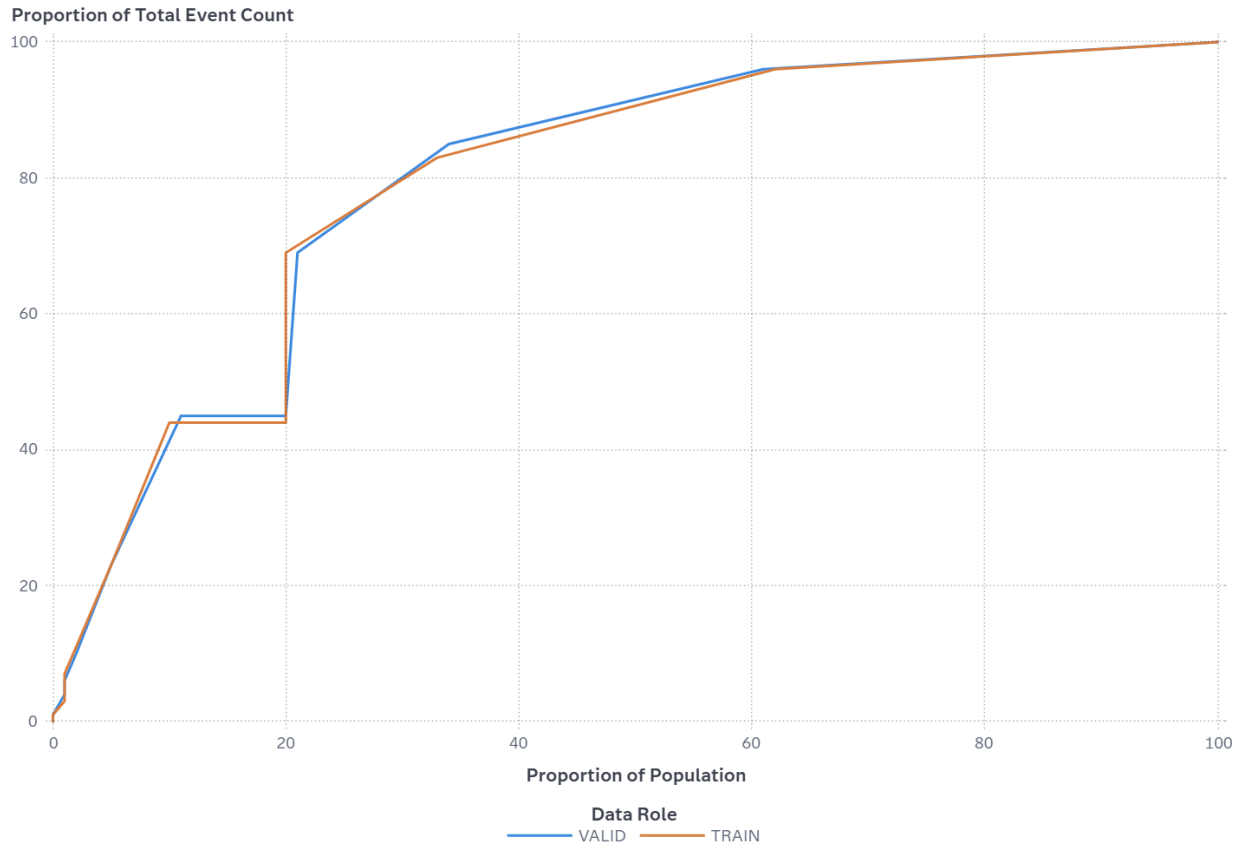
In the TRAIN partition, the bucket " Score >= 877" has an average scorecard value of 894.8 points and the odds of an event occurring in this bucket is -3.903.

In the TEST partition, the bucket " Score >= 877" has an average scorecard value of 892.9 points and the odds of an event occurring in this bucket is -4.082.

Accuracy Profile Plot



Captured Event Plot



This plot displays the cumulative proportion of the total event count versus the cumulative proportion of the population. The population is sorted in ascending order by the values of score points. Ideally, one would expect to see steep increases in event count in the lower ranges and a gradual flattening in the higher ranges where events are not anticipated.

In the VALIDATE partition, 96% of the events fall within 61% of the population.

In the TRAIN partition, 96% of the events fall within 62% of the population.

Scorecard Table

Variable	Group	Label	Weight of Evidence
CLAGE	-2	Weighted Average	
CLAGE	1	_MISSING_	-0.3061
CLAGE	2	CLAGE < 106.49	-0.4759
CLAGE	3	106.49 <= CLAGE < 144.07	-0.2856
CLAGE	4	144.07 <= CLAGE < 172.17	-0.1145
CLAGE	5	172.17 <= CLAGE < 247.97	0.2757
CLAGE	6	247.97 <= CLAGE	0.8055
DEBTINC	-2	Weighted Average	
DEBTINC	1	_MISSING_	-1.8924
DEBTINC	2	DEBTINC < 30.33	1.4456
DEBTINC	3	30.33 <= DEBTINC < 39.91	1.2183
DEBTINC	4	39.91 <= DEBTINC < 41.48	0.7799
DEBTINC	5	41.48 <= DEBTINC	-0.3519
DELINQ	-2	Weighted Average	
DELINQ	1	12 | 15 | 3 | 4 | 5 | 6 | 7 | 8	-2.1084
DELINQ	2	1 | 2	-0.8654
DELINQ	3	0 | _MISSING_ | _UNKNOWN_	0.4490
DEROG	-2	Weighted Average	
DEROG	1	1 | 10 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9	-1.3105
DEROG	2	0 | _MISSING_ | _UNKNOWN_	0.2583

Variable	Group	Label	Weight of Evidence
VALUE	-2	Weighted Average	
VALUE	1	_MISSING_	-4.5400
VALUE	2	VALUE < 49362	-0.5833
VALUE	3	49362 <= VALUE < 79087	0.0704
VALUE	4	79087 <= VALUE	0.2657

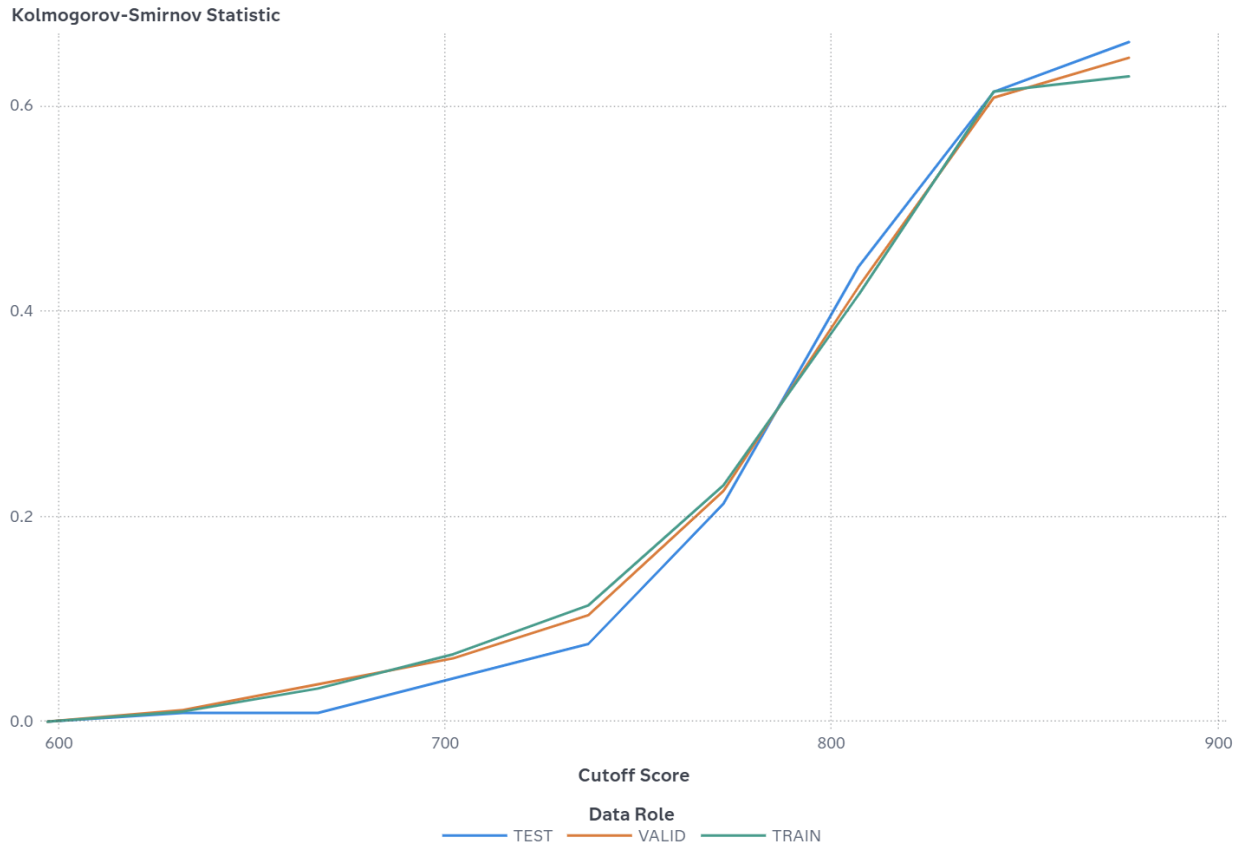
Manual WOE	Percentage of Population	Event Rate	Scorecard Points
			151
	5.1678	25.3247	131
	19.1443	30.0613	131
	18.4228	25.0455	145
	9.3624	22.5806	145
	29.2114	14.5893	162
	18.6913	10.1436	171
			201
	21.2584	62.0363	138
	23.7081	5.3079	231
	39.5470	6.7034	221
	7.8691	8.7420	209
	7.6174	28.4141	171
			162
	4.8993	66.7808	100
	15.1678	36.9469	138
	79.9329	13.8539	171
			166
	12.1644	48	136
	87.8356	16.0649	171

Manual WOE	Percentage of Population	Event Rate	Scorecard Points
			166
	1.8792	93.7500	43
	10.1174	31.8408	152
	28.4732	18.5622	168
	59.5302	16.2627	171

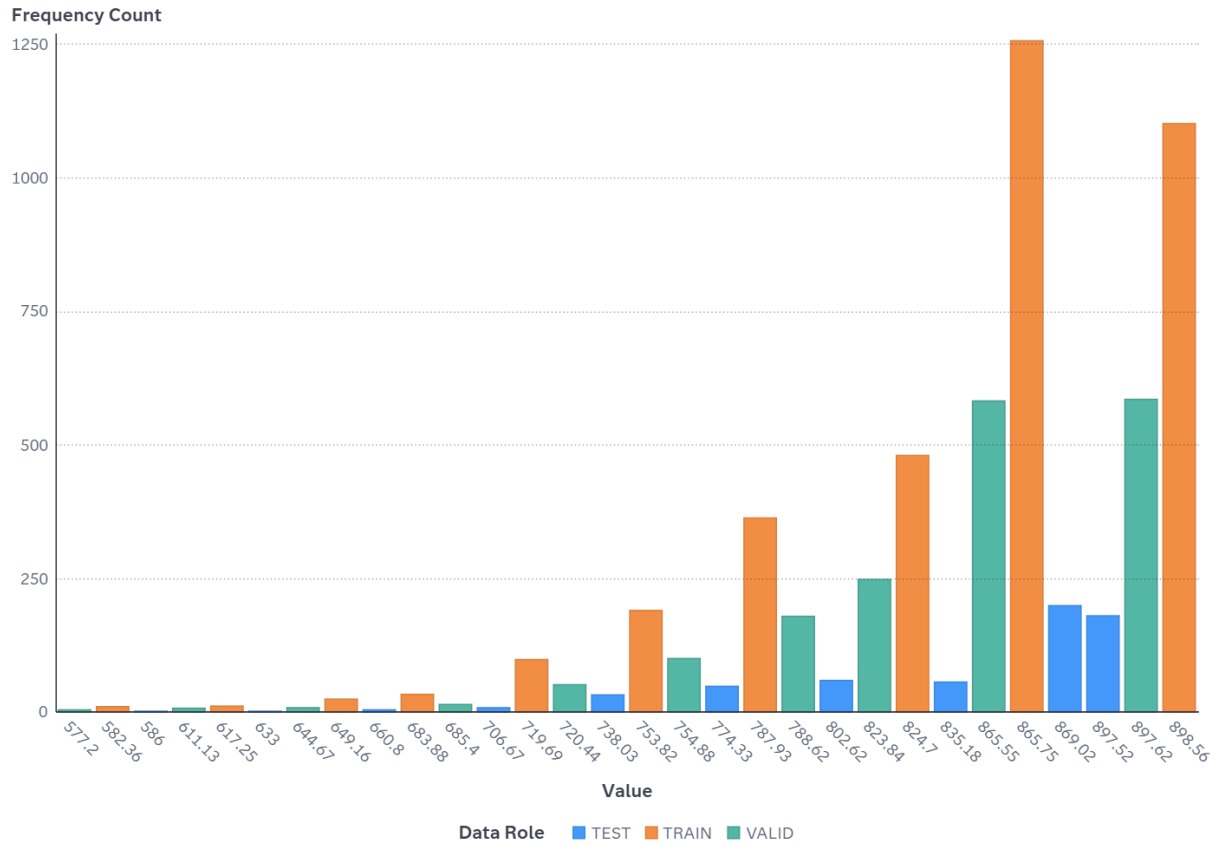
Coefficient	Variable Label
	CLAGE
1.3734	CLAGE
1.3523	CLAGE
0.8817	CLAGE
0.8891	CLAGE
0.2890	CLAGE
0	CLAGE
	DEBTINC
1.1252	DEBTINC
-2.1086	DEBTINC
-1.7636	DEBTINC
-1.3364	DEBTINC
0	DEBTINC
	DELINQ
2.4572	DELINQ
1.1260	DELINQ
0	DELINQ
	DEROG
1.1839	DEROG
0	DEROG
	VALUE
4.4050	VALUE

Coefficient	Variable Label
0.6244	VALUE
0.0733	VALUE
0	VALUE

Kolmogorov-Smirnov Plot



SCORECARD_POINTS



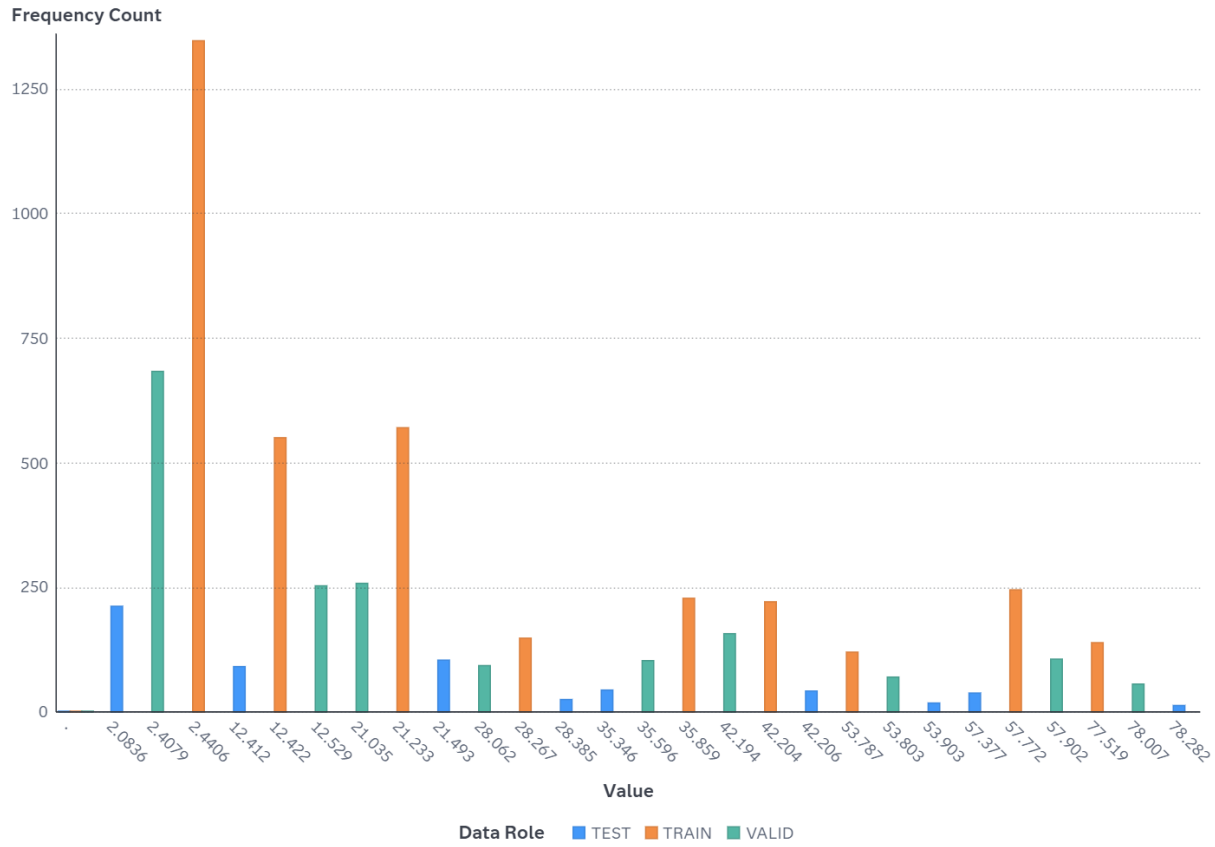
These charts show the score distribution of values for score points, event odds, and logarithm of event odds. The horizontal axis represents the values of the statistics and the vertical axis represents their frequency counts. The values that are displayed along the horizontal axis are divided into 10 bins where each bin displays the lower limit for a range of values for the specified statistic.

In the VALIDATE partition, the bin with the highest frequency count of 586 is associated with scores having a lower limit of 897.6.

In the TRAIN partition, the bin with the highest frequency count of 1,257 is associated with scores having a lower limit of 865.7.

In the TEST partition, the bin with the highest frequency count of 200 is associated with scores having a lower limit of 869.

