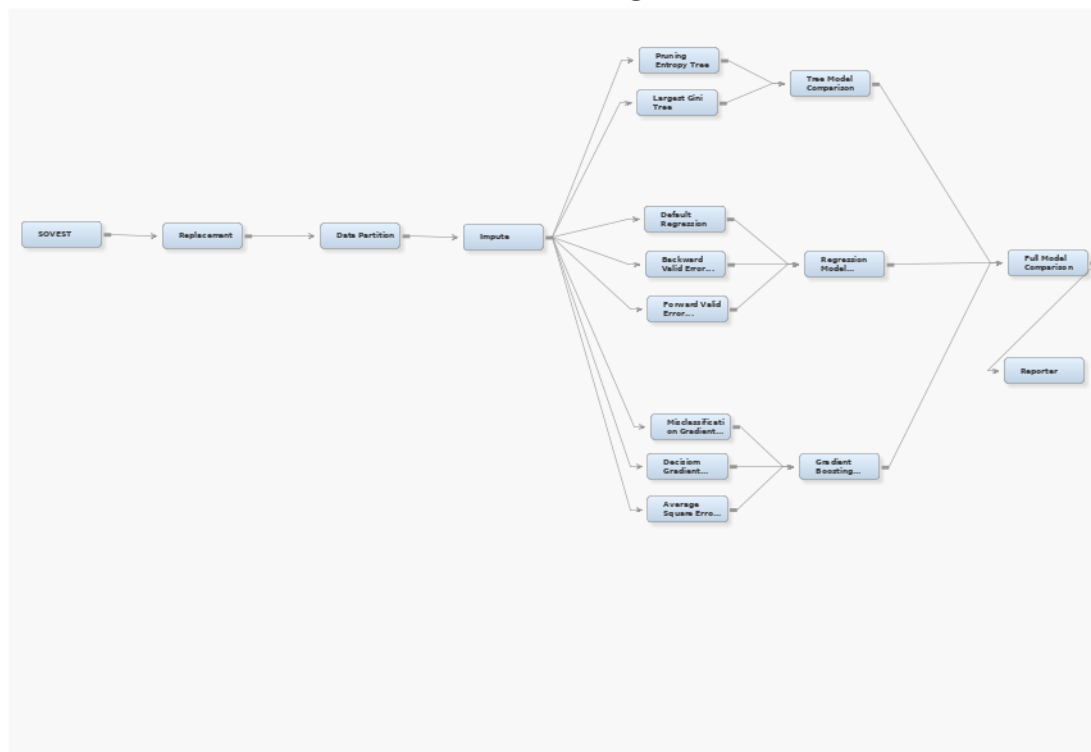# SAS Enterprise Miner Report

User   = u46564675
Date   = 18:19:22 June 07
Project   = SovestTest
Diagram   = test

Start Node = Report
Node label = Reporter
Nodes   = PATH
Showall   = N

Format   = PDF
Style   = LISTING

SAS Enterprise Miner Report

Node=SOVEST
Summary

Node id = lds
Node label = SOVEST
Meta path = lds
Notes =

Node=SOVEST
Properties

Property	Value	Default	Property	Value	Default	Property	Value	Default
Component	DataSource		DsCreatedBy	u46564675		NBytes	16909312	.
ApplyIntervalLevelLowerLimit	Y		DsId	sovest		NCols	36	.
ApplyMaxClassLevels	Y		DsModifiedBy	u46564675		NObs	56645	.
ApplyMaxPercentMissing	Y		DsModifyDate	1907063483.8		NewTable		
CMeta	WORK.M2IG0CLJ		DsSampleName			NewVariableRole	REJECT	
ComputeStatistics	N		DsSampleSize			OutputType	VIEW	
DBPassThrough	Y		DsSampleSizeType			Role	RAW	TRAIN
Data	SOVEST.SOVEST		DsScope	LOCAL		Sample	D	
DataSelection	DATASOURCE		IdentifyEmptyColumns	Y		SampleSizeObs	10000	
DataSource	sovest		IntervalLowerLimit	20		SampleSizePercent	20	
DataSourceRole	RAW		Library	SOVEST		SampleSizeType	PERCENT	
Description			MaxClassLevels	20		Scope	LOCAL	
DropMapVariables	Y		MaxPercentMissing	50		Segment		
DsCreateDate	1907063483.8		MetaAdvisor	BASIC		Table	SOVEST	

Node=SOVEST
Data Attributes

Attribute	Value	Attribute	Value	Attribute	Value
Data Name	SOVEST	Date Created	06Jun2020:11:39:48	Data Size	16909312
Data Type	DATA	Date Modified	06Jun2020:11:39:48	Role	RAW
Data Label		Number Rows	56645	Segment	
Engine	BASE	Number Columns	36	Data Library	SOVEST

Node=SOVEST
Variables List

Name	Label	Role	Level	Type	Length	Format	Creator
APPLICID	APPLICID	ID	NOMINAL	C	15	$15.	
AddressIdentical	AddressIdentical	INPUT	BINARY	N	8	BEST.	
AfsSumm	AfsSumm	INPUT	INTERVAL	N	8	BEST.	
Age	Age	INPUT	INTERVAL	N	8	BEST.	
AllCLC	AllCLC	INPUT	INTERVAL	N	8	BEST.	
ApprovedCreditSum	ApprovedCreditSum	INPUT	INTERVAL	N	8	BEST.	
BadAddressHome	BadAddressHome	INPUT	BINARY	N	8	BEST.	
BadAddressWork	BadAddressWork	INPUT	BINARY	N	8	BEST.	
BlockCnt	BlockCnt	INPUT	INTERVAL	N	8	BEST.	
BlockDur	BlockDur	INPUT	INTERVAL	N	8	BEST.	
Circle	Circle	INPUT	INTERVAL	N	8	BEST.	