_event_odds_



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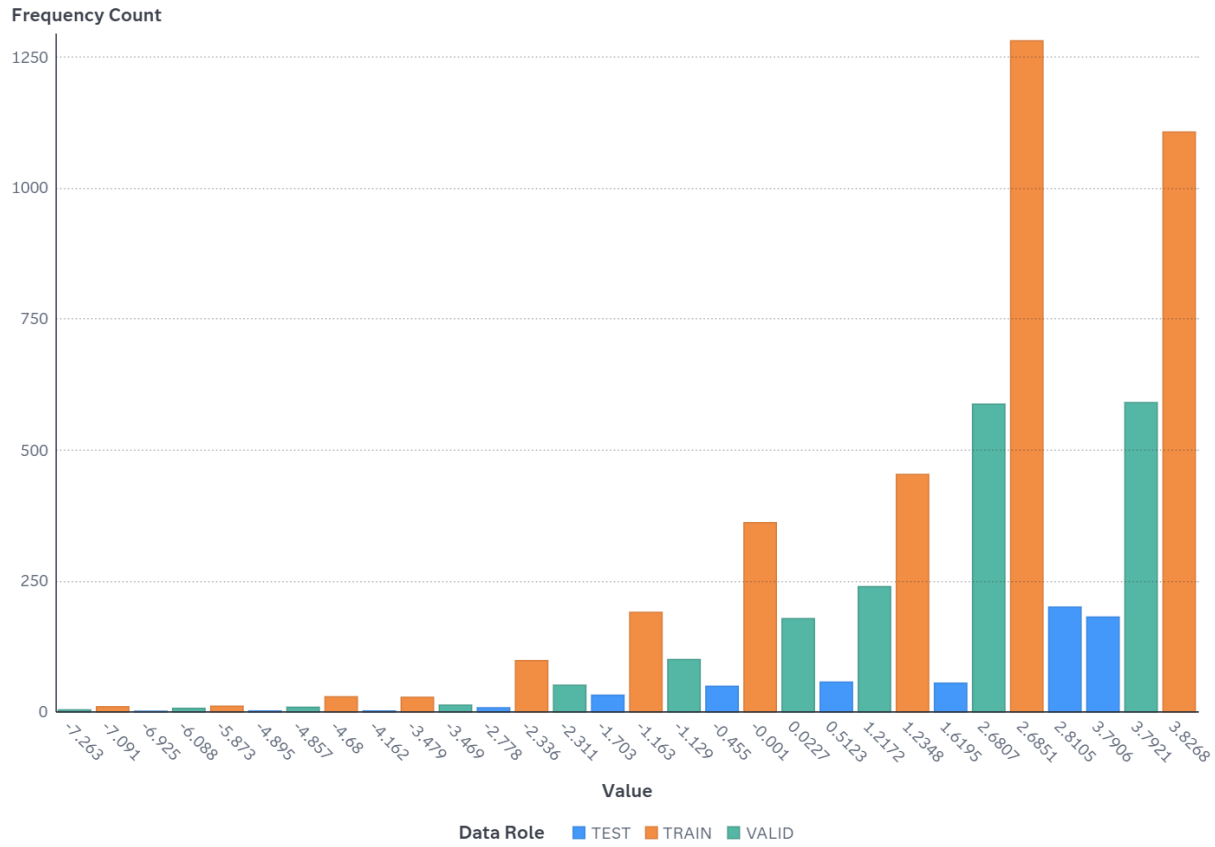
_log_event_odds_



These charts show the score distribution of values for score points, event odds, and logarithm of event odds. The horizontal axis represents the values of the statistics and the vertical axis represents their frequency counts. The values that are displayed along the horizontal axis are divided into 10 bins where each bin displays the lower limit for a range of values for the specified statistic.

Gains Table

Data Role	Bucket	Score Bucket	Count
TRAIN	10	Score >= 877	1,365
TRAIN	9	842 <= Score < 877	1,042
TRAIN	8	807 <= Score < 842	444
TRAIN	7	772 <= Score < 807	356
TRAIN	6	737 <= Score < 772	191
TRAIN	5	702 <= Score < 737	96
TRAIN	4	667 <= Score < 702	34
TRAIN	3	632 <= Score < 667	25
TRAIN	2	597 <= Score < 632	16
TRAIN	1	Score < 597	7
VALID	10	Score >= 877	695
VALID	9	842 <= Score < 877	491
VALID	8	807 <= Score < 842	235
VALID	7	772 <= Score < 807	177
VALID	6	737 <= Score < 772	101
VALID	5	702 <= Score < 737	52
VALID	4	667 <= Score < 702	15
VALID	3	632 <= Score < 667	9
VALID	2	597 <= Score < 632	9
VALID	1	Score < 597	4
TEST	10	Score >= 877	241
TEST	9	842 <= Score < 877	165
TEST	8	807 <= Score < 842	62
TEST	7	772 <= Score < 807	64
TEST	6	737 <= Score < 772	35
TEST	5	702 <= Score < 737	20
TEST	4	667 <= Score < 702	4
TEST	3	632 <= Score < 667	4

Data Role	Bucket	Score Bucket	Count
TEST	2	597 <= Score < 632	0
TEST	1	Score < 597	1

Event Count	Non-Event Count	Cumulative Count	Cumulative Event Count
27	1,338	1,365	27
94	948	2,407	121
97	347	2,851	218
184	172	3,207	402
144	47	3,398	546
86	10	3,494	632
34	0	3,528	666
24	1	3,553	690
16	0	3,569	706
7	0	3,576	713
13	682	695	13
39	452	1,186	52
58	177	1,421	110
88	89	1,598	198
77	24	1,699	275
45	7	1,751	320
15	0	1,766	335
9	0	1,775	344
9	0	1,784	353
4	0	1,788	357
4	237	241	4
14	151	406	18
17	45	468	35
29	35	532	64
29	6	567	93

Event Count	Non-Event Count	Cumulative Count	Cumulative Event Count
17	3	587	110
4	0	591	114
4	0	595	118
0	0	595	118
1	0	596	119

Cumulative Non-Event Count	Marginal Event Rate	Marginal Non-Event Rate	Cumulative Event Rate
1,338	1.9780	98.0220	1.9780
2,286	9.0211	90.9789	5.0270
2,633	21.8468	78.1532	7.6464
2,805	51.6854	48.3146	12.5351
2,852	75.3927	24.6073	16.0683
2,862	89.5833	10.4167	18.0882
2,862	100	0	18.8776
2,863	96	4	19.4202
2,863	100	0	19.7815
2,863	100	0	19.9385
682	1.8705	98.1295	1.8705
1,134	7.9430	92.0570	4.3845
1,311	24.6809	75.3191	7.7410
1,400	49.7175	50.2825	12.3905
1,424	76.2376	23.7624	16.1860
1,431	86.5385	13.4615	18.2753
1,431	100	0	18.9694
1,431	100	0	19.3803
1,431	100	0	19.7870
1,431	100	0	19.9664
237	1.6598	98.3402	1.6598

Cumulative Non-Event Count	Marginal Event Rate	Marginal Non-Event Rate	Cumulative Event Rate
388	8.4848	91.5152	4.4335
433	27.4194	72.5806	7.4786
468	45.3125	54.6875	12.0301
474	82.8571	17.1429	16.4021
477	85	15	18.7394
477	100	0	19.2893
477	100	0	19.8319
477	0	0	19.8319
477	100	0	19.9664

Cumulative Non-Event Rate	Cumulative Approval Rate	Average Marginal Profit	Average Total Profit
98.0220	38.1711	-8.7912	-3.3557
94.9730	67.3098	-1,563.7723	-1,052.5727
92.3536	79.7260	-2,899.6843	-2,311.8009
87.4649	89.6812	-5,392.8906	-4,836.4094
83.9317	95.0224	-7,194.8205	-6,836.6890
81.9118	97.7069	-8,224.9571	-8,036.3535
81.1224	98.6577	-8,627.5510	-8,511.7450
80.5798	99.3568	-8,904.3062	-8,847.0358
80.2185	99.8043	-9,088.5402	-9,070.7494
80.0615	100	-9,168.6242	-9,168.6242
98.1295	38.8702	46.0432	17.8971
95.6155	66.3311	-1,236.0877	-819.9105
92.2590	79.4743	-2,947.9240	-2,342.8412
87.6095	89.3736	-5,319.1489	-4,753.9150
83.8140	95.0224	-7,254.8558	-6,893.7360
81.7247	97.9306	-8,320.3883	-8,148.2103
81.0306	98.7696	-8,674.4054	-8,567.6734

Cumulative Non-Event Rate	Cumulative Approval Rate	Average Marginal Profit	Average Total Profit
80.6197	99.2729	-8,883.9437	-8,819.3512
80.2130	99.7763	-9,091.3677	-9,071.0291
80.0336	100	-9,182.8859	-9,182.8859
98.3402	40.4362	153.5270	62.0805
95.5665	68.1208	-1,261.0837	-859.0604
92.5214	78.5235	-2,814.1026	-2,209.7315
87.9699	89.2617	-5,135.3383	-4,583.8926
83.5979	95.1342	-7,365.0794	-7,006.7114
81.2606	98.4899	-8,557.0698	-8,427.8523
80.7107	99.1611	-8,837.5635	-8,763.4228
80.1681	99.8322	-9,114.2857	-9,098.9933
80.1681	99.8322	-9,114.2857	-9,098.9933
80.0336	100	-9,182.8859	-9,182.8859

Cutoff Score	Average Predicted Probability	Low Predicted Probability Threshold	High Predicted Probability Threshold
	0.0259	0.0124	0.0424
877	0.0757	0.0441	0.1304
842	0.2372	0.1311	0.3353
807	0.5057	0.3452	0.6347
772	0.7607	0.6377	0.8502
737	0.9101	0.8568	0.9459
702	0.9714	0.9535	0.9845
667	0.9913	0.9850	0.9952
632	0.9975	0.9962	0.9986
597	0.9993	0.9990	0.9996
	0.0258	0.0124	0.0424
877	0.0747	0.0441	0.1304

Cutoff Score	Average Predicted Probability	Low Predicted Probability Threshold	High Predicted Probability Threshold
842	0.2374	0.1311	0.3353
807	0.4964	0.3452	0.6176
772	0.7519	0.6476	0.8426
737	0.9068	0.8638	0.9459
702	0.9700	0.9587	0.9845
667	0.9925	0.9902	0.9952
632	0.9977	0.9967	0.9987
597	0.9994	0.9990	0.9996
	0.0274	0.0124	0.0424
877	0.0741	0.0441	0.1246
842	0.2508	0.1371	0.3337
807	0.5176	0.3735	0.6176
772	0.7630	0.6600	0.8257
737	0.9065	0.8568	0.9420
702	0.9718	0.9587	0.9806
667	0.9918	0.9904	0.9952
632			
597	0.9990	0.9990	0.9990

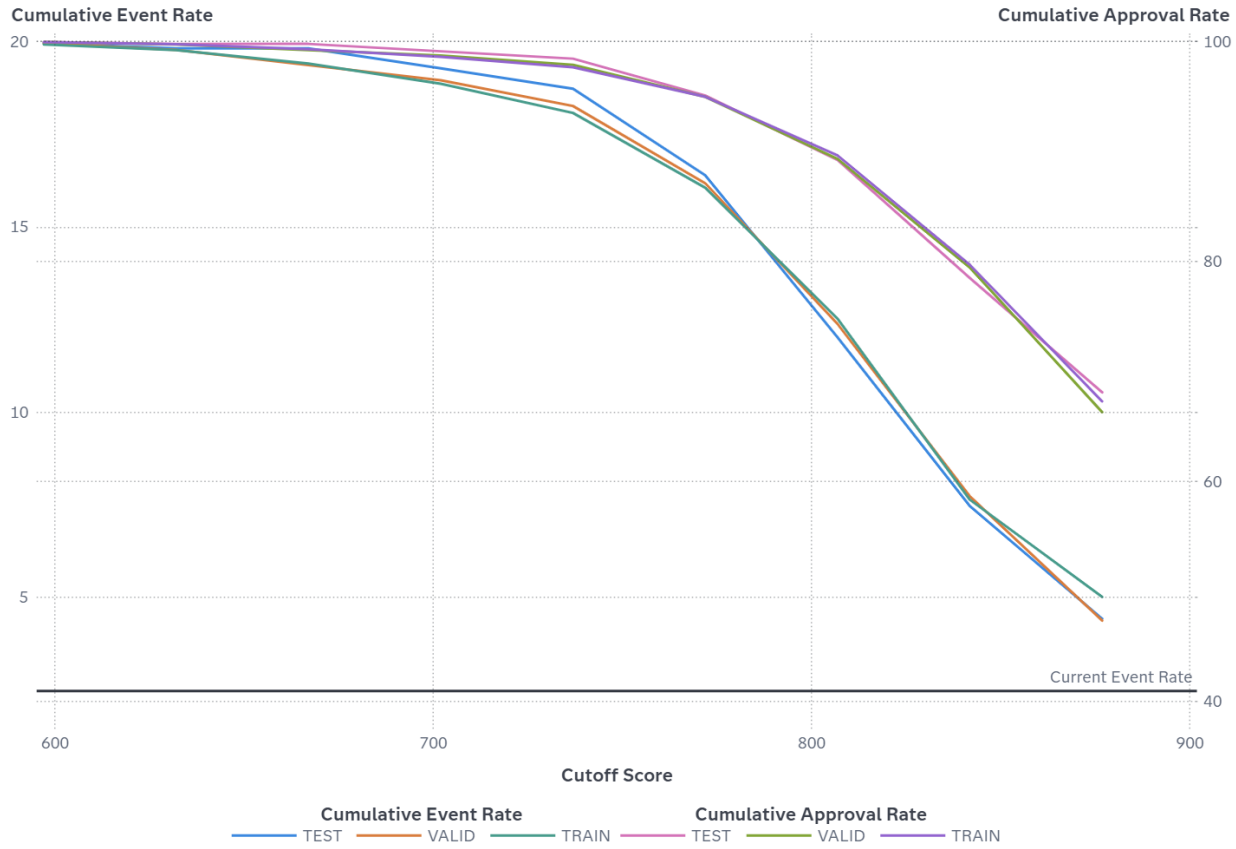
Population Percentage	Type	Frequency	Average Scorecard Points
38.1711	0	1,365	894.7656
67.3098	0	1,042	861.4050
79.7260	0	444	822.2635
89.6812	0	356	787.1798
95.0224	0	191	753.2618
97.7069	0	96	719.1458
98.6577	0	34	683.8824

Population Percentage	Type	Frequency	Average Scorecard Points
99.3568	0	25	649.1600
99.8043	0	16	612.1875
100	0	7	574
38.8702	0	695	894.6777
66.3311	0	491	861.8147
79.4743	0	235	822.2468
89.3736	0	177	788.2881
95.0224	0	101	754.8812
97.9306	0	52	720.4423
98.7696	0	15	685.4000
99.2729	0	9	644.6667
99.7763	0	9	609.5556
100	0	4	572.2500
40.4362	0	241	892.9046
68.1208	0	165	861.8545
78.5235	0	62	820.0484
89.2617	0	64	785.6875
95.1342	0	35	752.8571
98.4899	0	20	720.8000
99.1611	0	4	682.7500
99.8322	0	4	647.7500
99.8322			
100	0	1	586

Empirical Odds	Predicted Odds
-3.9031	-3.6272
-2.3111	-2.5024
-1.2746	-1.1682
0.0674	0.0228

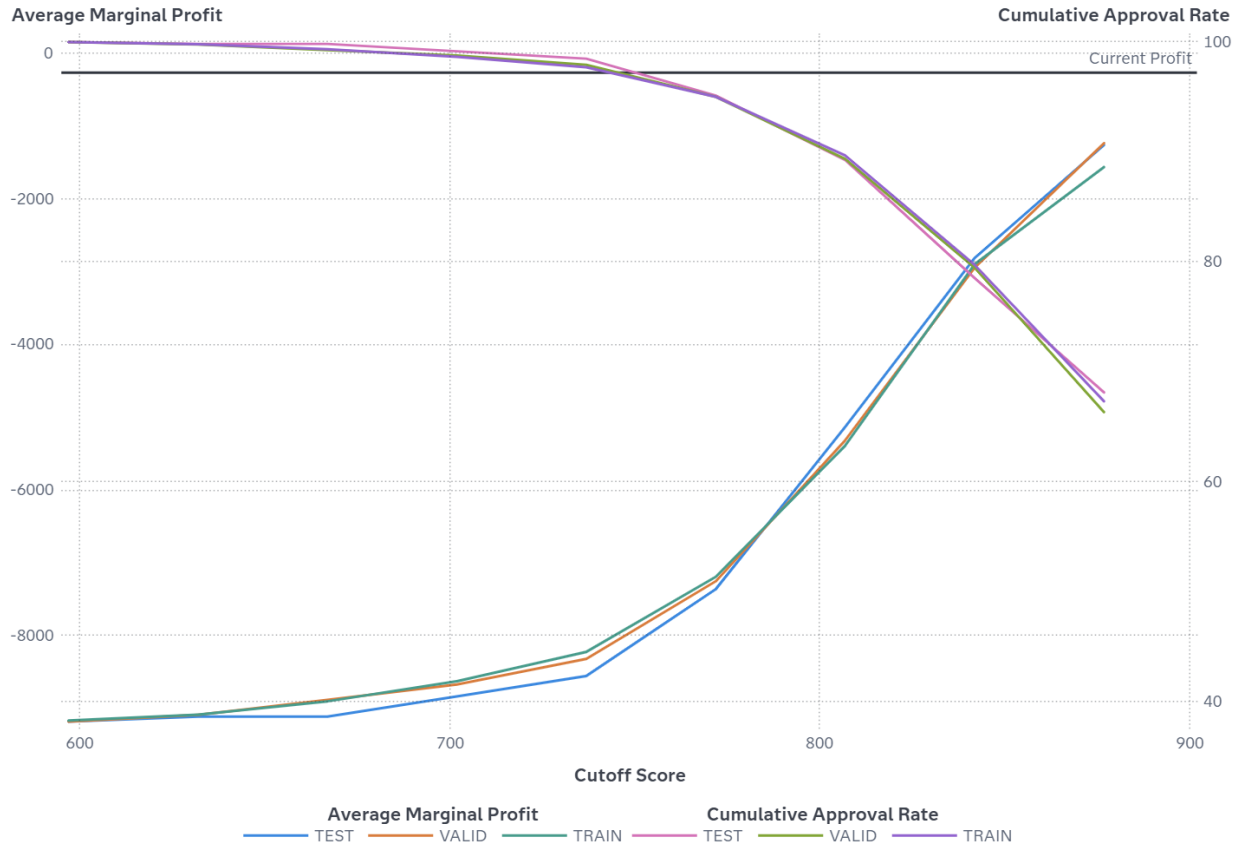
Empirical Odds	Predicted Odds
1.1197	1.1567
2.1518	2.3152
4.2341	3.5249
3.1781	4.7385
3.4965	5.9812
2.7081	7.3000
-3.9601	-3.6329
-2.4501	-2.5167
-1.1157	-1.1667
-0.0113	-0.0145
1.1658	1.1089
1.8608	2.2752
3.4340	3.4762
2.9444	4.8875
2.9444	6.0919
2.1972	7.3546
-4.0818	-3.5702
-2.3782	-2.5255
-0.9734	-1.0944
-0.1881	0.0705
1.5755	1.1693
1.7346	2.2716
2.1972	3.5389
2.1972	4.7941
0	
1.0986	6.9254

Cumulative Event Rate



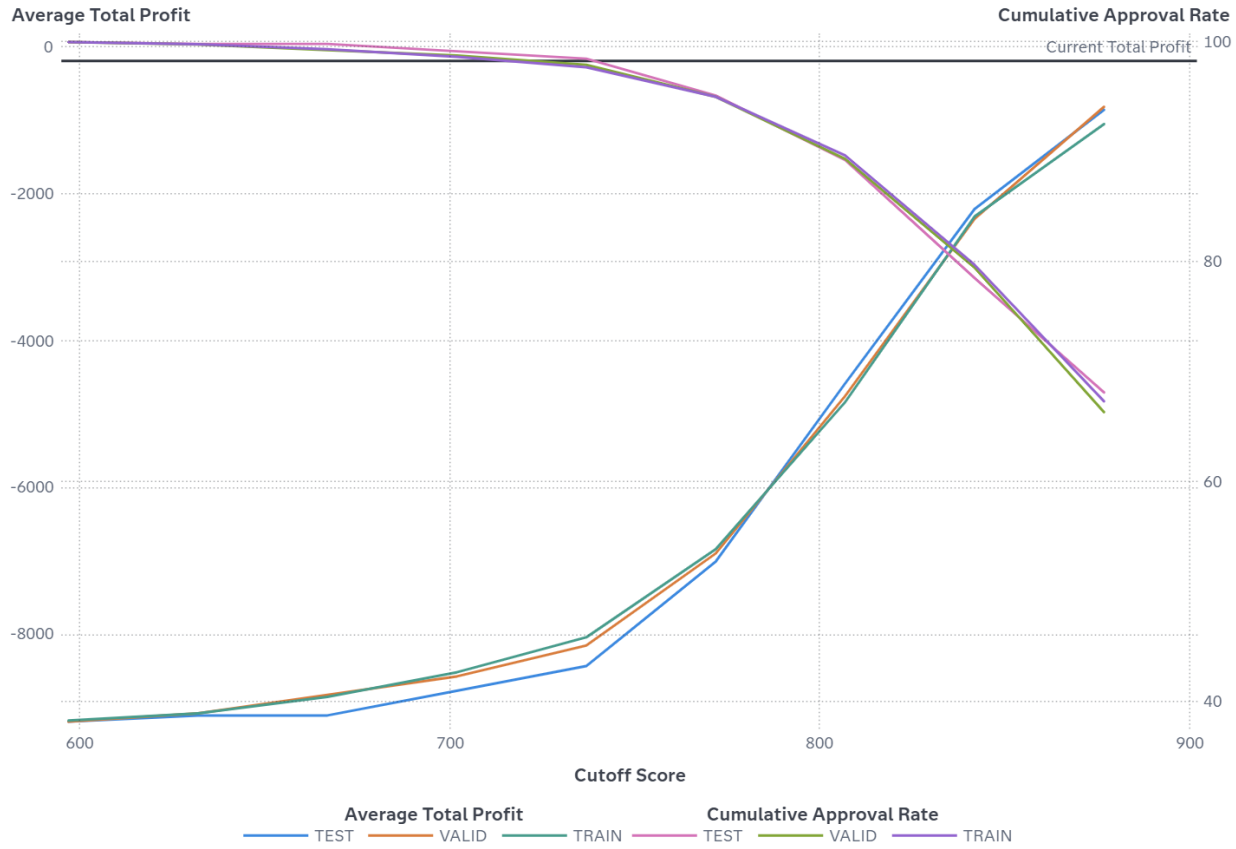
This trade-off plot provides a line plot of cumulative event rate and cumulative approval rate in the Gains table plotted against the lower limit of the score interval.

Average Marginal Profit



This trade-off plot provides a line plot of average marginal profit and cumulative approval rate in the Gains table plotted against the lower limit of the score interval.

Average Total Profit



This trade-off plot provides a line plot of average total profit and cumulative approval rate in the Gains table plotted against the lower limit of the score interval.

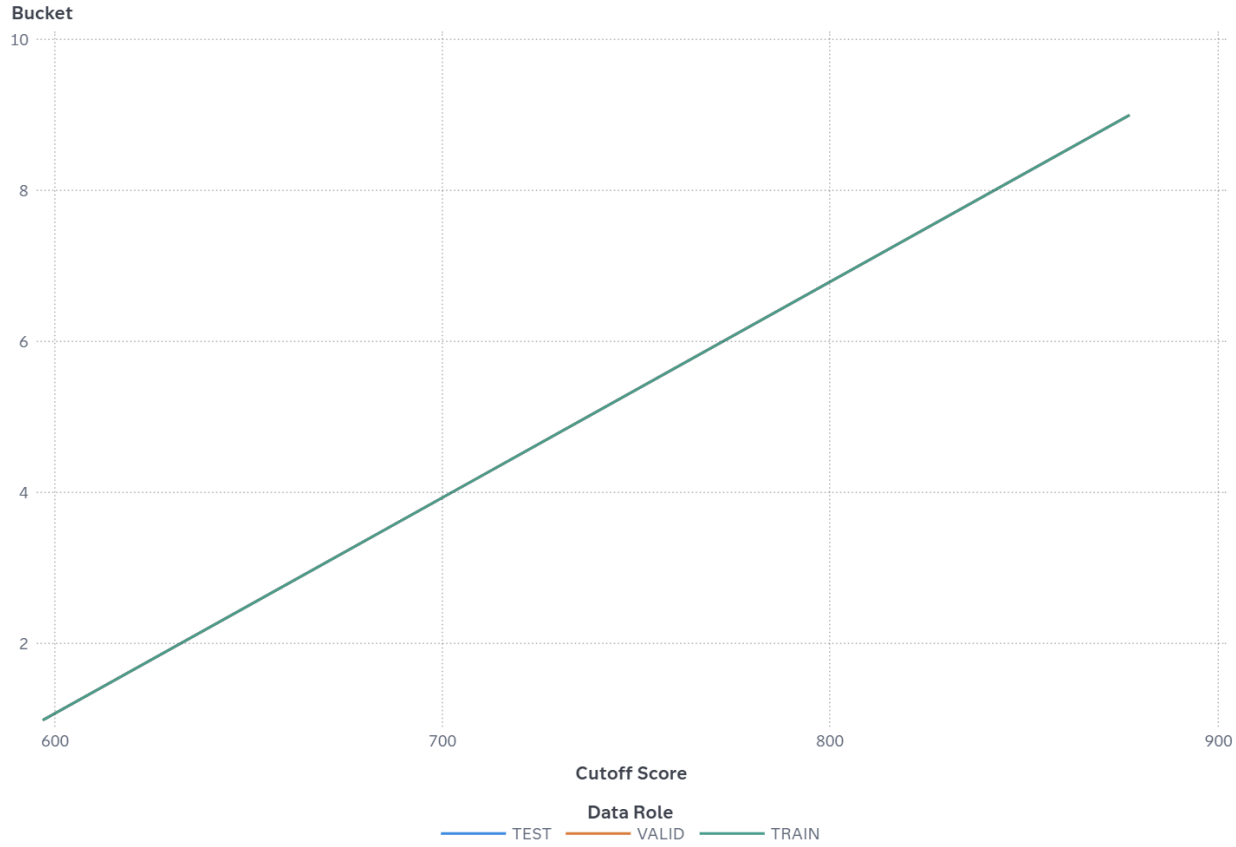
Statistics Table

Variable	Gini Statistic	Information Value	Level for Interactive
CLAGE	23.2890	0.1870	INTERVAL
DEBTINC	64.3260	1.8030	INTERVAL
DELINQ	32.5800	0.5950	NOMINAL
DEROG	20.9980	0.3290	NOMINAL
VALUE	20.2590	0.5200	INTERVAL

New Role	Pre-Defined Grouping	Level	Label
DEFAULT		INTERVAL	
DEFAULT		INTERVAL	
DEFAULT		NOMINAL	
DEFAULT		NOMINAL	
DEFAULT		INTERVAL	

Information Value Ordering
5
1
2
4
3

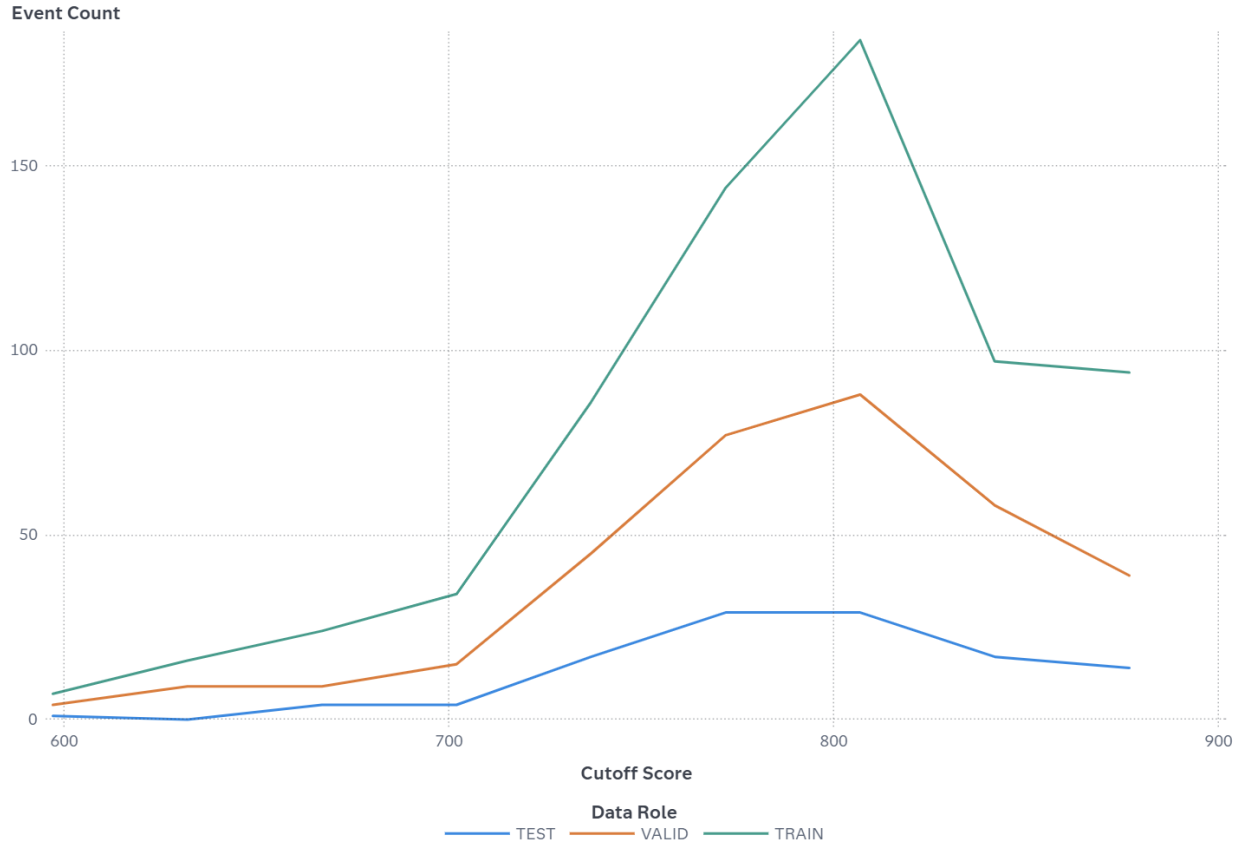
Bucket



This chart displays scoring buckets versus their range of cutoff scores.

Bucket 1 corresponds to a cutoff score of 597, while bucket 9 corresponds to a cutoff score of 877.

Event Count



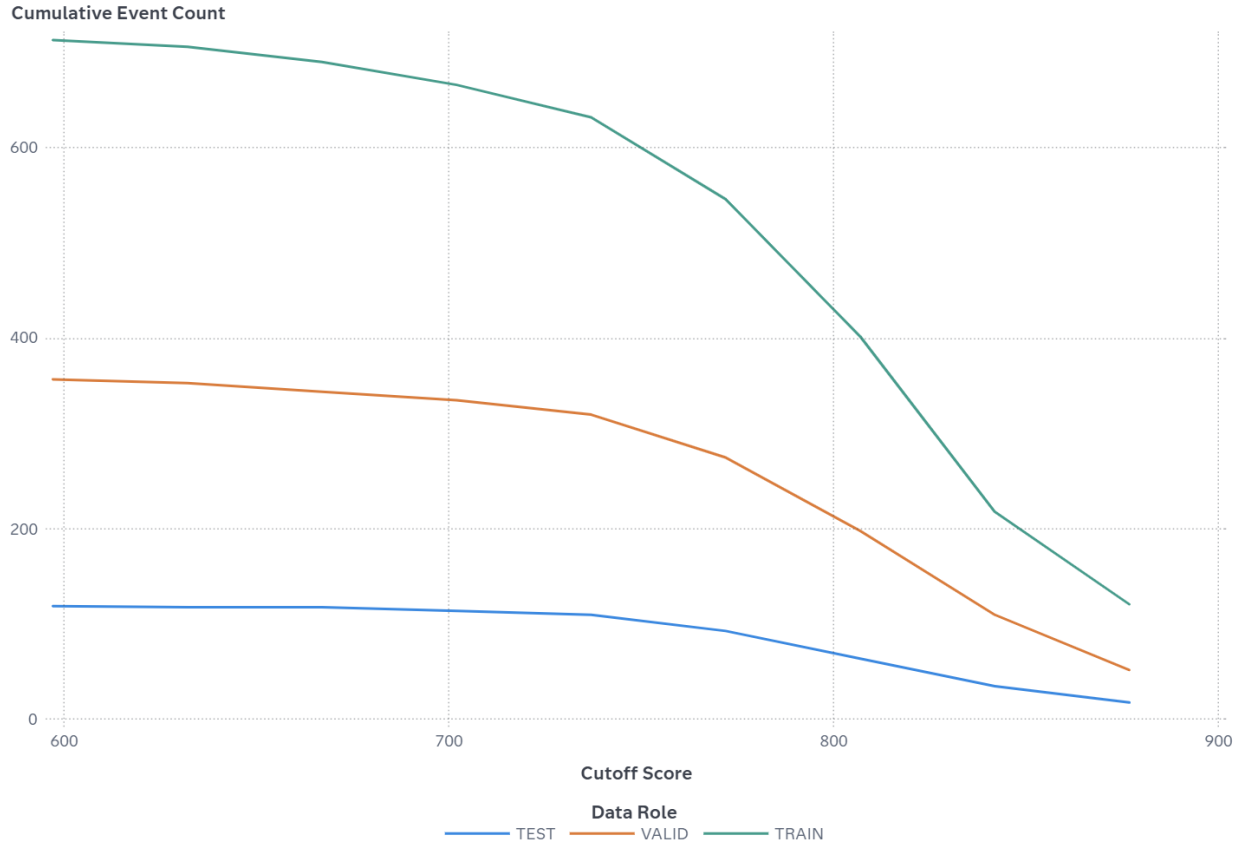
This chart displays event counts plotted against cutoff scores. Event count is the number of events in a score bucket.

In the VALIDATE partition, the highest event count of 88 corresponds to a cutoff score of 807.

In the TRAIN partition, the highest event count of 184 corresponds to a cutoff score of 807.

In the TEST partition, the highest event count of 29 corresponds to a cutoff score of 772.

Cumulative Event Count



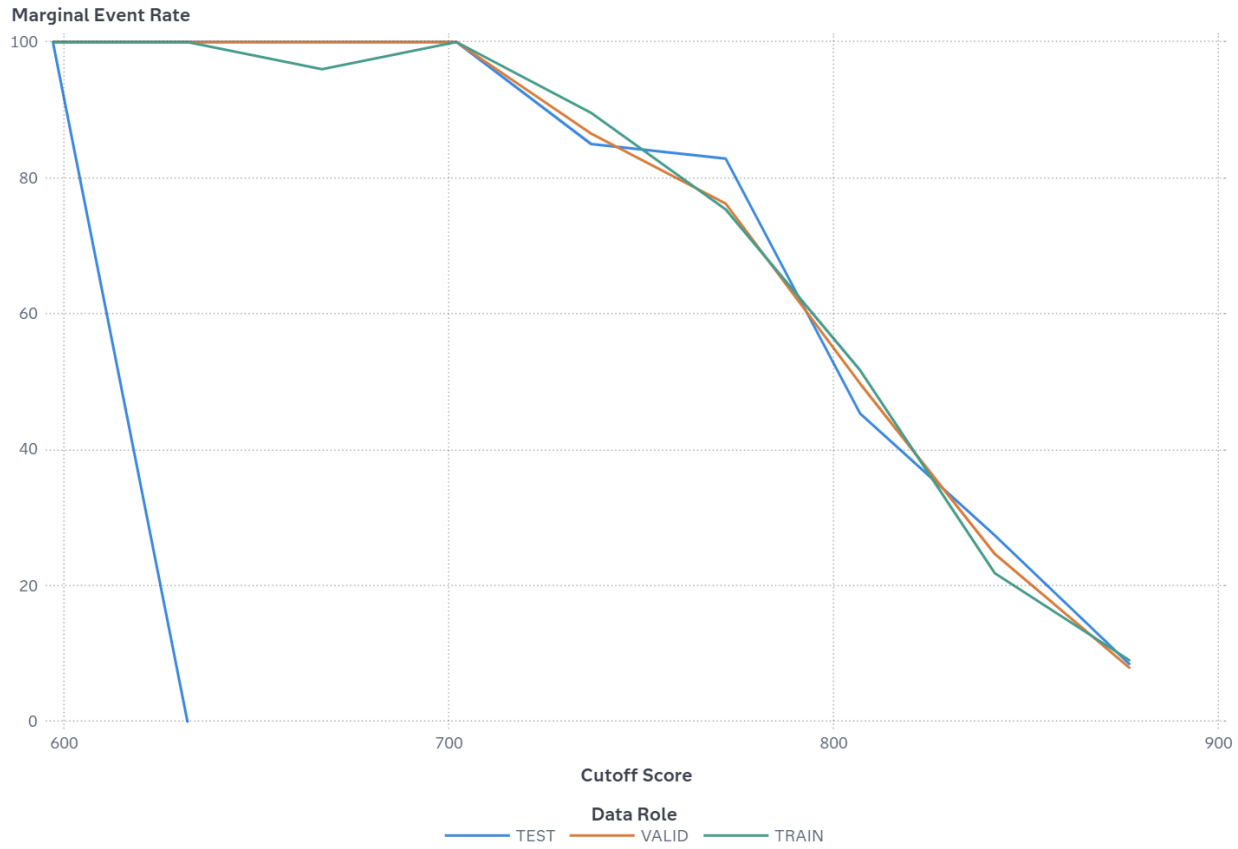
This chart displays cumulative event counts plotted against cutoff scores. The steepest part of the curve shows the greatest change in event count.