Name	Label	Role	Level	Type	Length	Format	Creator
ConfirmedMonthlyIncome	ConfirmedMonthlyIncome	INPUT	INTERVAL	N	8	BEST.	
CountRejectRequestLast12Month	CountRejectRequestLast12Month	INPUT	ORDINAL	N	8	BEST.	
CountRejectRequestLast3Month	CountRejectRequestLast3Month	INPUT	ORDINAL	N	8	BEST.	
CountRejectRequestLast6Month	CountRejectRequestLast6Month	INPUT	ORDINAL	N	8	BEST.	
CountRejectRequestLastMonth	CountRejectRequestLastMonth	INPUT	ORDINAL	N	8	BEST.	
CountRequest	CountRequest	INPUT	INTERVAL	N	8	BEST.	
CreditHistoryStopFactors	CreditHistoryStopFactors	INPUT	BINARY	N	8	BEST.	
CreditLimit	CreditLimit	INPUT	INTERVAL	N	8	BEST.	
EducationStatus	EducationStatus	INPUT	NOMINAL	N	8	BEST.	
FactCity	FactCity	INPUT	NOMINAL	N	8	BEST.	
FamilyStatus	FamilyStatus	INPUT	NOMINAL	N	8	BEST.	
KolichestvoDetejMladshe18	KolichestvoDetejMladshe18	INPUT	INTERVAL	N	8	BEST.	
LifeTimeBin	LifeTimeBin	INPUT	INTERVAL	N	8	BEST.	
MainScoreValue	MainScoreValue	INPUT	INTERVAL	N	8	BEST.	
OrgStanding	OrgStanding	INPUT	INTERVAL	N	8	BEST.	
PTI	PTI	INPUT	INTERVAL	N	8	BEST.	
PayMax	PayMax	INPUT	INTERVAL	N	8	BEST.	
Rashod	Rashod	INPUT	INTERVAL	N	8	BEST.	
Score	Score	INPUT	INTERVAL	N	8	BEST.	
ScoreBinary	ScoreBinary	INPUT	BINARY	N	8	BEST.	
ScoreFICO	ScoreFICO	INPUT	INTERVAL	N	8	BEST.	
ScoreProba	ScoreProba	INPUT	INTERVAL	N	8	BEST.	
Sex	Sex	INPUT	BINARY	N	8	BEST.	
SumOtherPayment	SumOtherPayment	INPUT	INTERVAL	N	8	BEST.	
Target	Target	TARGET	BINARY	N	8	BEST.	

SAS Enterprise Miner Report

**Node=Replacement
Summary**

Node id = Repl
Node label = Replacement
Meta path = Ids => Repl
Notes =

**Node=Replacement
Properties**

Property	Value	Default	Property	Value	Default	Property	Value	Default
Component	Replace		IntervalMethod	NONE		SpacingsCutoff	9.0	9
CalcMethod	STDDEV		MADSCutoff	9.0	9	StddevCutoff	3.0	3
CountReport	Y		PercentsCutoff	0.5		UnknownLevel	NONE	MODE
HideVariable	N		ReplaceMethod	COMPUTED				

**Node=Replacement
Variable Summary**

Role	Level	Frequency Count	Name
INPUT	BINARY	6	AddressIdentical BadAddressHome BadAddressWork CreditHistoryStopFactors ScoreBinary Sex
INPUT	INTERVAL	21	AfsSumm Age AllCLC ApprovedCreditSum BlockCnt BlockDur Circle ConfirmedMonthlyIncome CountRequest CreditLimit KolichestvoDetejMladshe18 LifeTimeBin MainScoreValue OrgStanding PTI PayMax Rashod ...
INPUT	NOMINAL	3	EducationStatus FactCity FamilyStatus
INPUT	ORDINAL	4	CountRejectRequestLast12Month CountRejectRequestLast3Month CountRejectRequestLast6Month CountRejectRequestLastMonth

**Node=Replacement
Interval Variables**

Variable	Replace Variable	Limits Method	Lower limit	Upper Limit	Label	Replacement Method	Lower Replacement Value	Upper Replacement Value
AfsSumm	REP_AfsSumm	STDDEV	-4.10179	5.40834	AfsSumm	COMPUTED	-4.10179	5.40834
Age	REP_Age	STDDEV	-2.07347	5.27950	Age	COMPUTED	-2.07347	5.27950
AllCLC	REP_AllCLC	STDDEV	-0.96164	6.30863	AllCLC	COMPUTED	-0.96164	6.30863
ApprovedCreditSum	REP_ApprovedCreditSum	STDDEV	-1.56242	4.82368	ApprovedCreditSum	COMPUTED	-1.56242	4.82368
BlockCnt	REP_BlockCnt	STDDEV	-2.78571	5.23573	BlockCnt	COMPUTED	-2.78571	5.23573
BlockDur	REP_BlockDur	STDDEV	-3.05879	5.71855	BlockDur	COMPUTED	-3.05879	5.71855
Circle	REP_Circle	STDDEV	-1.09867	8.73895	Circle	COMPUTED	-1.09867	8.73895
ConfirmedMonthlyIncome	REP_ConfirmedMonthlyIncome	STDDEV	-0.04353	5.39718	ConfirmedMonthlyIncome	COMPUTED	-0.04353	5.39718
CountRequest	REP_CountRequest	STDDEV	-0.60352	0.66527	CountRequest	COMPUTED	-0.60352	0.66527
CreditLimit	REP_CreditLimit	STDDEV	-1.79354	4.46558	CreditLimit	COMPUTED	-1.79354	4.46558
KolichestvoDetejMladshe18	REP_KolichestvoDetejMladshe18	STDDEV	-1.70444	2.57749	KolichestvoDetejMladshe18	COMPUTED	-1.70444	2.57749
LifeTimeBin	REP_LifeTimeBin	STDDEV	0.17293	8.13798	LifeTimeBin	COMPUTED	0.17293	8.13798
MainScoreValue	REP_MainScoreValue	STDDEV	-4.04721	6.96845	MainScoreValue	COMPUTED	-4.04721	6.96845
OrgStanding	REP_OrgStanding	STDDEV	-2.06530	5.25415	OrgStanding	COMPUTED	-2.06530	5.25415
PTI	REP_PTI	STDDEV	-4.04418	7.72097	PTI	COMPUTED	-4.04418	7.72097
PayMax	REP_PayMax	STDDEV	-1.28233	7.43309	PayMax	COMPUTED	-1.28233	7.43309
Rashod	REP_Rashod	STDDEV	-3.14033	4.97615	Rashod	COMPUTED	-3.14033	4.97615
Score	REP_Score	STDDEV	0.30625	1.73083	Score	COMPUTED	0.30625	1.73083

Variable	Replace Variable	Limits Method	Lower limit	Upper Limit	Label	Replacement Method	Lower Replacement Value	Upper Replacement Value
ScoreFICO	REP_ScoreFICO	STDDEV	-0.79304	6.27837	ScoreFICO	COMPUTED	-0.79304	6.27837
ScoreProba	REP_ScoreProba	STDDEV	-2.73606	5.58224	ScoreProba	COMPUTED	-2.73606	5.58224
SumOtherPayment	REP_SumOtherPayment	STDDEV	-2.47188	4.13211	SumOtherPayment	COMPUTED	-2.47188	4.13211