In the VALIDATE partition, the greatest change (+88 events) appears to be between 807 and 842 cutoff values.

In the TRAIN partition, the greatest change (+184 events) appears to be between 807 and 842 cutoff values.

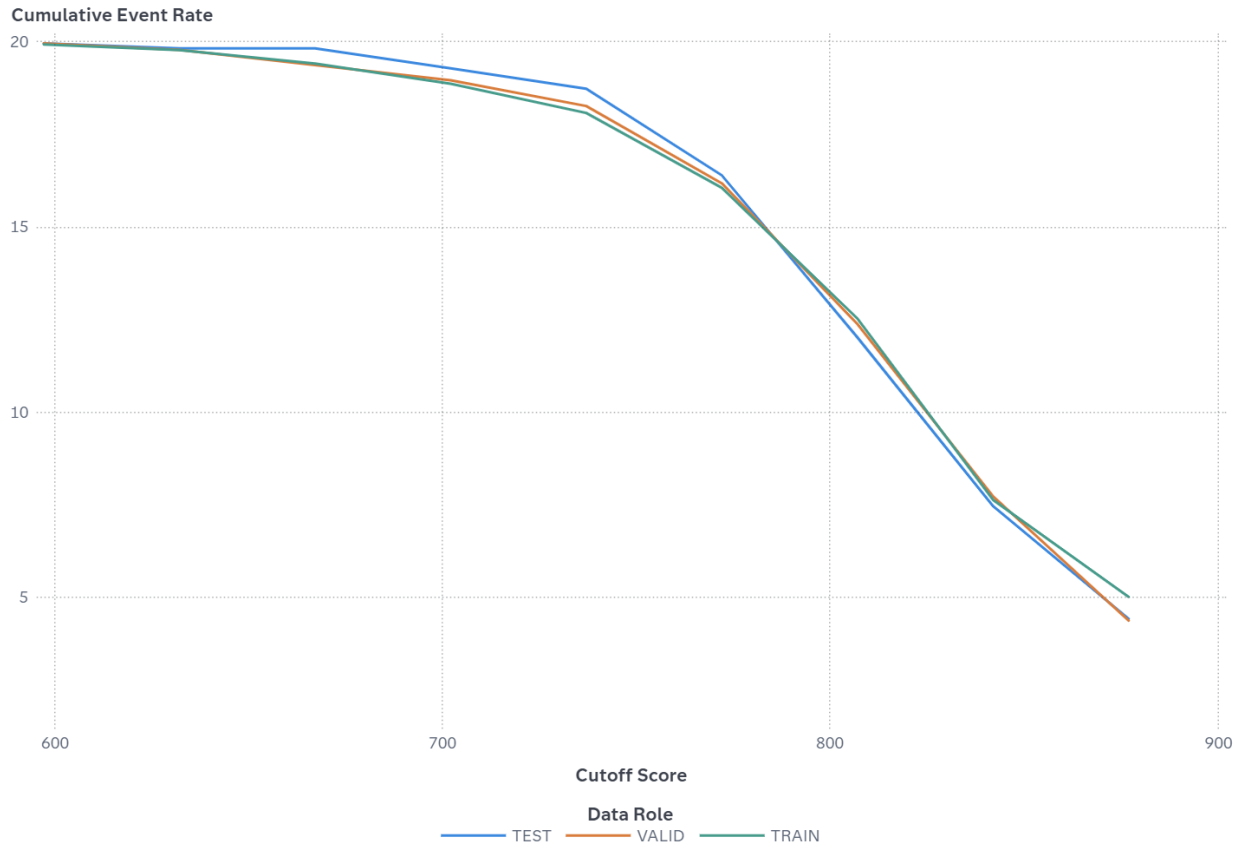
In the TEST partition, the greatest change (+29 events) appears to be between 772 and 807 cutoff values.

Marginal Event Rate



This chart displays the marginal event rates plotted against cutoff scores. The marginal event rate is calculated as 100*(Event_Count/Total_Count) where Event_Count is the number of events associated with a specific cutoff score and Total_Count is the number of events and non-events associated with a specific cutoff score.

Cumulative Event Rate



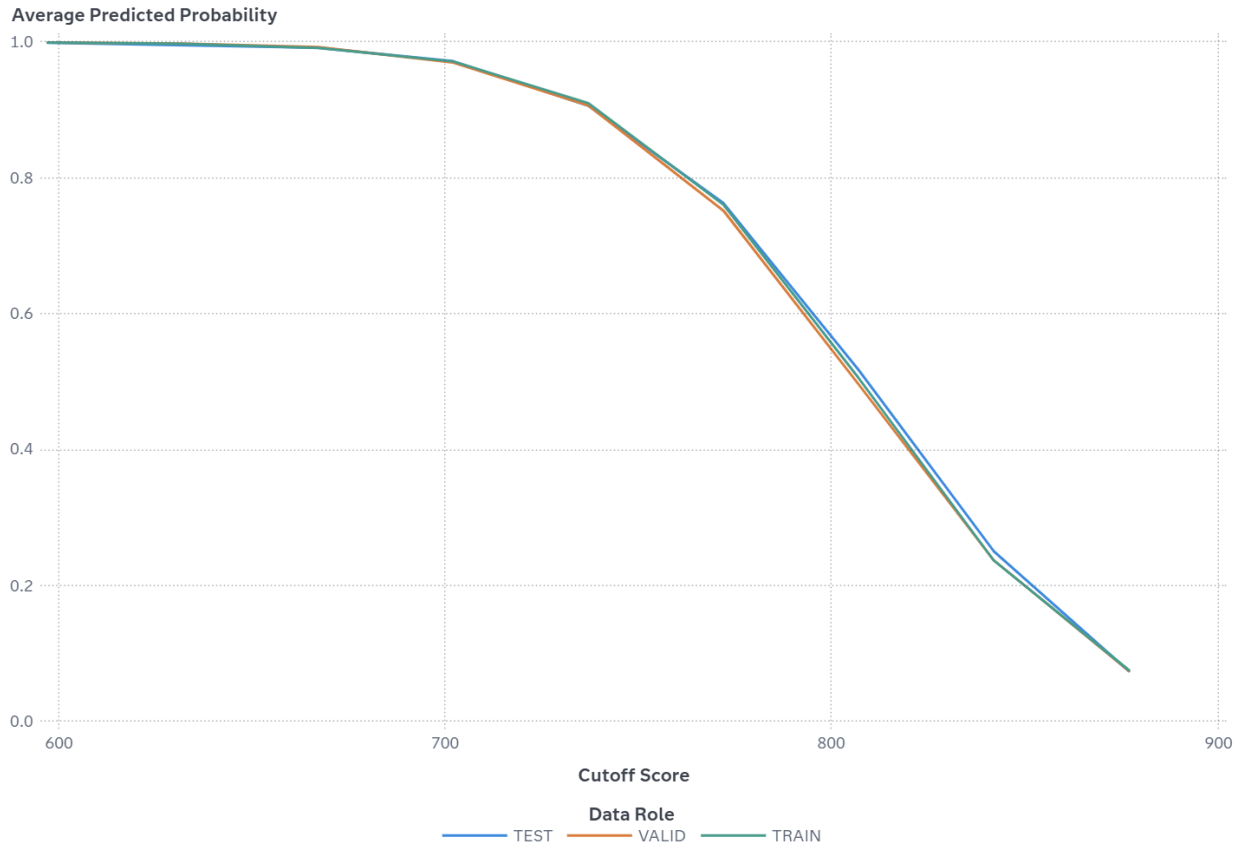
This chart displays cumulative event rates plotted against cutoff scores. The cumulative event rate is calculated as 100*(Event_Count_Cum/Total_Count_Cum) where Event_Count_Cum is the cumulative number of events associated with a score less than or equal to the cutoff score and Total_Count_Cum is the cumulative number of events and non-events associated with a score less than or equal to the cutoff score. The steepest part of the curve shows the greatest event rate change.

In the VALIDATE partition, the greatest rate change appears to be between 807 and 842 cutoff values.

In the TRAIN partition, the greatest rate change appears to be between 807 and 842 cutoff values.

In the TEST partition, the greatest rate change appears to be between 807 and 842 cutoff values.

Average Predicted Probability



This chart plots the average posterior probability of an event versus a range of cutoff scores.

In the VALIDATE partition, the score bucket " 737 <= Score < 772" has an average score of 754.9 and an average predicted probability of 0.752 (predicted odds = 1.109).

In the TRAIN partition, the score bucket " 772 <= Score < 807" has an average score of 787.2 and an average predicted probability of 0.506 (predicted odds = 0.023).

In the TEST partition, the score bucket " 772 <= Score < 807" has an average score of 785.7 and an average predicted probability of 0.518 (predicted odds = 0.07).

Node Statistics

Run Statistics

Last Run (UTC)	Setup (sec)	Run Duration (sec)	Pipeline Run	User
25Aug202509:11:20	2.688	7.395	True	AmarnadhSurasani@sas.com

Score Inputs

Name	Role	Variable Level	Type
CLAGE	INPUT	INTERVAL	N
DEBTINC	INPUT	INTERVAL	N
DELINQ	INPUT	NOMINAL	N
DEROG	INPUT	NOMINAL	N
JOB	INPUT	NOMINAL	C
LOAN	INPUT	INTERVAL	N
NINQ	INPUT	NOMINAL	N
VALUE	INPUT	INTERVAL	N

Variable Type	Variable Label	Variable Format	Variable Length
double			8
double			8
double			8
double			8
varchar			7
double			8
double			8
double			8

Score Outputs

Name	Role	Type	Variable Type
EM_CLASSIFICATION	CLASSIFICATION	C	char
EM_EVENTPROBABILITY	PREDICT	N	double
EM_PROBABILITY	PREDICT	N	double
GRP_CLAGE	INPUT	N	double
GRP_DEBTINC	INPUT	N	double
GRP_DELINQ	INPUT	N	double
GRP_DEROG	INPUT	N	double
GRP_JOB	INPUT	N	double
GRP_LOAN	INPUT	N	double
GRP_NINQ	INPUT	N	double
GRP_VALUE	INPUT	N	double
I_BAD	CLASSIFICATION	C	char
P_BAD0	PREDICT	N	double
P_BAD1	PREDICT	N	double
SCORECARD_BIN	SEGMENT	N	double
SCORECARD_POINTS	ASSESS	N	double
SCR_CLAGE	ASSESS	N	double
SCR_DEBTINC	ASSESS	N	double
SCR_DELINQ	ASSESS	N	double
SCR_DEROG	ASSESS	N	double
SCR_VALUE	ASSESS	N	double
WOE_CLAGE	REJECTED	N	double
WOE_DEBTINC	REJECTED	N	double
WOE_DELINQ	REJECTED	N	double
WOE_DEROG	REJECTED	N	double

Name	Role	Type	Variable Type
WOE_JOB	REJECTED	N	double
WOE_LOAN	REJECTED	N	double
WOE_NINQ	REJECTED	N	double
WOE_VALUE	REJECTED	N	double

Variable Label	Variable Format	Variable Length	Creator
Predicted for BAD		12	cs_scorecard
Probability for BAD=1		8	cs_scorecard
Probability of Classification		8	cs_scorecard
Grouped: CLAGE		8	cs_ign
Grouped: DEBTINC		8	cs_ign
Grouped: DELINQ		8	cs_ign
Grouped: DEROG		8	cs_ign
Grouped: JOB		8	cs_ign
Grouped: LOAN		8	cs_ign
Grouped: NINQ		8	cs_ign
Grouped: VALUE		8	cs_ign
Into: BAD		12	cs_scorecard
Predicted: BAD=0		8	cs_scorecard
Predicted: BAD=1		8	cs_scorecard
Score Bucket		8	cs_scorecard
Scorecard Points		8	cs_scorecard
Score: CLAGE		8	cs_scorecard
Score: DEBTINC		8	cs_scorecard
Score: DELINQ		8	cs_scorecard
Score: DEROG		8	cs_scorecard
Score: VALUE		8	cs_scorecard
Weight of Evidence:		8	cs_ign

Variable Label	Variable Format	Variable Length	Creator
CLAGE			
Weight of Evidence: DEBTINC		8	cs_ign
Weight of Evidence: DELINQ		8	cs_ign
Weight of Evidence: DEROG		8	cs_ign
Weight of Evidence: JOB		8	cs_ign
Weight of Evidence: LOAN		8	cs_ign
Weight of Evidence: NINQ		8	cs_ign
Weight of Evidence: VALUE		8	cs_ign

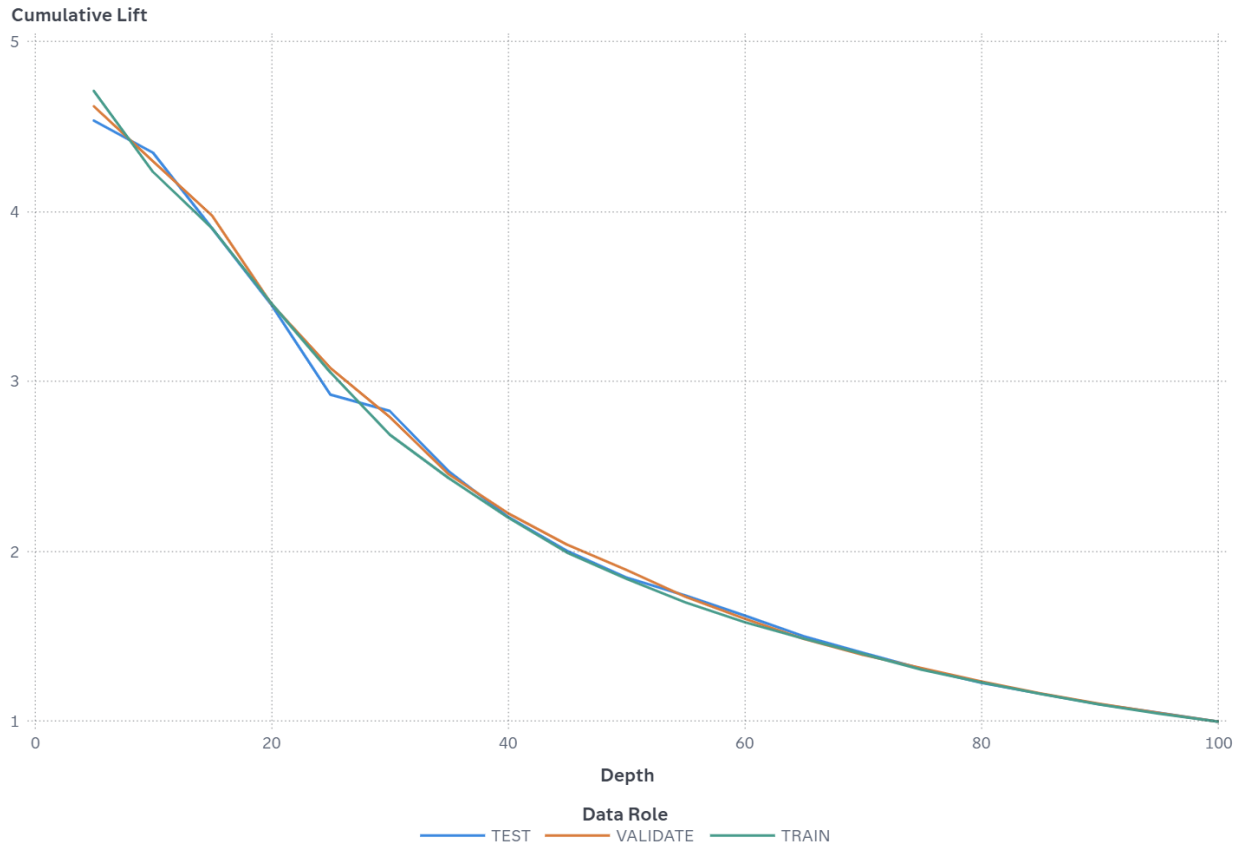
Function	Creator GUID
CLASSIFICATION	4740e484-5288-4f4e-86d7-979cf6aad974
PREDICT	4740e484-5288-4f4e-86d7-979cf6aad974
PREDICT	4740e484-5288-4f4e-86d7-979cf6aad974
TRANSFORM	691498c9-26b7-499c-a4c6-6d5084c50967
TRANSFORM	691498c9-26b7-499c-a4c6-6d5084c50967

Function	Creator GUID
TRANSFORM	691498c9-26b7-499c-a4c6-6d5084c50967
TRANSFORM	691498c9-26b7-499c-a4c6-6d5084c50967
TRANSFORM	691498c9-26b7-499c-a4c6-6d5084c50967
TRANSFORM	691498c9-26b7-499c-a4c6-6d5084c50967
TRANSFORM	691498c9-26b7-499c-a4c6-6d5084c50967
TRANSFORM	691498c9-26b7-499c-a4c6-6d5084c50967
CLASSIFICATION	4740e484-5288-4f4e-86d7-979cf6aad974
PREDICT	4740e484-5288-4f4e-86d7-979cf6aad974
PREDICT	4740e484-5288-4f4e-86d7-979cf6aad974
TRANSFORM	4740e484-5288-4f4e-86d7-979cf6aad9

Function	Creator GUID
	74
TRANSFORM	4740e484-5288-4f4e-86d7-979cf6aad974
TRANSFORM	4740e484-5288-4f4e-86d7-979cf6aad974
TRANSFORM	4740e484-5288-4f4e-86d7-979cf6aad974
TRANSFORM	4740e484-5288-4f4e-86d7-979cf6aad974
TRANSFORM	4740e484-5288-4f4e-86d7-979cf6aad974
TRANSFORM	4740e484-5288-4f4e-86d7-979cf6aad974
TRANSFORM	691498c9-26b7-499c-a4c6-6d5084c50967
TRANSFORM	691498c9-26b7-499c-a4c6-6d5084c50967
TRANSFORM	691498c9-26b7-499c-a4c6-6d5084c50967
TRANSFORM	691498c9-26b7-499c-a4c6-6d5084c50967

Function	Creator GUID
TRANSFORM	691498c9-26b7-499c-a4c6-6d5084c50967
TRANSFORM	691498c9-26b7-499c-a4c6-6d5084c50967
TRANSFORM	691498c9-26b7-499c-a4c6-6d5084c50967
TRANSFORM	691498c9-26b7-499c-a4c6-6d5084c50967