Node=Replacement
Total Replacement Counts

Variable	Label	Role	Train
AfsSumm	AfsSumm	INPUT	2323
Age	Age	INPUT	0
AllCLC	AllCLC	INPUT	0
ApprovedCreditSum	ApprovedCreditSum	INPUT	59
BlockCnt	BlockCnt	INPUT	0
BlockDur	BlockDur	INPUT	0
Circle	Circle	INPUT	0
ConfirmedMonthlyIncome	ConfirmedMonthlyIncome	INPUT	72
CountRequest	CountRequest	INPUT	1420
CreditLimit	CreditLimit	INPUT	2
KolichestvoDetejMladshe18	KolichestvoDetejMladshe18	INPUT	272
LifeTimeBin	LifeTimeBin	INPUT	2226
MainScoreValue	MainScoreValue	INPUT	0
OrgStanding	OrgStanding	INPUT	0
PTI	PTI	INPUT	0
PayMax	PayMax	INPUT	0
Rashod	Rashod	INPUT	973
Score	Score	INPUT	3212
ScoreFICO	ScoreFICO	INPUT	0
ScoreProba	ScoreProba	INPUT	0
SumOtherPayment	SumOtherPayment	INPUT	0

SAS Enterprise Miner Report

Node=Data Partition
Summary

Node id = Part
Node label = Data Partition
Meta path = Ids => Repl => Part
Notes =

Node=Data Partition
Properties

Property	Value	Default	Property	Value	Default	Property	Value	Default
Component	Partition		Method	DEFAULT		TestPct	0	30
ClassDistribution	Y		OutputType	DATA		TrainPct	70	40
IntervalDistribution	Y		RandomSeed	12345		ValidatePct	30	

Node=Data Partition
Variable Summary

Role	Level	Frequency Count	Name
TARGET	BINARY	1	Target
REJECTED	INTERVAL	21	AfsSumm Age AllCLC ApprovedCreditSum BlockCnt BlockDur Circle ConfirmedMonthlyIncome CountRequest CreditLimit KolichestvoDetejMladshe18 LifeTimeBin MainScoreValue OrgStanding PTI PayMax Rashod …
INPUT	BINARY	6	AddressIdentical BadAddressHome BadAddressWork CreditHistoryStopFactors ScoreBinary Sex
INPUT	INTERVAL	21	REP_AfsSumm REP_Age REP_AllCLC REP_ApprovedCreditSum REP_BlockCnt REP_BlockDur REP_Circle REP_ConfirmedMonthlyIncome REP_CountRequest REP_CreditLimit REP_KolichestvoDetejMladshe18 REP_LifeTimeBin …
INPUT	NOMINAL	3	EducationStatus FactCity FamilyStatus
INPUT	ORDINAL	4	CountRejectRequestLast12Month CountRejectRequestLast3Month CountRejectRequestLast6Month CountRejectRequestLastMonth
ID	NOMINAL	1	APPLICID

SAS Enterprise Miner Report

Node=Impute
Summary

Node id = Impt
Node label = Impute
Meta path = Ids => Repl => Part => Impt
Notes =

Node=Impute
Properties

Property	Value	Default	Property	Value	Default	Property	Value	Default
Component	Impute		IndicatorRole	INPUT	REJECTED	MinCatSize	5	
ABWTuning	9		IndicatorSource	IMPUTED		Normalize	Y	
AHUBERTuning	1.5		LeafSize	5		Nrules	5	
AWAVETuning	6.2831853072		MaxPctMissing	50		Nsurrs	2	
DefaultChar			Maxbranch	2		RandomSeed	12345	
DefaultNum	.		Maxdepth	6		ReplaceVariable	N	
DistributionMissing	N		MethodClass	COUNT		SpacingProportion	90	
HideVariable	Y		MethodInterval	MIN	MEAN	Splitsize	.	
ImputeNoMissing	N		MethodTargetClass	NONE		ValidateTestMissing	N	
Indicator	UNIQUE	NONE	MethodTargetInterval	NONE				

Node=Impute
Variable Summary

Role	Level	Frequency Count	Name
INPUT	BINARY	6	AddressIdentical BadAddressHome BadAddressWork CreditHistoryStopFactors ScoreBinary Sex
INPUT	INTERVAL	21	REP_AfsSumm REP_Age REP_AllCLC REP_ApprovedCreditSum REP_BlockCnt REP_BlockDur REP_Circle REP_ConfirmedMonthlyIncome REP_CountRequest REP_CreditLimit REP_KolichestvoDetejMladshe18 REP_LifeTimeBin ...
INPUT	NOMINAL	3	EducationStatus FactCity FamilyStatus
INPUT	ORDINAL	4	CountRejectRequestLast12Month CountRejectRequestLast3Month CountRejectRequestLast6Month CountRejectRequestLastMonth

Node=Impute
Imputation Summary

Variable Name	Impute Method	Imputed Variable	Indicator Variable	Impute Value	Role	Measurement Level	Label	Number of Missing for TRAIN
BadAddressHome	COUNT	IMP_BadAddressHome	M_BadAddressHome	0.00000	INPUT	BINARY	BadAddressHome	8
BadAddressWork	COUNT	IMP_BadAddressWork	M_BadAddressWork	0.00000	INPUT	BINARY	BadAddressWork	8
CreditHistoryStopFactors	COUNT	IMP_CreditHistoryStopFactors	M_CreditHistoryStopFactors	0.00000	INPUT	BINARY	CreditHistoryStopFactors	9148
FactCity	COUNT	IMP_FactCity	M_FactCity	2.00000	INPUT	NOMINAL	FactCity	3045
FamilyStatus	COUNT	IMP_FamilyStatus	M_FamilyStatus	1.00000	INPUT	NOMINAL	FamilyStatus	3005
REP_AllCLC	MIN	IMP_REP_AllCLC	M_REP_AllCLC	0.00000	INPUT	INTERVAL	Replacement: AllCLC	8
REP_BlockCnt	MIN	IMP_REP_BlockCnt	M_REP_BlockCnt	0.00000	INPUT	INTERVAL	Replacement: BlockCnt	8
REP_BlockDur	MIN	IMP_REP_BlockDur	M_REP_BlockDur	0.00000	INPUT	INTERVAL	Replacement: BlockDur	8
REP_Circle	MIN	IMP_REP_Circle	M_REP_Circle	0.00000	INPUT	INTERVAL	Replacement: Circle	8
REP_LifeTimeBin	MIN	IMP_REP_LifeTimeBin	M_REP_LifeTimeBin	0.17293	INPUT	INTERVAL	Replacement: LifeTimeBin	8
REP_PayMax	MIN	IMP_REP_PayMax	M_REP_PayMax	0.00000	INPUT	INTERVAL	Replacement: PayMax	8
REP_Score	MIN	IMP_REP_Score	M_REP_Score	0.30625	INPUT	INTERVAL	Replacement: Score	8

Variable Name	Impute Method	Imputed Variable	Indicator Variable	Impute Value	Role	Measurement Level	Label	Number of Missing for TRAIN
REP_ScoreFICO	MIN	IMP_REP_ScoreFICO	M_REP_ScoreFICO	0.00000	INPUT	INTERVAL	Replacement: ScoreFICO	18604
REP_ScoreProba	MIN	IMP_REP_ScoreProba	M_REP_ScoreProba	0.00000	INPUT	INTERVAL	Replacement: ScoreProba	9414
ScoreBinary	COUNT	IMP_ScoreBinary	M_ScoreBinary	0.00000	INPUT	BINARY	ScoreBinary	178

SAS Enterprise Miner Report

Node=Pruning Entropy Tree
Summary

Node id = Tree2
Node label = Pruning Entropy Tree
Meta path = Ids => Repl => Part => Impt => Tree2
Notes =

Node=Pruning Entropy Tree
Properties

Property	Value	Default	Property	Value	Default	Property	Value	Default
Component	DecisionTree		Kass	Y		Pred	N	
AVG	Y		KassApply	BEFORE		Predict	Y	
AssessMeasure	ASE	PROFIT/LOSS	LeafSize	5		ProfitLoss	NONE	
AssessPercentage	0.25		Leafid	Y		RASE	N	
CV	N		Maxbranch	2		SampleMethod	RANDOM	
CVNIter	10		Maxdepth	6		SampleSeed	12345	
CVRepeat	1		MinCatSize	5		SampleSize	10000	
CVSeed	12345		MissingValue	USEINSEARCH		ShowNodeId	Y	
ClassColorBy	PERCENTCORRECT		NSubtree	1		ShowValid	Y	
Count	Y		NodeRole	SEGMENT		SigLevel	0.2	
CreateSample	DEFAULT		NodeSample	20000		SplitPrecision	4	
Criterion	DEFAULT		NominalCriterion	PROBCHISQ		Splitsize	.	
Depth	Y		Nrules	5		Subtree	ASSESSMENT	
Dummy	N		Nsurrs	0		Target	ALL	
Exhaustive	5000		NumInputs	1		ToolType	MODEL	
Freeze	N		NumSingleImp	5		TrainMode	BATCH	
ImportModel	N		ObsImportance	N		UseDecision	N	
ImportedTreeData			OrdinalCriterion	ENTROPY		UseMultipleTarget	N	
Inputs	N		PercentCorrect	N		UsePriors	N	
IntColorBy	AVG		Performance	DISK		UseVarOnce	N	
IntervalCriterion	PROBF		Precision	4		VarSelection	Y	

Node=Pruning Entropy Tree
Variable Summary

Role	Level	Frequency Count	Name
TARGET	BINARY	1	Target
INPUT	BINARY	21	AddressIdentical IMP_BadAddressHome IMP_BadAddressWork IMP_CreditHistoryStopFactors IMP_ScoreBinary M_BadAddressHome M_BadAddressWork M_CreditHistoryStopFactors M_FactCity M_FamilyStatus … Sex
INPUT	INTERVAL	20	IMP_REP_AllCLC IMP_REP_BlockCnt IMP_REP_BlockDur IMP_REP_Circle IMP_REP_LifeTimeBin IMP_REP_PayMax IMP_REP_Score IMP_REP_ScoreFICO IMP_REP_ScoreProba REP_AfsSumm REP_Age REP_ApprovedCreditSum …
INPUT	NOMINAL	3	EducationStatus IMP_FactCity IMP_FamilyStatus
INPUT	ORDINAL	4	CountRejectRequestLast12Month CountRejectRequestLast3Month CountRejectRequestLast6Month CountRejectRequestLastMonth
ID	INTERVAL	1	_dataobs_
ID	NOMINAL	1	APPLICID

Node=Pruning Entropy Tree
Model Fit Statistics

Target=Target Target Label=Target

Label of Statistic	Train	Validation	Test
Sum of Frequencies	39650.00	16995.00	.
Misclassification Rate	0.01	0.01	.
Maximum Absolute Error	1.00	1.00	.
Sum of Squared Errors	504.02	218.60	.
Average Squared Error	0.01	0.01	.
Root Average Squared Error	0.08	0.08	.
Divisor for ASE	79300.00	33990.00	.
Total Degrees of Freedom	39650.00	.	.

SAS Enterprise Miner Report
Node=Pruning Entropy Tree
Tree Diagram

N: 39650 16995
Replacement: ...

< 0.5 Or Missing
N: 32377 13842
Imputed: Repla...

>= 0.5
N: 7273 3153
Imputed: Repla...

< 2.5 Or Missing
N: 22396 9541
Replacement: ...

>= 2.5
N: 9981 4301

< 4.5
N: 2459 1110

>= 4.5 Or Missing
N: 4814 2043

< 0.5
N: 10238 4271

>= 0.5 Or Missing
N: 12158 5270
Imputation Indi...