Cumulative Lift



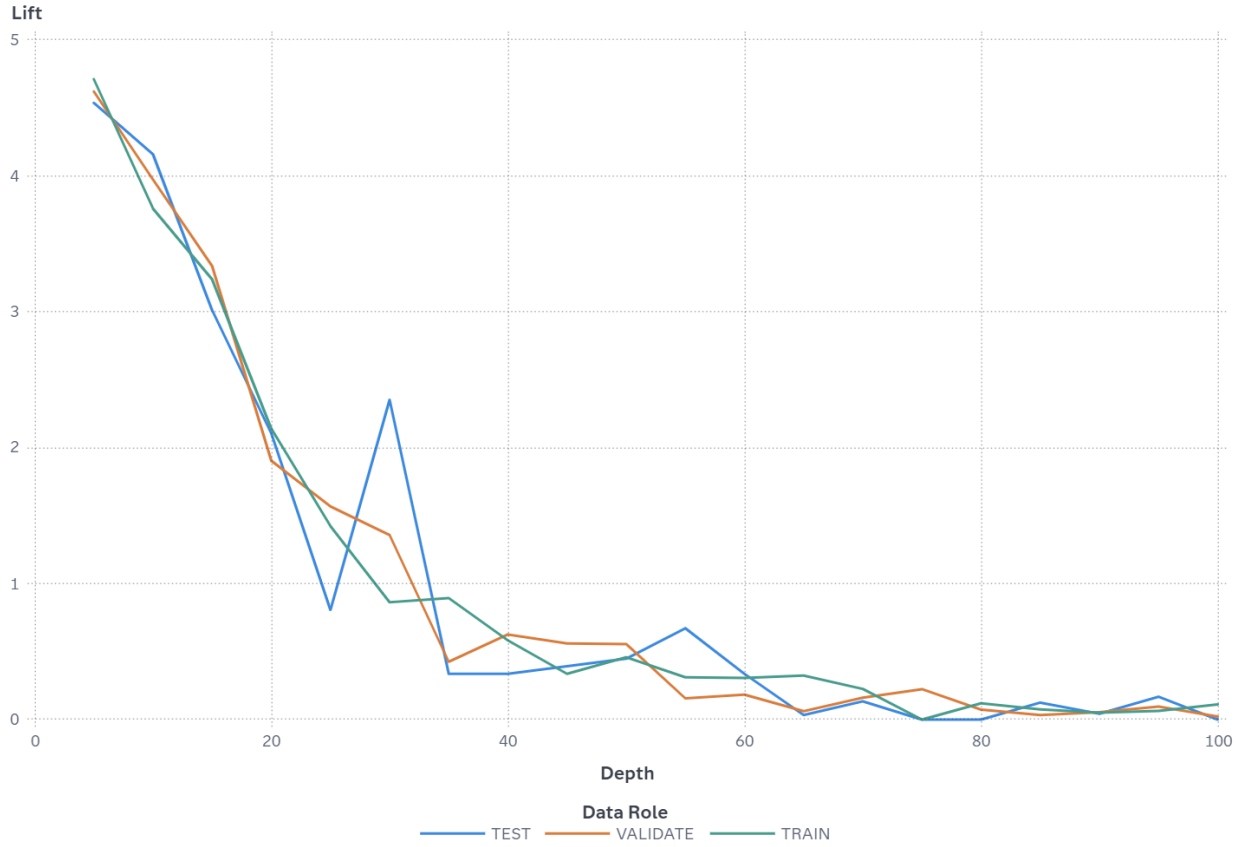
The VALIDATE partition has a Cumulative Lift of 4.3 in the 10% quantile (depth of 10) meaning there are 4.3 times more events in the first two quantiles than expected by random (10% of the total number of events). Because this value is greater than 1, it is better to use your model to identify responders than no model, based on the selected partition.

The TRAIN partition has a Cumulative Lift of 4.24 in the 10% quantile (depth of 10) meaning there are 4.24 times more events in the first two quantiles than expected by random (10% of the total number of events). Because this value is greater than 1, it is better to use your model to identify responders than no model, based on the selected partition.

The TEST partition has a Cumulative Lift of 4.35 in the 10% quantile (depth of 10) meaning there are 4.35 times more events in the first two quantiles than expected by random (10% of the total number of events). Because this value is greater than 1, it is better to use your model to identify responders than no model, based on the selected partition.

Cumulative lift is calculated by sorting each partition in descending order by the predicted probability of the target event P_BAD1, which represents the predicted probability of the event "1" for the target BAD. The data is divided into 20 quantiles (demi-deciles, with 5% of the data in each), and the number of events in each quantile is computed. The cumulative lift for a particular quantile is the ratio of the number of events across all quantiles up to and including the current quantile to the number of events that would be there at random, or equivalently, the ratio of the cumulative response percentage to the baseline response percentage. The cumulative lift at depth 10 includes the top 10% of the data, which is the first 2 quantiles, which would have 10% of the events at random. Thus, cumulative lift measures how much more likely it is to observe an event in the quantiles than by selecting observations at random.

Lift



The VALIDATE partition has a Lift of 4.62 in the 5% quantile (depth of 5) meaning there are 4.62 times more events in that quantile than expected by random (5% of the total number of events). Because this value is greater than 1, it is better to use your model to identify responders than no model, based on the selected partition.

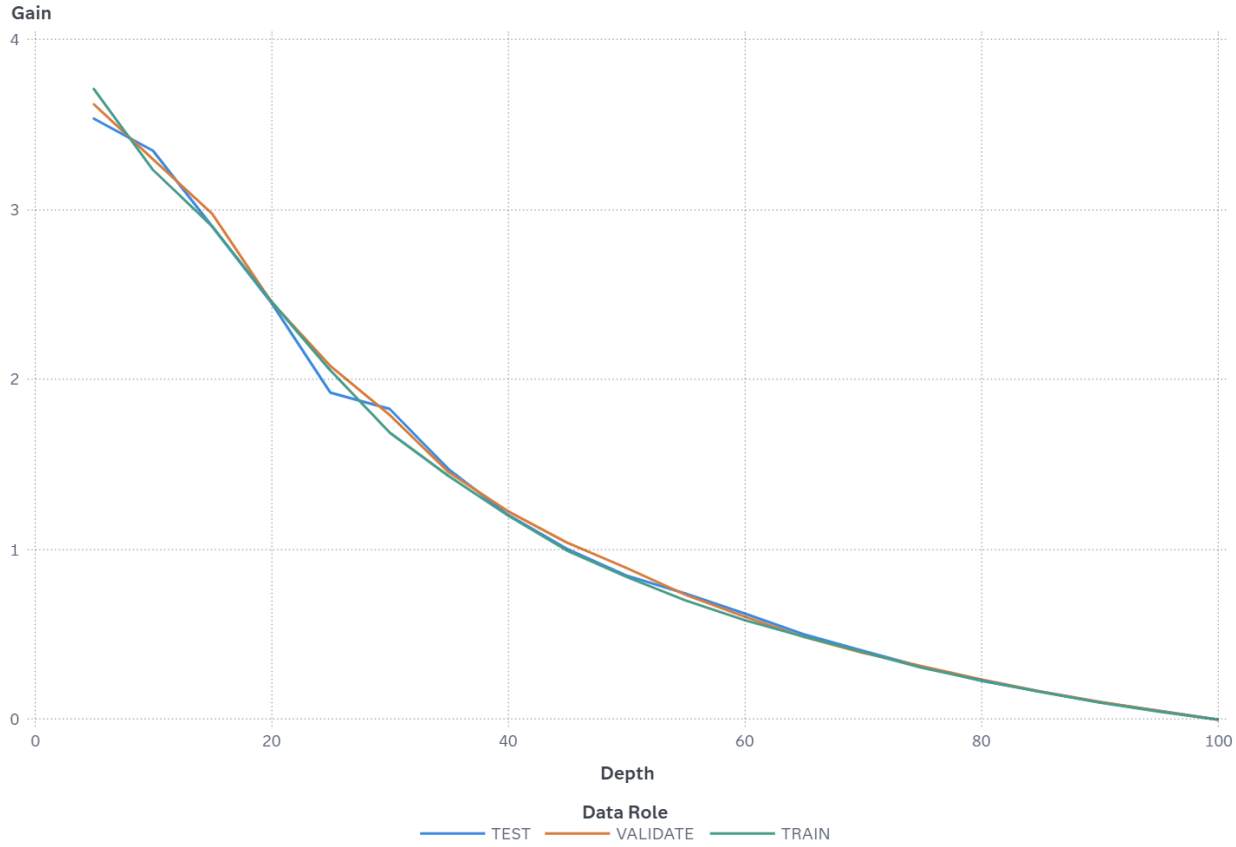
The TRAIN partition has a Lift of 4.71 in the 5% quantile (depth of 5) meaning there are 4.71 times more events in that quantile than expected by random (5% of the total number of events). Because this value is greater than 1, it is better to use your model to identify responders than no model, based on the selected partition.

The TEST partition has a Lift of 4.54 in the 5% quantile (depth of 5) meaning there are 4.54 times more events in that quantile than expected by random (5% of the total number of events). Because this value is greater than 1, it is better to use your model to identify responders than no model, based on the selected partition.

Lift is calculated by sorting each partition in descending order by the predicted probability of the target event P_BAD1, which represents the predicted probability of the event "1" for the target BAD. The data is divided into 20 quantiles (demi-deciles, with

5% of the data in each), and the number of events in each quantile is computed. Lift is the ratio of the number of events in that quantile to the number of events that would be there at random, or equivalently, the ratio of the response percentage to the baseline response percentage. With 20 quantiles, it is expected that 5% of the events occur in each quantile. Thus, Lift measures how much more likely it is to observe an event in each quantile than by selecting observations at random.

Gain



The VALIDATE partition has a Gain of 3.3 at the 10% quantile (depth of 10). Because this value is greater than 0, it is better to use your model to identify responders than no model, based on the selected partition. The best possible value of Gain for this partition at depth 10 is 4.04.

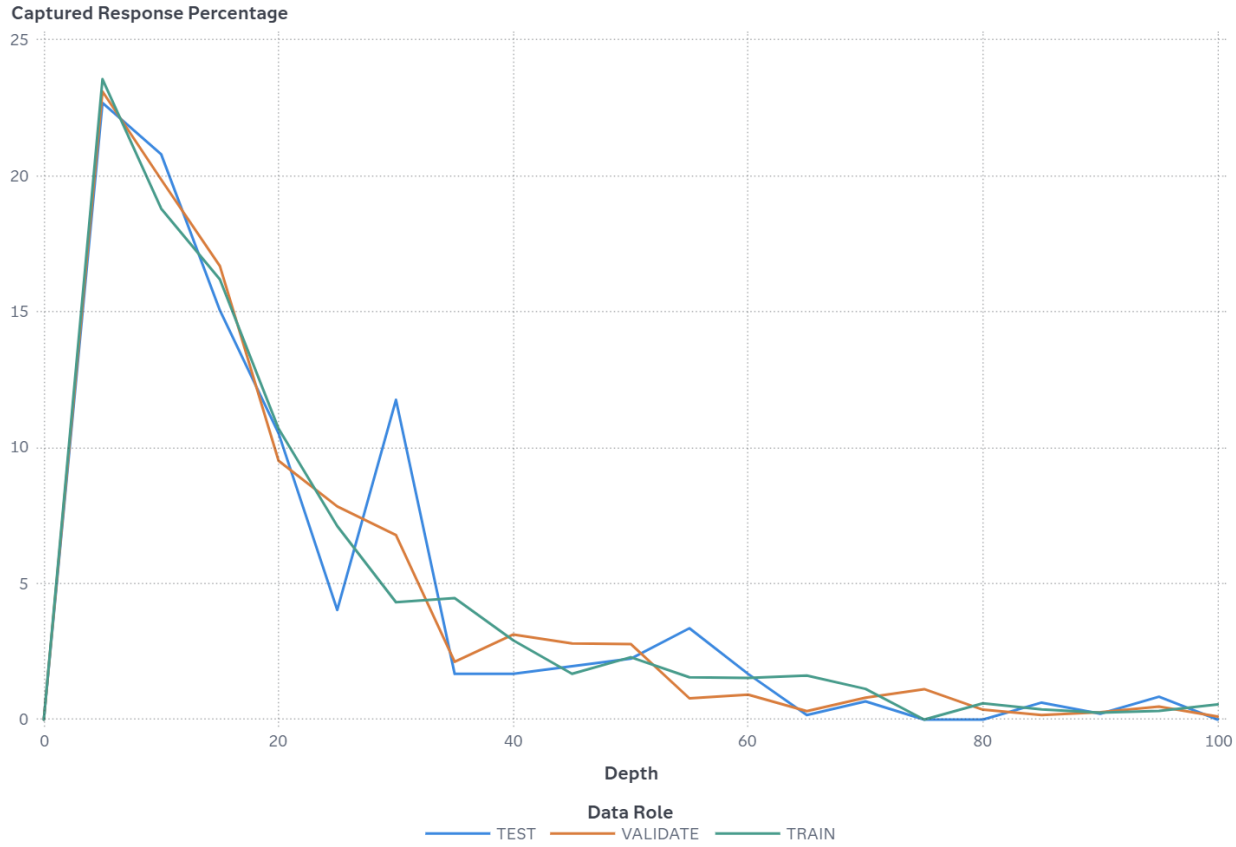
The TRAIN partition has a Gain of 3.2 at the 10% quantile (depth of 10). Because this value is greater than 0, it is better to use your model to identify responders than no model, based on the selected partition. The best possible value of Gain for this partition at depth 10 is 4.02.

The TEST partition has a Gain of 3.3 at the 10% quantile (depth of 10). Because this value is greater than 0, it is better to use your model to identify responders than no model, based on the selected partition. The best possible value of Gain for this partition at depth 10 is 4.04.

Gain is calculated by sorting each partition in descending order by the predicted probability of the target event P_BAD1, which represents the predicted probability of the event "1" for the target BAD. The data is divided into 20 quantiles (demi-deciles, with

5% of the data in each), and the number of events in each quantile is computed. Gain is a cumulative measure for the quantiles up to and including the current one and is calculated as (number of events in the quantiles) / (number of events expected by random) - 1. With 20 quantiles, it is expected that 5% of the events occur in each quantile. Note that the value of Gain is the same as the value of Cumulative Lift - 1. If the value of Gain is greater than 0, then your model is better at identifying events than using no model.

Captured Response Percentage



At the 5% quantile (depth of 5), the VALIDATE partition has a Captured response percentage of 23.1 (compared to the expected value of 5 for no model). The best possible value of Captured response percentage for this partition at depth 5 is 25.21.

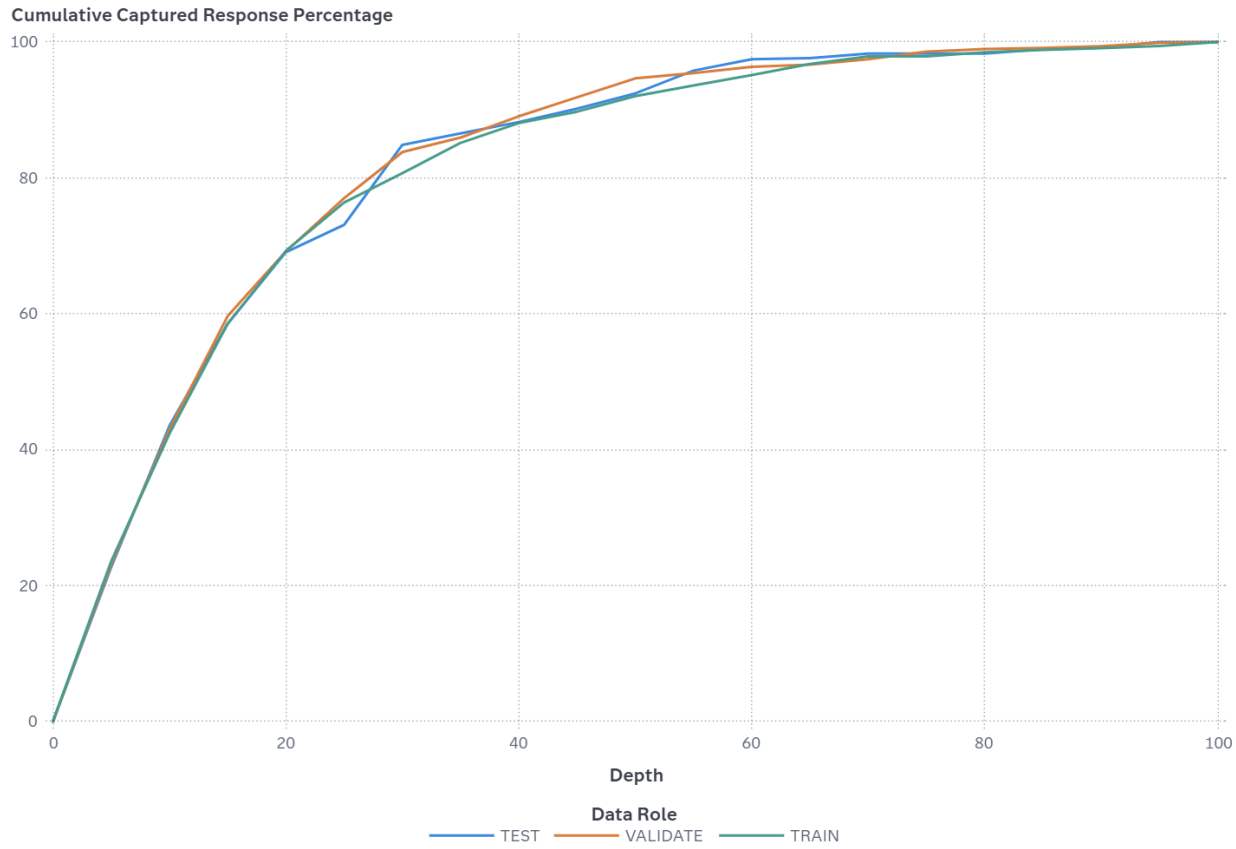
At the 5% quantile (depth of 5), the TRAIN partition has a Captured response percentage of 23.6 (compared to the expected value of 5 for no model). The best possible value of Captured response percentage for this partition at depth 5 is 25.11.

At the 5% quantile (depth of 5), the TEST partition has a Captured response percentage of 22.7 (compared to the expected value of 5 for no model). The best possible value of Captured response percentage for this partition at depth 5 is 25.21.

Captured response percentage is calculated by sorting each partition in descending order by the predicted probability of the target event P_BAD1, which represents the predicted probability of the event "1" for the target BAD. The data is divided into 20 quantiles (demi-deciles, with 5% of the data in each), and the number of events in each quantile is computed. Captured response percentage is the percentage of the total number of events that are in that quantile. With no model, it is expected that 5% of the

events are in each quantile.