1
N: 3568 1518

0 Or Missing
N: 8590 3752
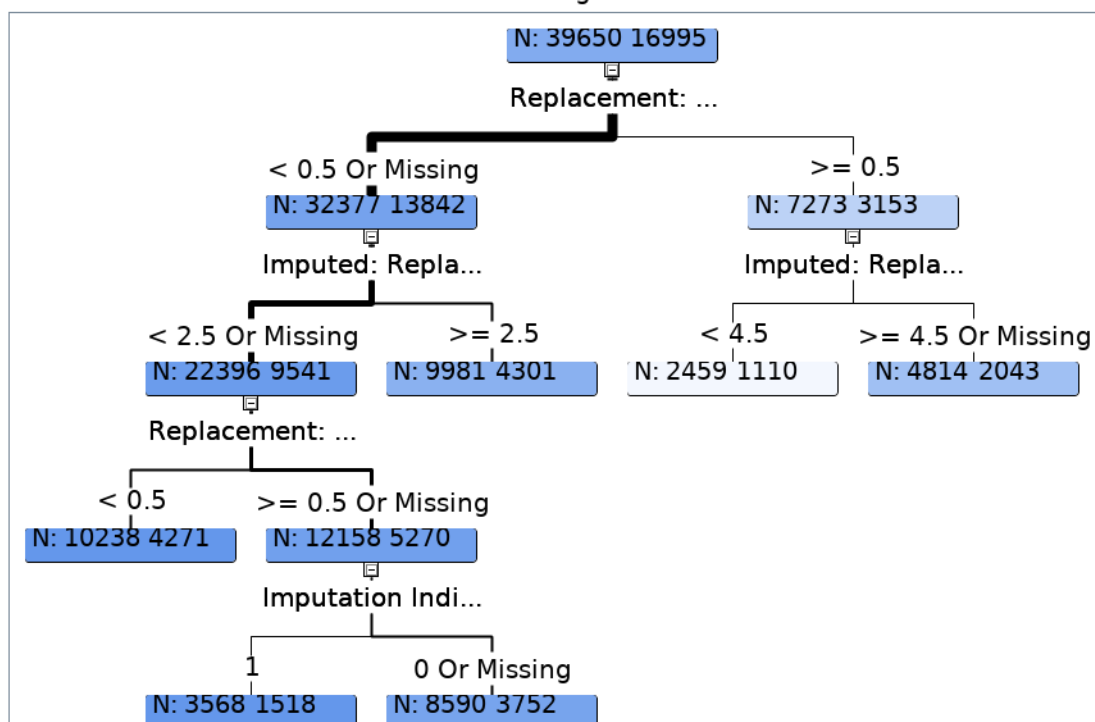
SAS Enterprise Miner Report
Node=Pruning Entropy Tree
Treemap
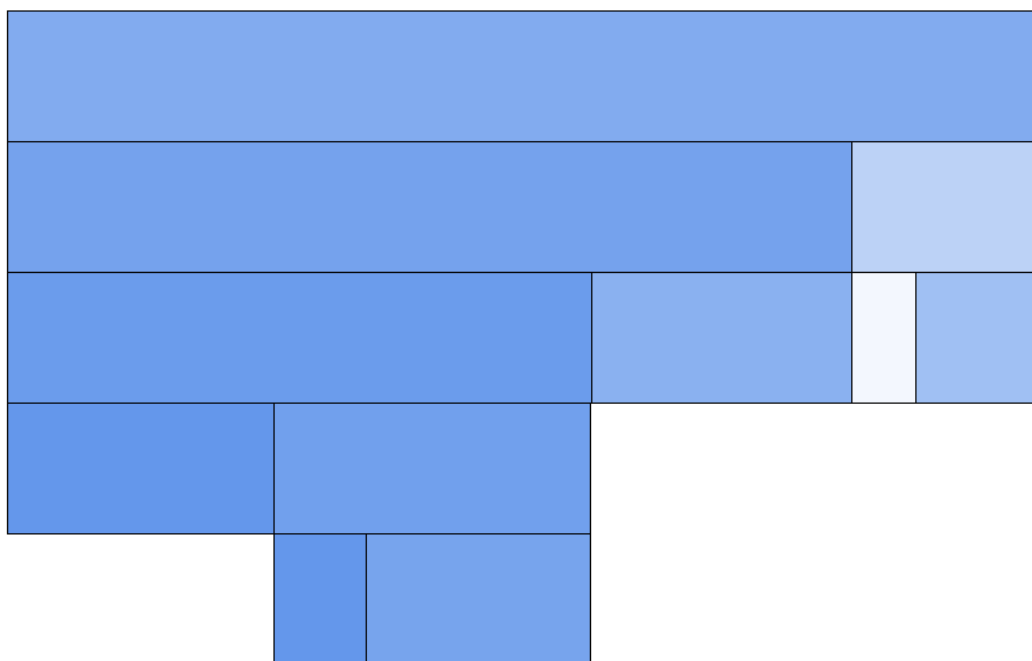
SAS Enterprise Miner Report
Node=Pruning Entropy Tree
Model Iteration Plots
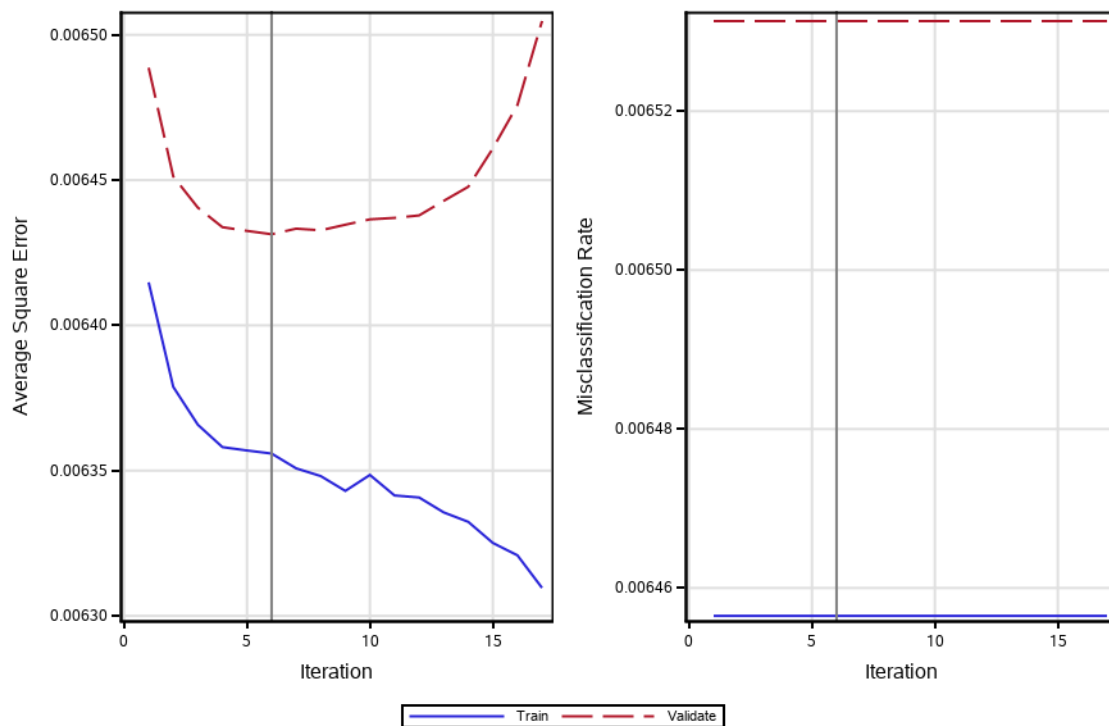
SAS Enterprise Miner Report
Node=Pruning Entropy Tree
Model Assessment Scores where TARGET='Target'

SAS Enterprise Miner Report
Node=Pruning Entropy Tree
Model Assessment Scores where TARGET='Target'
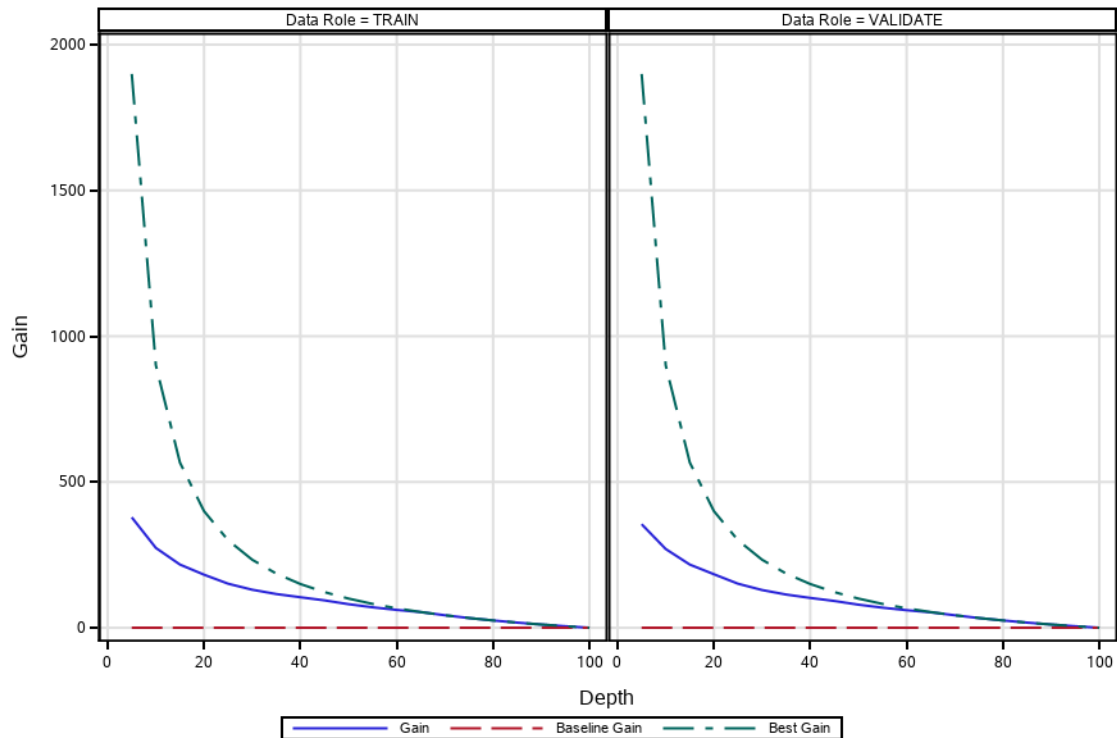
SAS Enterprise Miner Report
Node=Pruning Entropy Tree
Model Assessment Scores where TARGET='Target'

SAS Enterprise Miner Report
Node=Pruning Entropy Tree
Score Distributions where TARGET='Target'

SAS Enterprise Miner Report
Node=Pruning Entropy Tree
Score Distributions where TARGET='Target'

Node=Pruning Entropy Tree
Score Distributions

Target Variable=Target Data Role=TRAIN

Posterior Probability Range	Number of Events	Percentage of Events	Percentage of Nonevents	Cumulative Percentage of Events	Cumulative Percentage of Nonevents
0.00-0.05	256	100	100	100	100

Target Variable=Target Data Role=VALIDATE

Posterior Probability Range	Number of Events	Percentage of Events	Percentage of Nonevents	Cumulative Percentage of Events	Cumulative Percentage of Nonevents
0.00-0.05	111	100	100	100	100

SAS Enterprise Miner Report

Node=Largest Gini Tree
Summary

Node id = Tree4
Node label = Largest Gini Tree
Meta path = Ids => Repl => Part => Impt => Tree4
Notes =

Node=Largest Gini Tree
Properties

Property	Value	Default	Property	Value	Default	Property	Value	Default
Component	DecisionTree		Kass	Y		Pred	N	
AVG	Y		KassApply	BEFORE		Predict	Y	
AssessMeasure	ASE	PROFIT/LOSS	LeafSize	5		ProfitLoss	NONE	
AssessPercentage	0.25		Leafid	Y		RASE	N	
CV	N		Maxbranch	2		SampleMethod	RANDOM	
CVNIter	10		Maxdepth	6		SampleSeed	12345	
CVRepeat	1		MinCatSize	5		SampleSize	10000	
CVSeed	12345		MissingValue	USEINSEARCH		ShowNodeId	Y	
ClassColorBy	PERCENTCORRECT		NSubtree	1		ShowValid	Y	
Count	Y		NodeRole	SEGMENT		SigLevel	0.2	
CreateSample	DEFAULT		NodeSample	20000		SplitPrecision	4	
Criterion	DEFAULT		NominalCriterion	PROBCHISQ		Splitsize	.	
Depth	Y		Nrules	5		Subtree	LARGEST	ASSESSMENT
Dummy	N		Nsurrs	0		Target	ALL	
Exhaustive	5000		NumInputs	1		ToolType	MODEL	
Freeze	N		NumSingleImp	5		TrainMode	BATCH	
ImportModel	N		ObsImportance	N		UseDecision	N	
ImportedTreeData			OrdinalCriterion	GINI	ENTROPY	UseMultipleTarget	N	
Inputs	N		PercentCorrect	N		UsePriors	N	
IntColorBy	AVG		Performance	DISK		UseVarOnce	N	
IntervalCriterion	PROBF		Precision	4		VarSelection	Y	