Cumulative Captured Response Percentage



In the top 10% of the data (depth 10), the VALIDATE partition has a Cumulative captured response percentage of 43 (compared to the expected value of 10 for no model). The best possible value of Cumulative captured response percentage for this partition at depth 10 is 50.42.

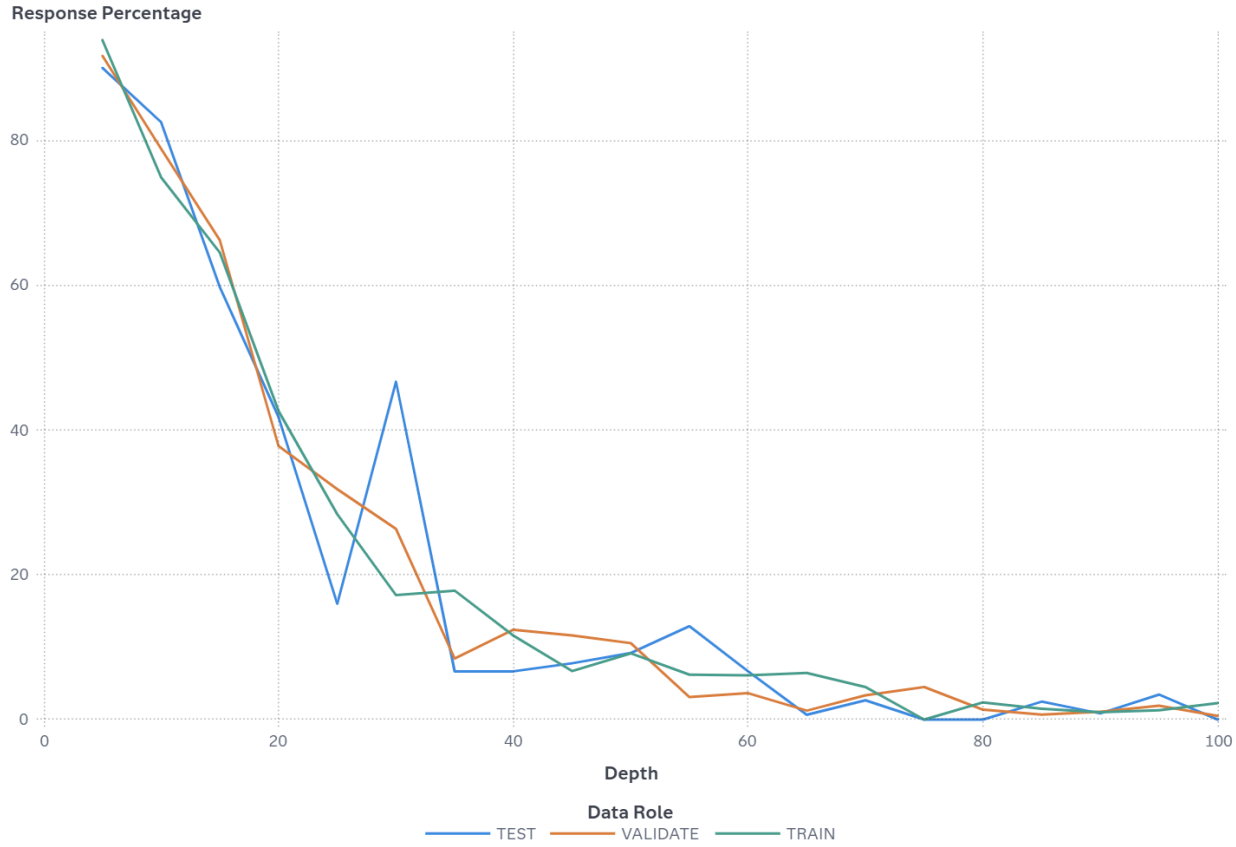
In the top 10% of the data (depth 10), the TRAIN partition has a Cumulative captured response percentage of 42.4 (compared to the expected value of 10 for no model). The best possible value of Cumulative captured response percentage for this partition at depth 10 is 50.21.

In the top 10% of the data (depth 10), the TEST partition has a Cumulative captured response percentage of 43.5 (compared to the expected value of 10 for no model). The best possible value of Cumulative captured response percentage for this partition at depth 10 is 50.42.

Cumulative captured response percentage is calculated by sorting each partition in descending order by the predicted probability of the target event P_BAD1, which represents the predicted probability of the event "1" for the target BAD. The data is

divided into 20 quantiles (demi-deciles, with 5% of the data in each), and the number of events in each quantile is computed. The cumulative captured response percentage for a particular quantile is the percentage of the total number of events that are in the quantiles up to and including the current quantile. With no model, it is expected that 5% of the events are in each quantile, so the cumulative captured response percentage at depth 10 would be 10%.

Response Percentage



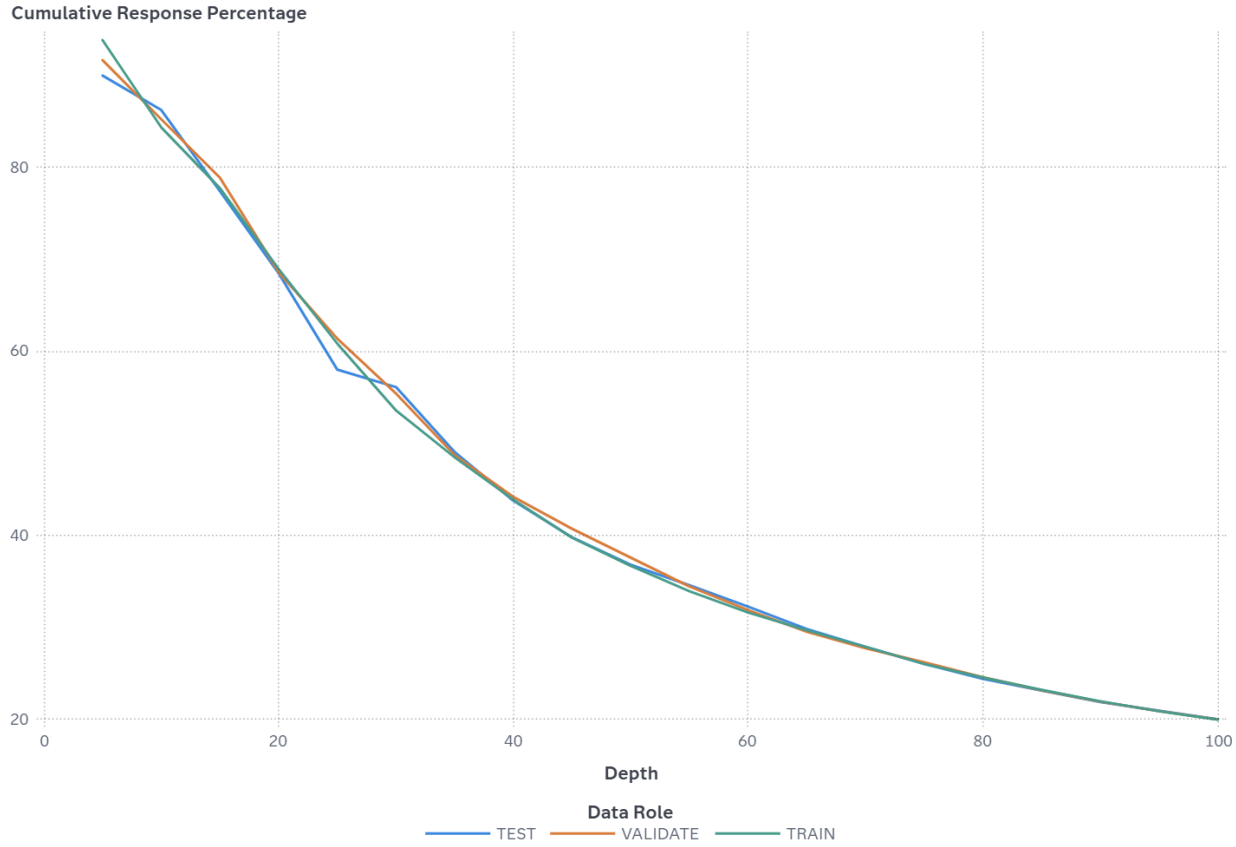
At the 5% quantile (depth of 5), the VALIDATE partition has a Response percentage of 91.7. The best possible value of Response percentage for this partition at depth 5 is 100.

At the 5% quantile (depth of 5), the TRAIN partition has a Response percentage of 93.9. The best possible value of Response percentage for this partition at depth 5 is 100.

At the 5% quantile (depth of 5), the TEST partition has a Response percentage of 90. The best possible value of Response percentage for this partition at depth 5 is 100.

Response percentage is calculated by sorting each partition in descending order by the predicted probability of the target event P_BAD1, which represents the predicted probability of the event "1" for the target BAD. The data is divided into 20 quantiles (demi-deciles, with 5% of the data in each), and the number of events in each quantile is computed. Response percentage is the percentage of observations that are events in that quantile. With no model, it is expected that the response percentage is constant across quantiles, 100*overall-event-rate. This is also called the baseline response percentage.

Cumulative Response Percentage



In the top 10% of the data (depth 10), the VALIDATE partition has a Cumulative response percentage of 85.2. The best possible value of Cumulative response percentage for this partition at depth 10 is 100.

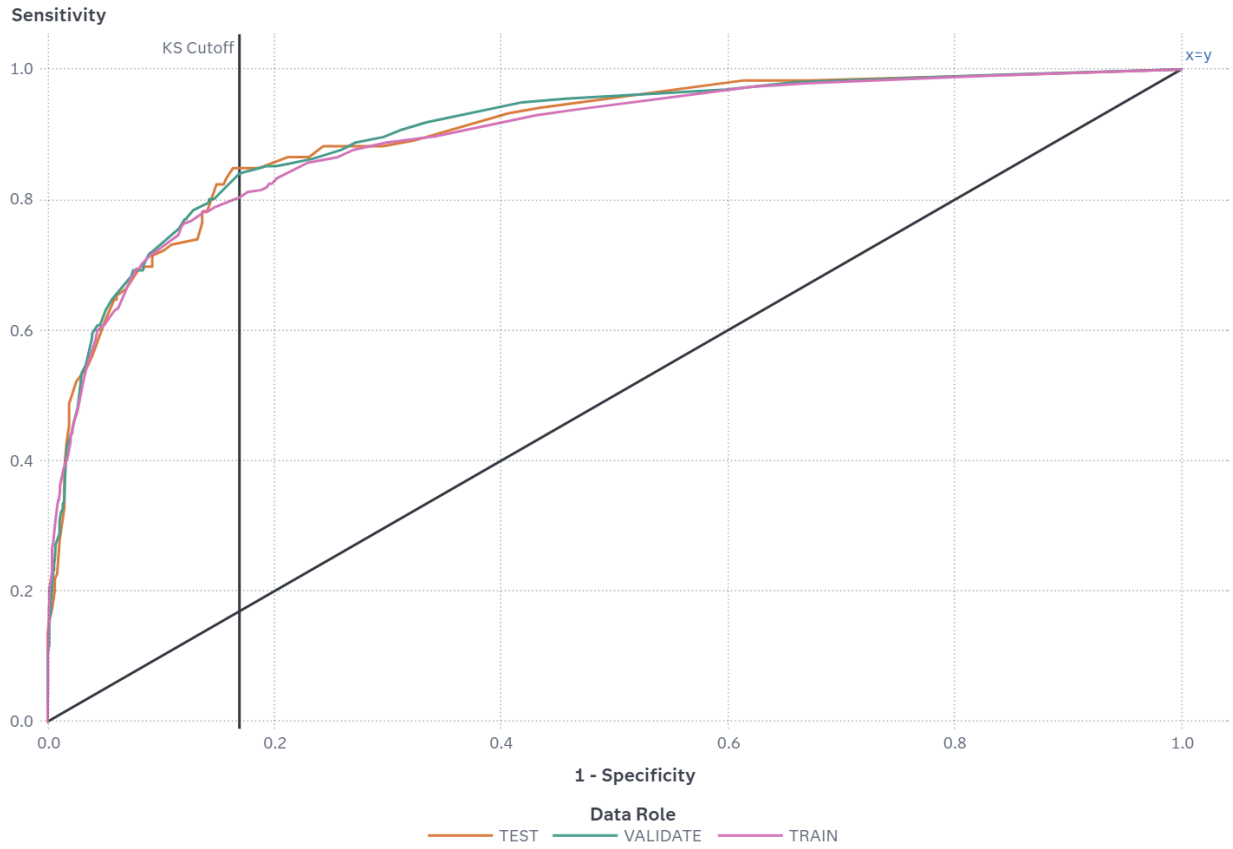
In the top 10% of the data (depth 10), the TRAIN partition has a Cumulative response percentage of 84.4. The best possible value of Cumulative response percentage for this partition at depth 10 is 100.

In the top 10% of the data (depth 10), the TEST partition has a Cumulative response percentage of 86.3. The best possible value of Cumulative response percentage for this partition at depth 10 is 100.

Cumulative response percentage is calculated by sorting in descending order each partition of the data by the predicted probability of the target event P_BAD1, which represents the predicted probability of the event "1" for the target BAD. The data is divided into 20 quantiles (demi-deciles, with 5% of the data in each), and the number of events in each quantile is computed. The cumulative response percentage for a particular quantile is the percentage of observations that are events in the quantiles up

to and including the current quantile. With no model, it is expected that the response percentage is constant across quantiles, 100*overall-event-rate. This is also called the baseline response percentage.

ROC



The ROC curve is a plot of sensitivity (the true positive rate) against 1-specificity (the false positive rate), which are both measures of classification based on the confusion matrix. These measures are calculated at various cutoff values. To help identify the best cutoff to use when scoring your data, the KS Cutoff reference line is drawn at the value of 1-specificity where the greatest difference between sensitivity and 1-specificity is observed for the VALIDATE partition. The KS Cutoff line is drawn at the cutoff value 0.2, where the 1-specificity value is 0.169 and the sensitivity value is 0.84.

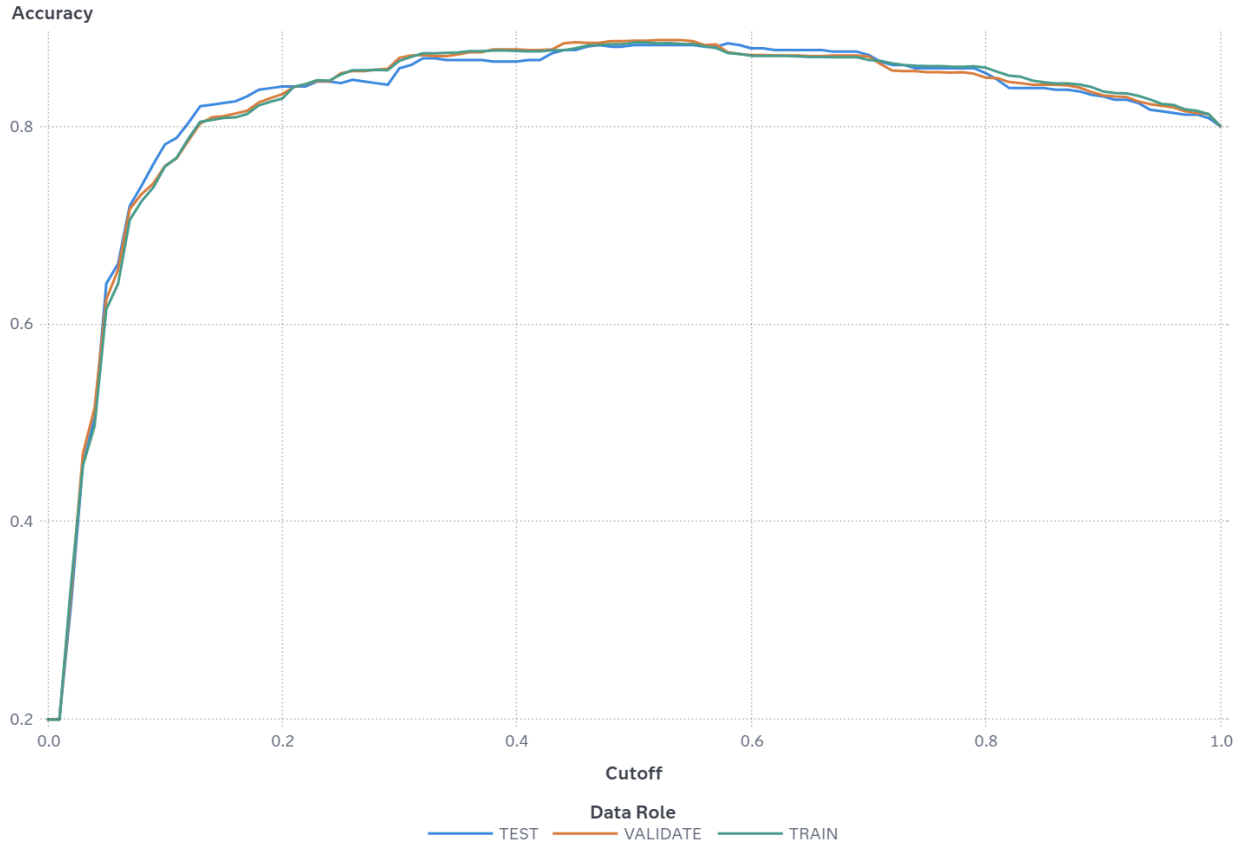
Cutoff values range from 0 to 1, inclusive, in increments of 0.01. At each cutoff value, the predicted target classification is determined by whether P_BAD1, which is the predicted probability of the event "1" for the target BAD, is greater than or equal to the cutoff value. When P_BAD1 is greater than or equal to the cutoff value, then the predicted classification is the event, otherwise it is a non-event.

The confusion matrix for each cutoff value contains four cells that display the true positives for events that are correctly classified (TP), false positives for non-events that are classified as events (FP), false negatives for events that are classified as non-events (FN), and true negatives for non-events that are classified as non-events (TN).

True negatives include non-event classifications that specify a different non-event. Sensitivity is calculated as TP / (TP + FN). Specificity, the true negative rate, is calculated as TN / (TN + FP), so 1-specificity is FP / (TN + FP). The values of sensitivity and 1-specificity are plotted at each cutoff value.

A ROC curve that rapidly approaches the upper-left corner of the graph, where the difference between sensitivity and 1-specificity is the greatest, indicates a more accurate model. A diagonal line where sensitivity = 1-specificity indicates a random model.