Node=Largest Gini Tree
Variable Summary

| Role	Level	Frequency Count	Name
TARGET	BINARY	1	Target
INPUT	BINARY	21	AddressIdentical IMP_BadAddressHome IMP_BadAddressWork IMP_CreditHistoryStopFactors IMP_ScoreBinary M_BadAddressHome M_BadAddressWork M_CreditHistoryStopFactors M_FactCity M_FamilyStatus ... Sex
INPUT	INTERVAL	20	IMP_REP_AllCLC IMP_REP_BlockCnt IMP_REP_BlockDur IMP_REP_Circle IMP_REP_LifeTimeBin IMP_REP_PayMax IMP_REP_Score IMP_REP_ScoreFICO IMP_REP_ScoreProba REP_AfsSumm REP_Age REP_ApprovedCreditSum ...
INPUT	NOMINAL	3	EducationStatus IMP_FactCity IMP_FamilyStatus
INPUT	ORDINAL	4	CountRejectRequestLast12Month CountRejectRequestLast3Month CountRejectRequestLast6Month CountRejectRequestLastMonth
ID	INTERVAL	1	_dataobs_
ID	NOMINAL	1	APPLICID

Node=Largest Gini Tree
Model Fit Statistics

Target=Target Target Label=Target

Label of Statistic	Train	Validation	Test
Sum of Frequencies	39650.00	16995.00	.
Misclassification Rate	0.01	0.01	.
Maximum Absolute Error	1.00	1.00	.
Sum of Squared Errors	500.35	221.10	.
Average Squared Error	0.01	0.01	.
Root Average Squared Error	0.08	0.08	.
Divisor for ASE	79300.00	33990.00	.
Total Degrees of Freedom	39650.00	.	.

SAS Enterprise Miner Report
Node=Largest Gini Tree
Tree Diagram

SAS Enterprise Miner Report
Node=Largest Gini Tree
Treemap
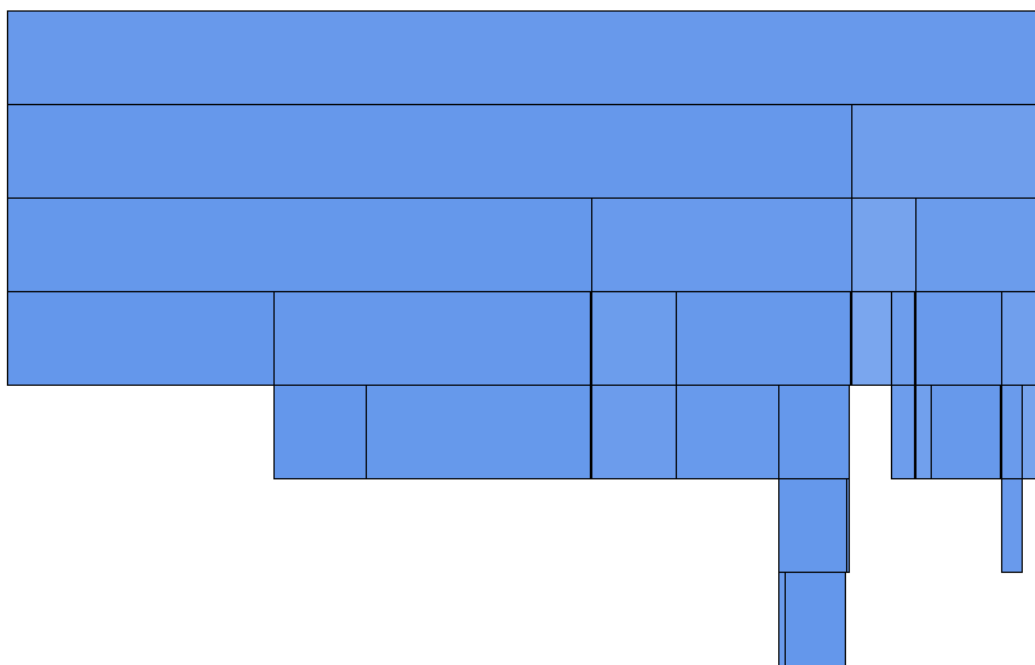
SAS Enterprise Miner Report
Node=Largest Gini Tree
Model Iteration Plots
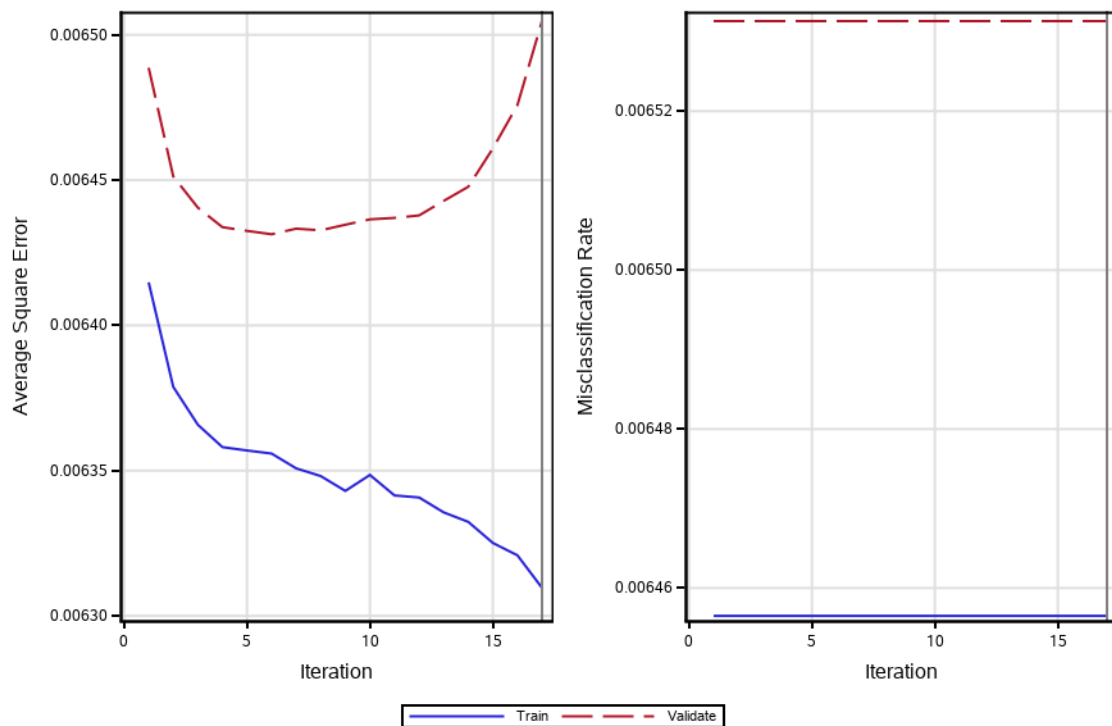
SAS Enterprise Miner Report
Node=Largest Gini Tree
Model Assessment Scores where TARGET='Target'