Accuracy



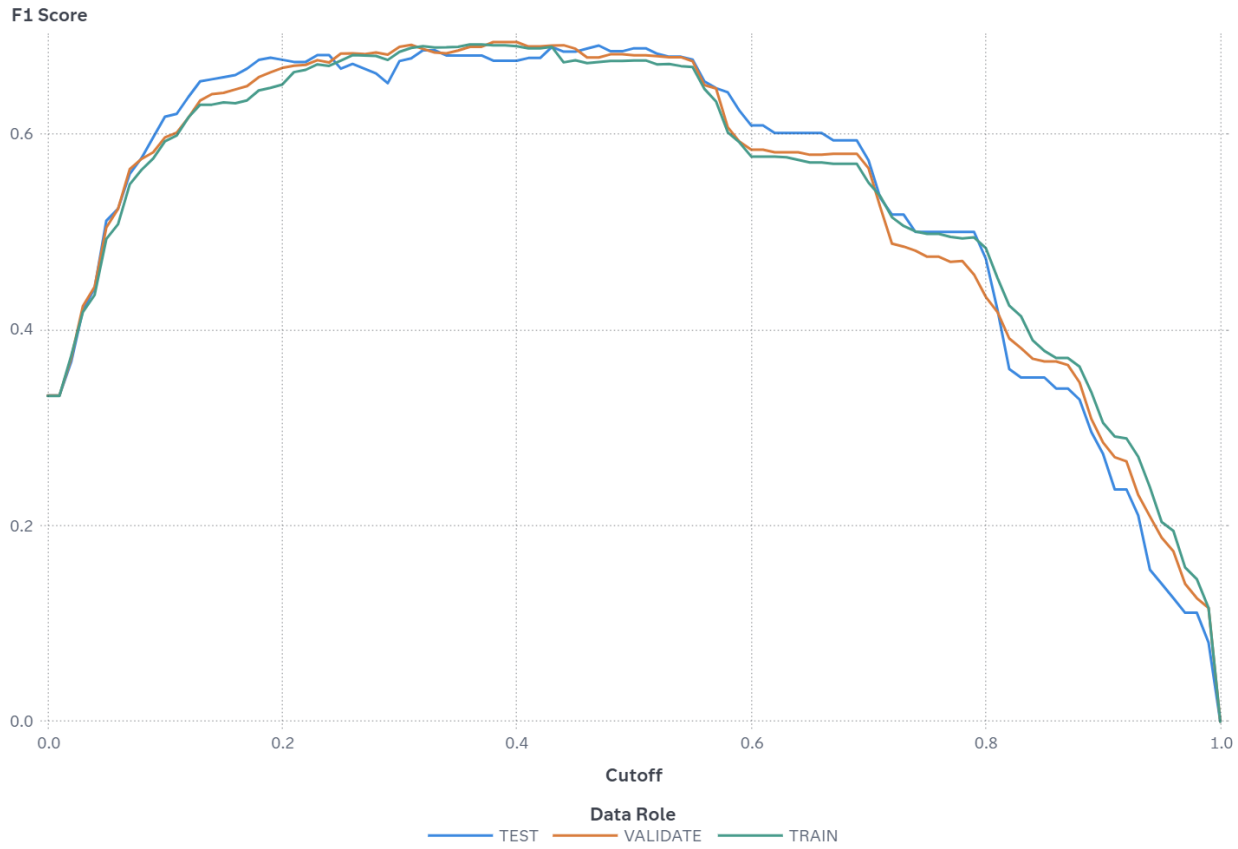
For this model, the accuracy in the TEST partition at the cutoff of 0.5 is 0.883.

For this model, the accuracy in the TRAIN partition at the cutoff of 0.5 is 0.885.

For this model, the accuracy in the VALIDATE partition at the cutoff of 0.5 is 0.887.

Accuracy is the proportion of observations that are correctly classified as either an event or non-event, calculated at various cutoff values. Cutoff values range from 0 to 1, inclusive, in increments of 0.01. At each cutoff value, the predicted target classification is determined by whether P_BAD1, which is the predicted probability of the event "1" for the target BAD, is greater than or equal to the cutoff value. When P_BAD1 is greater than or equal to the cutoff value, then the predicted classification is the event, otherwise it is a non-event. When the predicted classification and the actual classification are both events (true positives) or both non-events (true negatives), the observation is correctly classified. If the predicted classification and actual classification disagree, then the observation is incorrectly classified. Accuracy is calculated as (true positives + true negatives) / (total observations).

F1 Score



For this model, the F1 score in the TEST partition at the cutoff of 0.5 is 0.688.

For this model, the F1 score in the TRAIN partition at the cutoff of 0.5 is 0.675.

For this model, the F1 score in the VALIDATE partition at the cutoff of 0.5 is 0.68.

The F1 score combines the measures of precision and recall (or sensitivity), which are measures of classification based on the confusion matrix that are calculated at various cutoff values. Cutoff values range from 0 to 1, inclusive, in increments of 0.01. At each cutoff value, the predicted target classification is determined by whether P_BAD1, which is the predicted probability of the event "1" for the target BAD, is greater than or equal to the cutoff value. When P_BAD1 is greater than or equal to the cutoff value, then the predicted classification is the event, otherwise it is a non-event.

The confusion matrix for each cutoff value contains four cells that display the true positives for events that are correctly classified (TP), false positives for non-events that are classified as events (FP), false negatives for events that are classified as non-events (FN), and true negatives for non-events that are classified as non-events (TN).

True negatives include non-event classifications that specify a different non-event.

Precision is calculated as TP / (TP + FP), and recall (or sensitivity) is calculated as TP / (TP + FN). The F1 score is calculated as 2*Precision*Recall / (Precision + Recall), which is the harmonic mean of Precision and Recall. Larger F1 scores indicate a more accurate model.

Fit Statistics

Target Name	Data Role	Partition Indicator	Formatted Partition
BAD	TEST	2	2
BAD	TRAIN	1	1
BAD	VALIDATE	0	0

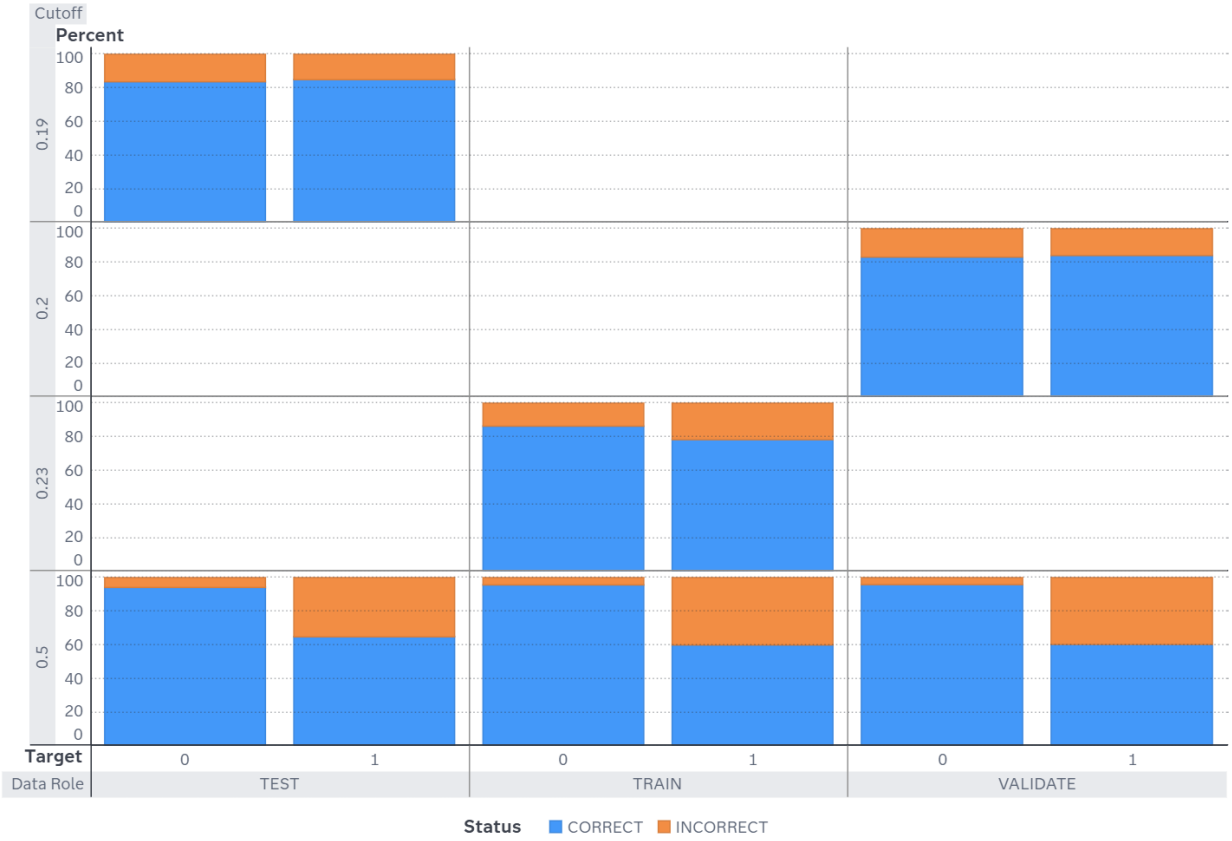
Number of Observations	Average Squared Error	Divisor for ASE	Root Average Squared Error
596	0.0880	596	0.2967
3,576	0.0883	3,576	0.2971
1,788	0.0872	1,788	0.2952

Misclassification Rate	Multi-Class Log Loss	KS (Youden)	Area Under ROC
0.1174	0.2926	0.6852	0.9010
0.1149	0.2955	0.6457	0.8955
0.1130	0.2898	0.6712	0.9039

Gini Coefficient	Gamma	Tau	KS Cutoff
0.8021	0.8169	0.2568	0.1900
0.7910	0.8048	0.2526	0.2300
0.8077	0.8190	0.2583	0.2000

KS at User-Specified Cutoff	Misclassification Rate at KS Cutoff (Event)	Misclassification Rate (Event)
0.5884	0.1611	0.1174
0.5552	0.1530	0.1149
0.5603	0.1672	0.1130

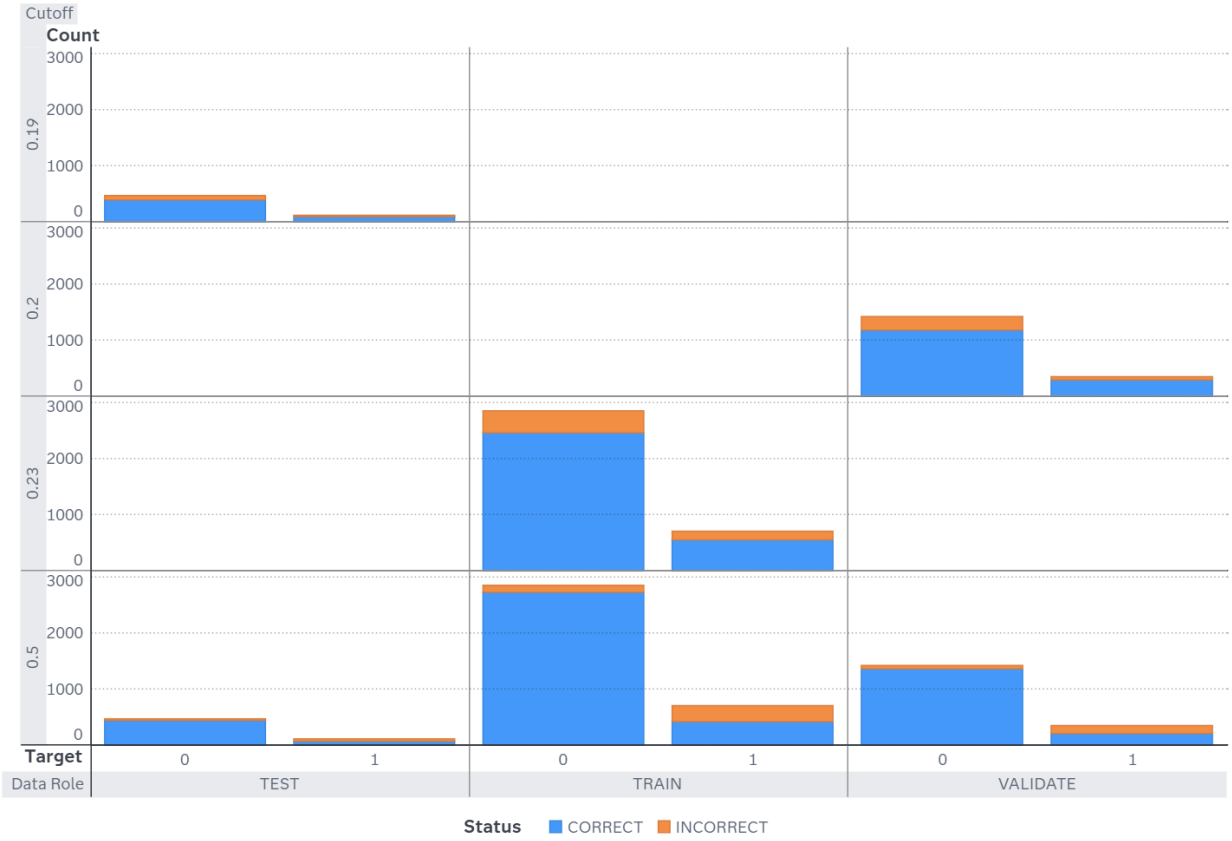
Percentage Plot



The Event Classification report is a visual representation of the confusion matrix at various cutoff values for each partition. The classification cutoffs used in the plot are the default (0.5) and these KS cutoff values for existing partitions: 0.23 (TRAIN), 0.2 (VALIDATE), 0.19 (TEST).

For this data, for the bar corresponding to the event level of BAD, "1", the segment of the bar colored as "CORRECT" corresponds to true positives.

Count Plot



The Event Classification report is a visual representation of the confusion matrix at various cutoff values for each partition. The classification cutoffs used in the plot are the default (0.5) and these KS cutoff values for existing partitions: 0.23 (TRAIN), 0.2 (VALIDATE), 0.19 (TEST).

For this data, for the bar corresponding to the event level of BAD, "1", the segment of the bar colored as "CORRECT" corresponds to true positives.

Table

Cutoff	Cutoff Source	Target Name	Response
0.1900	KS	BAD	CORRECT
0.1900	KS	BAD	INCORRECT
0.1900	KS	BAD	CORRECT
0.1900	KS	BAD	INCORRECT
0.2000	KS	BAD	CORRECT
0.2000	KS	BAD	INCORRECT
0.2000	KS	BAD	CORRECT
0.2000	KS	BAD	INCORRECT
0.2300	KS	BAD	CORRECT
0.2300	KS	BAD	INCORRECT
0.2300	KS	BAD	CORRECT
0.2300	KS	BAD	INCORRECT
0.5000	Default	BAD	CORRECT
0.5000	Default	BAD	INCORRECT
0.5000	Default	BAD	CORRECT
0.5000	Default	BAD	INCORRECT

Event	Value	Training Frequency	Validation Frequency
1	True Positive		
1	False Negative		
0	True Negative		
0	False Positive		
1	True Positive		300
1	False Negative		57
0	True Negative		1,189
0	False Positive		242
1	True Positive	558	

Event	Value	Training Frequency	Validation Frequency
1	False Negative	155	
0	True Negative	2,471	
0	False Positive	392	
1	True Positive	427	215
1	False Negative	286	142
0	True Negative	2,738	1,371
0	False Positive	125	60

Test Frequency	Training Percentage	Validation Percentage	Test Percentage
101			84.8739
18			15.1261
399			83.6478
78			16.3522
		84.0336	
		15.9664	
		83.0887	
		16.9113	
	78.2609		
	21.7391		
	86.3081		
	13.6919		
77	59.8878	60.2241	64.7059
42	40.1122	39.7759	35.2941
449	95.6340	95.8071	94.1300
28	4.3660	4.1929	5.8700

Properties

Property Name	Property Value
actFunc1	TANH
actFunc10	TANH
actFunc2	TANH
actFunc3	TANH
actFunc4	TANH
actFunc5	TANH
actFunc6	TANH
actFunc7	TANH
actFunc8	TANH
actFunc9	TANH
actFuncAll	TANH
adverseVarEditor	
analysisVariables	GROUP
annealingRate	0.0000
atAppendLookup	false
atCreateHistory	false
atHistoryLibUri	
atHistoryTblName	
atLookupTableUri	
atMaxBayes	100
atMaxEval	50
atMaxIter	5
atMaxTime	60
atObjectiveInt	ASE
atObjectiveNom	KS
atPopSize	10
atSampleSize	50
atSearchMethod	GA

Property Name	Property Value
atTrainProp	0.7000
atUseLookup	false
atValidFold	5
atValidMethod	PARTITION
atValidProp	0.3000
atannealingRate	true
atannealingRateInit	0.0010
atannealingRateLB	0.0000
atannealingRateUB	0.1000
atbagFreqInitLgbm	0
atbagFreqLBLgbm	0
atbagFreqLgbm	true
atbagFreqUBLgbm	7
atbagPctInitLgbm	0.5000
atbagPctLBLgbm	0.2000
atbagPctLgbm	true
atbagPctUBLgbm	0.9500
atinputPctInitLgbm	1
atinputPctLBLgbm	0.1000
atinputPctLgbm	true
atinputPctUBLgbm	1
atintervalBins	true
atintervalBinsInit	50
atintervalBinsLB	20
atintervalBinsUB	100
atlasso	true
atlassoInit	0
atlassoLB	0
atlassoUB	10

Property Name	Property Value
atleafSize	false
atleafSizeInit	5
atleafSizeLB	1
atleafSizeUB	100
atlearningRate	true
atlearningRateInit	0.0010
atlearningRateLB	0
atlearningRateUB	0.1000
atlearnrt	true
atlearnrtInit	0.1000
atlearnrtLB	0.0100
atlearnrtUB	1
atmaxTrees	true
atmaxTreesInit	100
atmaxTreesLB	20
atmaxTreesUB	150
atmaxdepth	true
atmaxdepthInit	4
atmaxdepthLB	1
atmaxdepthUB	6
atnhidden	true
atnhiddenInit	1
atnhiddenLB	0
atnhiddenUB	2
atntrees	true
atntreesInit	100
atntreesLB	20
atntreesUB	150
atnunitsInit	1

Property Name	Property Value
atnunitsLB	1
atnunitsUB	100
atridge	true
atridgeInit	1
atridgeLB	0
atridgeUB	10
atsamprt	true
atsamprtInit	0.5000
atsamprtLB	0.1000
atsamprtUB	1
attrainFraction	true
attrainFractionInit	0.6000
attrainFractionLB	0.1000
attrainFractionUB	0.9000
atvarsToTry	true
atvarsToTryInit	100
atvarsToTryLB	1
atvarsToTryUB	100
atweightDecay1	true
atweightDecay1Init	0
atweightDecay1LB	0
atweightDecay1UB	10
atweightDecay2	true
atweightDecay2Init	0
atweightDecay2LB	0
atweightDecay2UB	10
autotune_enabled	false
badRate	2.5000
bagFractionLgbm	0.5000

Property Name	Property Value
bagFreqLgbm	0
binaryProbCutoff	0.5000
blackBoxModel	TREE
bn_alpha	0.2000
bn_atAppendLookup	false
bn_atCreateHistory	false
bn_atHistoryLibUri	
bn_atHistoryTblName	
bn_atLookupTableUri	
bn_atMaxBayes	100
bn_atMaxEval	50
bn_atMaxIter	5
bn_atMaxParents	true
bn_atMaxParentsInit	5
bn_atMaxParentsLB	1
bn_atMaxParentsUB	5
bn_atMaxTime	60
bn_atNBin	true
bn_atNBinInit	10
bn_atNBinLB	2
bn_atNBinUB	20
bn_atObjectiveInt	ASE
bn_atObjectiveNom	KS
bn_atParenting	true
bn_atParentingVals	BESTONE

Property Name	Property Value
	BESTSET
bn_atPopSize	10
bn_atSampleSize	50
bn_atSearchMethod	GA
bn_atStructureVals	NAIVE TAN PC
bn_atTrainProp	0.7000
bn_atUseLookup	false
bn_atValidFold	5
bn_atValidMethod	PARTITION
bn_atValidProp	0.3000
bn_autotune_enabled	false
bn_bestMaxParents	true
bn_indepTest	GSQUARE
bn_maxParents	5
bn_missingInt	IGNORE
bn_missingNom	IGNORE
bn_nBin	10
bn_parenting	BESTSET
bn_preScreen	true
bn_structure	NAIVE TAN PC
bn_varSelect	false
boostingLgbm	GBDT
bucketMethod	MINMAX
chooseCriterion	SBC
classDistrLgbm	MULTICLASS
classOrder	FMTASC
costAcceptedBad	50,000
criterionMethod	IGR

Property Name	Property Value
currentApprovalRate	70
dataMiningVersion	V2025.06
defaultVarsPerTree	true
deterministicLgbm	false
directConn	false
displayNoInfo	false
distribution	GAUSSIAN
dnnAlg	ADAM
dnnBeta1	0.9000
dnnBeta2	0.9990
dnnClipGradMax	0
dnnClipGradMin	0
dnnGamma	0.1000
dnnLRPolicy	FIXED
dnnMaxEpochs	10
dnnMomentum	0.9000
dnnPower	0.7500
dnnStepSize	10
earlyStop	true
earlyStopMethod	STAGNATION
esMetric	MCR
esMinimum	false
esThreshold	0
esThresholdIter	0
exactPctlLift	true
explainFidelity	false
explainInfo	false
factorInteractions	false

Property Name	Property Value
factorSplit	false
forceEffects	0
freeze	NONE
gb_atAppendLookup	false
gb_atCreateHistory	false
gb_atHistoryLibUri	
gb_atHistoryTblName	
gb_atLookupTableUri	
gb_atUseLookup	false
generateCharAnalysis	false
generateIntercept	false
generateVifAnalysis	false
goal	0
hidden1	50
hidden10	50
hidden2	50
hidden3	50
hidden4	50
hidden5	50
hidden6	50
hidden7	50
hidden8	50
hidden9	50
hiddenAll	true
hiddenAllNum	50
hiddenDropout	0

Property Name	Property Value
hierarchy	NONE
iCriterionMethod	VARIANCE
icePlots	false
informativeMiss	false
inputDropout	0
inputFractionLgbm	1
inputStd	MIDRANGE
intBinMethod	QUANTILE
interactiveModel	false
interactivePoints	false
interactiveRanges	false
intervalBins	50
intervalDistrLgbm	REGRESSION
lasso	0
leafProp	0.0001
leafSize	5
leafSpec	COUNT
learningRate	0.1000
lightGBM_enabled	false
loh	0
marginalGini	false
marginalIv	false
maxBranch	2
maxCategories	128
maxDepth	4
maxEffects	0
maxIter	300
maxNumShapVars	20
maxSteps	0

Property Name	Property Value
maxTime	0
maxTrees	100
minEffects	0
minLeafSize	5
minUseInSearch	1
miniBatchSize	50
missAsLevl	false
missAsLvl	false
missingLgbm	true
missingValue	USEINSEARCH
modelOrderingEditor	
momentum	0
nBins	50
nHidden	1
nn_atAppendLookup	false
nn_atCreateHistory	false
nn_atHistoryLibUri	
nn_atHistoryTblName	
nn_atLookupTableUri	
nn_atMaxBayes	100
nn_atMaxEval	50
nn_atMaxIter	5
nn_atMaxTime	60
nn_atObjectiveInt	ASE
nn_atObjectiveNom	KS
nn_atPopSize	10

Property Name	Property Value
nn_atSampleSize	50
nn_atSearchMethod	GA
nn_atTrainProp	0.7000
nn_atUseLookup	false
nn_atValidFold	5
nn_atValidMethod	PARTITION
nn_atValidProp	0.3000
nn_autotune_enabled	false
nn_earlyStop	true
nn_learningRate	0.0010
nn_stagnation	5
noInfo	NEUTRAL
normalize	true
ntrees	100
numAdverse	3
numCorrections	6
numTries	1
numberOfBuckets	10
odds	50
optTech	AUTOMATIC
pdNumImportantInputs	5
pdObsSamples	1,000
pdPlots	false
performKernelShap	false
performLime	false
performVI	false
pointsToDoubleOdd	20

Property Name	Property Value
s	
polynomialDegree	2
power	1.5000
precision	0
randomSeed	12,345
reportAdverse	false
revenueAcceptedGood	1,000
reverseScore	false
rf_atMaxBayes	100
rf_atMaxEval	50
rf_atMaxIter	5
rf_atMaxTime	60
rf_atObjectiveInt	ASE
rf_atObjectiveNom	KS
rf_atPopSize	10
rf_atSampleSize	50
rf_atSearchMethod	GA
rf_atTrainProp	0.7000
rf_atValidFold	5
rf_atValidMethod	PARTITION
rf_atValidProp	0.3000
rf_atintBinsInit	50
rf_atintervalBins	true
rf_atintervalBinsLB	20
rf_atintervalBinsUB	100
rf_atleafSize	false
rf_atleafSizeInit	5
rf_atleafSizeLB	1

Property Name	Property Value
rf_atleafSizeUB	100
rf_atmaxDepth	true
rf_atmaxDepthInit	20
rf_atmaxDepthLB	1
rf_atmaxDepthUB	29
rf_atvarsToTry	true
rf_atvarsToTryInit	100
rf_atvarsToTryLB	1
rf_atvarsToTryUB	100
rf_autotune_enabled	false
rf_defVarsPerTree	true
rf_intBinMethod	QUANTILE
rf_intervalBins	50
rf_maxBranch	2
rf_maxCategories	128
rf_maxDepth	20
rf_minUseInSearch	1
rf_missingValue	USEINSEARCH
rf_seed	12,345
rf_varsToTry	100
ridge	1
scoreOutvars	COMPLETE
scorecardPoints	900
scorecardType	DETAILED
seed	12,345
seedId	12,345
selectCriterion	SBC
selectMethod	STEPWISE

Property Name	Property Value
sgdSeed	12,345
slEntry	0.0500
slStay	0.0500
smoteApply	false
smoteMultiplier	3
smoteNNCount	5
smoteSeed	12,345
specifyRows	RANDOM
stagnation	5
stopCriterion	SBC
subsampleRate	0.5000
sv_activeTolerance	0.0001
sv_atAppendLookup	false
sv_atCreateHistory	false
sv_atDegree	true
sv_atDegreeInit	2
sv_atHistoryLibUri	
sv_atHistoryTblName	
sv_atKernel	true
sv_atKernelInit	LINEAR
sv_atKernelVals	LINEAR POLYNOM RBF SIGMOID
sv_atL2Penalty	false
sv_atL2PenaltyInit	0.1000
sv_atL2PenaltyLB	0.1000
sv_atL2PenaltyUB	100
sv_atLookupTableUr	

Property Name	Property Value
i	
sv_atMaxBayes	100
sv_atMaxEval	50
sv_atMaxIter	5
sv_atMaxTime	60
sv_atMethod	true
sv_atMethodActiveSet	true
sv_atMethodCD	true
sv_atMethodIpoint	true
sv_atObjectiveInt	ASE
sv_atObjectiveNom	KS
sv_atPenalty	true
sv_atPenaltyInit	1
sv_atPenaltyLB	0.0000
sv_atPenaltyUB	100
sv_atPopSize	10
sv_atRbfKpar	true
sv_atRbfKparInit	0.1000
sv_atRbfKparLB	0.1000
sv_atRbfKparUB	100
sv_atSampleSize	50
sv_atSearchMethod	GA
sv_atSigmoidKpar1	true
sv_atSigmoidKpar1Int	0.1000
sv_atSigmoidKpar1LB	0.1000
sv_atSigmoidKpar1UB	10

Property Name	Property Value
sv_atSigmoidKpar2	true
sv_atSigmoidKpar2Int	-0.1000
sv_atSigmoidKpar2LB	-10
sv_atSigmoidKpar2UB	-0.1000
sv_atTrainProp	0.7000
sv_atUseLookup	false
sv_atValidFold	5
sv_atValidMethod	PARTITION
sv_atValidProp	0.3000
sv_autotune_enabled	false
sv_degree	2
sv_earlyStop	false
sv_iterReport	false
sv_kernel	LINEAR
sv_maxIter	25
sv_maxItercd	100
sv_maxsv	3,500
sv_methodLinear	IPOINT
sv_methodNonlin	ACTIVESET
sv_methodPolyLow	IPOINT
sv_missAsLvl	false
sv_penalty	1
sv_penaltytype	REGL1
sv_scale	true
sv_seed	12,345
sv_sigmoidKpar1	1

Property Name	Property Value
sv_sigmoidKpar2	-1
sv_tolerance	0.0000
targetAct	IDENTITY
targetError	NORMAL
targetStd	MIDRANGE
tech	NRRIDG
templateRevision	13
tolerance	0
tomekApply	false
tr_alpha	0.2000
tr_atAppendLookup	false
tr_atCreateHistory	false
tr_atHistoryLibUri	
tr_atHistoryTblName	
tr_atLookupTableUri	
tr_atMaxBayes	100
tr_atMaxEval	50
tr_atMaxIter	5
tr_atMaxTime	60
tr_atObjectiveInt	ASE
tr_atObjectiveNom	KS
tr_atPopSize	10
tr_atSampleSize	50
tr_atSearchMethod	GA
tr_atTrainProp	0.7000
tr_atUseLookup	false
tr_atValidFold	5
tr_atValidMethod	PARTITION

Property Name	Property Value
tr_atValidProp	0.3000
tr_atgrowcrit	true
tr_atgrowcritValsi	VARIANCE FTEST CHAID
tr_atgrowcritValsn	ENTROPY CHAID IGR GINI CHISQUARE
tr_atleafSize	false
tr_atleafSizeInit	5
tr_atleafSizeLB	1
tr_atleafSizeUB	100
tr_atmaxdepth	true
tr_atmaxdepthInit	10
tr_atmaxdepthLB	1
tr_atmaxdepthUB	19
tr_atnumbin	true
tr_atnumbinInit	50
tr_atnumbinLB	20
tr_atnumbinUB	200
tr_autotune_enabled	true
tr_bonferroni	false
tr_ccAlpha	0
tr_confidence	0.2500
tr_criterionMethod	IGR
tr_cvccFolds	10
tr_embeddedBarChart	true
tr_hLeafSize	5
tr_iCriterionMethod	VARIANCE

Property Name	Property Value
tr_inodeColor	AVERAGE
tr_intBinMethod	QUANTILE
tr_intervalBins	50
tr_maxBranch	2
tr_maxCategories	128
tr_maxDepth	10
tr_minUseinsearch	1
tr_missingValue	USEINSEARCH
tr_nPLeaves	1
tr_nodeColor	PROBEVENT
tr_pruningMethod	COSTCOMPLEXITY
tr_seRule	false
tr_seed	12,345
tr_selMethod	AUTOMATIC
tr_useVarOnce	false
trainFraction	0.6000
truncateLl	5
truncateUl	95
useBlackBoxModel	false
useIndet	false
useLocking	false
usePolynomial	false
useSpline	false
useSplineSplit	false
userProbCutoff	false
varsToTry	100
voteMethod	PROBABILITY
weightDecay	0.1000

Property Name	Property Value
weightDecay1	0

Output

The SAS System

The GENSELECT Procedure

Model Information	
Data Source	_INPUT_47V0ONESTREP8AWGPF7O88SC4
Response Variable	BAD
Distribution	Binary
Link Function	Logit
Optimization Technique	Newton-Raphson with Ridging
Predicted Response Level	I_BAD

Number of Observations				
Description	Total	Training	Validation	Testing
Number of Observations Read	5960	3576	1788	596
Number of Observations Used	5960	3576	1788	596

Response Profile					
Ordered Value	BAD	Total Frequency	Training	Validation	Testing
1	0	4771	2863	1431	477
2	1	1189	713	357	119

Probability modeled is BAD = 1.

Class Level Information		
Class	Levels	Values
GRP_CLAGE	6	1 2 3 4 5 6
GRP_DEBTINC	5	1 2 3 4 5
GRP_DELINQ	3	1 2 3
GRP_DEROG	2	1 2
GRP_JOB	5	1 2 3 4 5
GRP_LOAN	4	2 3 4 5
GRP_NINQ	5	1 2 3 4 5
GRP_VALUE	4	1 2 3 4

Selection Information	
Selection Method	Stepwise
Select Criterion	SBC
Choose Criterion	SBC
Stop Criterion	SBC
Effect Hierarchy Enforced	None
Stop Horizon	3

Selection Details

Convergence criterion (FCONV=1E-7) satisfied

Selection Summary			
Step	Effect Entered	Number Effects In	SBC
0	Intercept	1	3580.9520
1	GRP_DEBTINC	2	2487.7370
2	GRP_DELINQ	3	2430.5993
3	GRP_VALUE	4	2355.0107
4	GRP_DEROG	5	2274.7933
5	GRP_CLAGE	6	2245.126†

† Optimal Value Of Criterion

Stepwise selection stopped because adding or removing an effect does not improve the SBC criterion

The model at step 5 is selected where SBC is 2245.126

Selected Effects: Intercept GRP_CLAGE GRP_DEBTINC GRP_DELINQ GRP_DEROG GRP_VALUE

Selected Model

Dimensions	
Columns in Design	21
Number of Effects	6
Max Effect Columns	6
Rank of Design	16
Parameters in Optimization	16

Fit Statistics			
Description	Training	Validation	Testing
-2 Log Likelihood	2113.76894	1036.16319	348.78895
AIC (smaller is better)	2145.76894	1068.16319	380.78895
AICC (smaller is better)	2145.92179	1068.47036	381.72850
SBC (smaller is better)	2244.68094	1155.98483	451.03280
Average Square Error	0.08828	0.08716	0.08803

Parameter Estimates					
Parameter	DF	Estimate	Standard Error	Chi-Square	Pr > ChiSq
Intercept	1	-2.266997	0.217175	108.9635	<.0001
GRP_CLAGE 1	1	1.373361	0.287410	22.8332	<.0001
GRP_CLAGE 2	1	1.352260	0.199821	45.7973	<.0001
GRP_CLAGE 3	1	0.881750	0.202373	18.9838	<.0001
GRP_CLAGE 4	1	0.889074	0.236376	14.1472	0.0002
GRP_CLAGE 5	1	0.288978	0.196508	2.1626	0.1414
GRP_CLAGE 6	0	0	.	.	.
GRP_DEBTINC 1	1	1.125210	0.174408	41.6231	<.0001
GRP_DEBTINC 2	1	-2.108575	0.227374	85.9993	<.0001
GRP_DEBTINC 3	1	-1.763647	0.189925	86.2304	<.0001
GRP_DEBTINC 4	1	-1.336410	0.264483	25.5319	<.0001
GRP_DEBTINC 5	0	0	.	.	.
GRP_DELINQ 1	1	2.457248	0.229648	114.4909	<.0001
GRP_DELINQ 2	1	1.126020	0.140594	64.1445	<.0001
GRP_DELINQ 3	0	0	.	.	.
GRP_DEROG 1	1	1.183939	0.151308	61.2255	<.0001
GRP_DEROG 2	0	0	.	.	.
GRP_VALUE 1	1	4.405014	0.653195	45.4788	<.0001
GRP_VALUE 2	1	0.624404	0.176723	12.4837	0.0004
GRP_VALUE 3	1	0.073291	0.129243	0.3216	0.5707
GRP_VALUE 4	0	0	.	.	.

Score Code Variables for Predicted Probability	
BAD	Variable
1	P_BAD1
0	P_BAD0

Task Timing		
Task	Seconds	Percent
Setup and Parsing	0.00	4.29%
Levelization	0.00	3.03%
Model Initialization	0.00	1.00%
SSCP Computation	0.00	4.58%
Model Selection	0.09	85.52%
Producing Score Code	0.00	1.14%
Display	0.00	0.29%
Cleanup	0.00	0.00%
Total	0.10	100.00%

Scorecard

Obs	Variable	Group	Label	Scorecard Points
1	CLAGE	-2	WeightedAverage	151
2	CLAGE	1	_MISSING_	131
3	CLAGE	2	CLAGE < 106.49	131
4	CLAGE	3	106.49 <= CLAGE < 144.07	145
5	CLAGE	4	144.07 <= CLAGE < 172.17	145
6	CLAGE	5	172.17 <= CLAGE < 247.97	162
7	CLAGE	6	247.97 <= CLAGE	171
8	DEBTINC	-2	WeightedAverage	201
9	DEBTINC	1	_MISSING_	138
10	DEBTINC	2	DEBTINC < 30.33	231
11	DEBTINC	3	30.33 <= DEBTINC < 39.91	221
12	DEBTINC	4	39.91 <= DEBTINC < 41.48	209
13	DEBTINC	5	41.48 <= DEBTINC	171
14	DELINQ	-2	WeightedAverage	162
15	DELINQ	1	12 | 15 | 3 | 4 | 5 | 6 | 7 | 8	100
16	DELINQ	2	1 | 2	138
17	DELINQ	3	0 | _MISSING_ | _UNKNOWN_	171
18	DEROG	-2	WeightedAverage	166
19	DEROG	1	1 | 10 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9	136
20	DEROG	2	0 | _MISSING_ | _UNKNOWN_	171
21	VALUE	-2	WeightedAverage	166
22	VALUE	1	_MISSING_	43
23	VALUE	2	VALUE < 49362	152
24	VALUE	3	49362 <= VALUE < 79087	168
25	VALUE	4	79087 <= VALUE	171