Data Role = TRAIN	Data Role = VALIDATE

Gain vs Depth

Legend: Gain — Baseline Gain — — Best Gain

SAS Enterprise Miner Report
Node=Largest Gini Tree
Model Assessment Scores where TARGET='Target'

Data Role = TRAIN	Data Role = VALIDATE

Cumulative Lift vs Depth

Legend: Cumulative Lift — Baseline Cumulative Lift — — Best Cumulative Lift
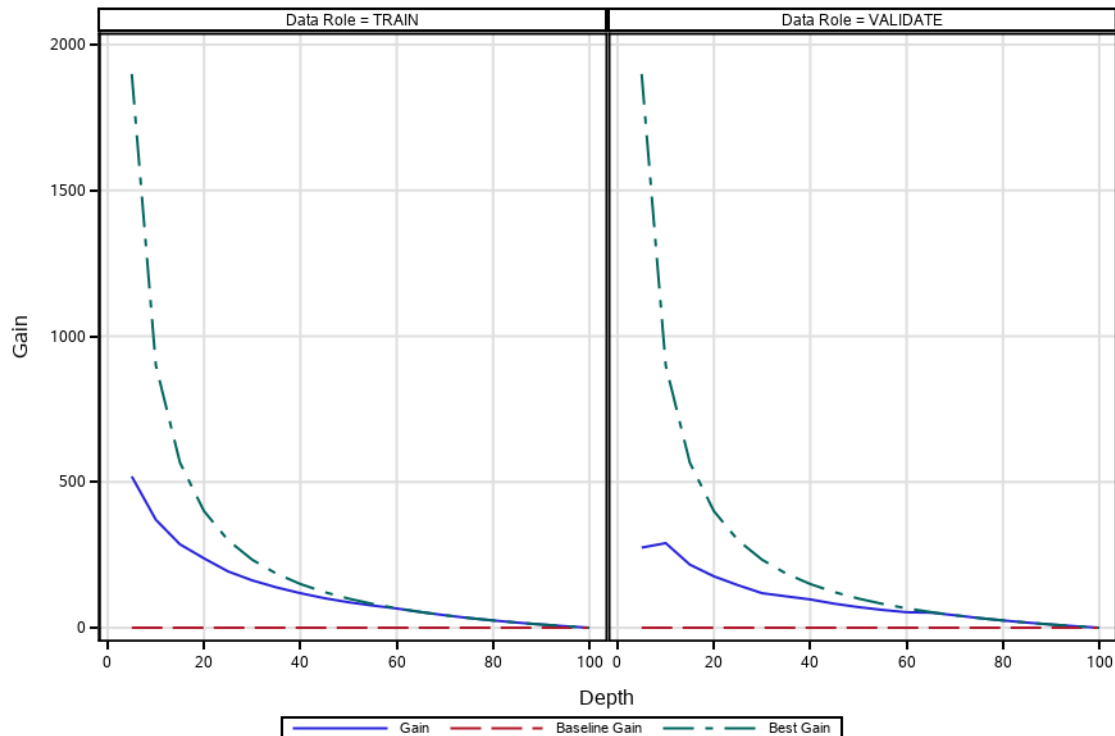
SAS Enterprise Miner Report
Node=Largest Gini Tree
Model Assessment Scores where TARGET='Target'
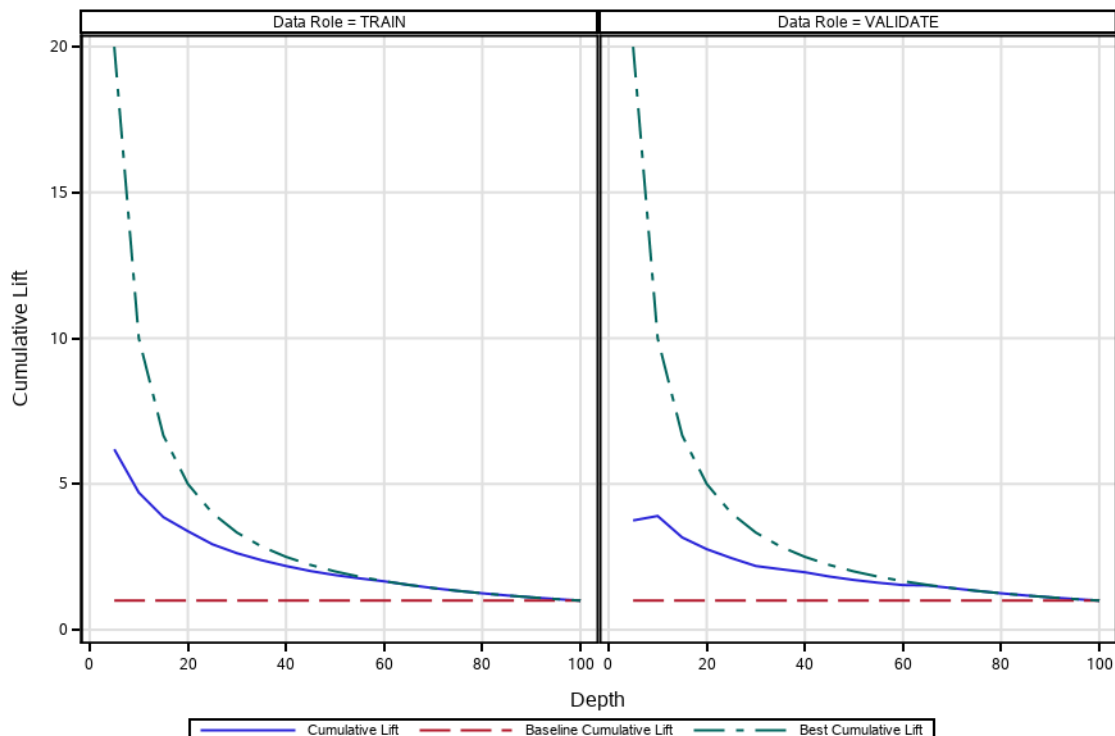
SAS Enterprise Miner Report
Node=Largest Gini Tree
Score Distributions where TARGET='Target'
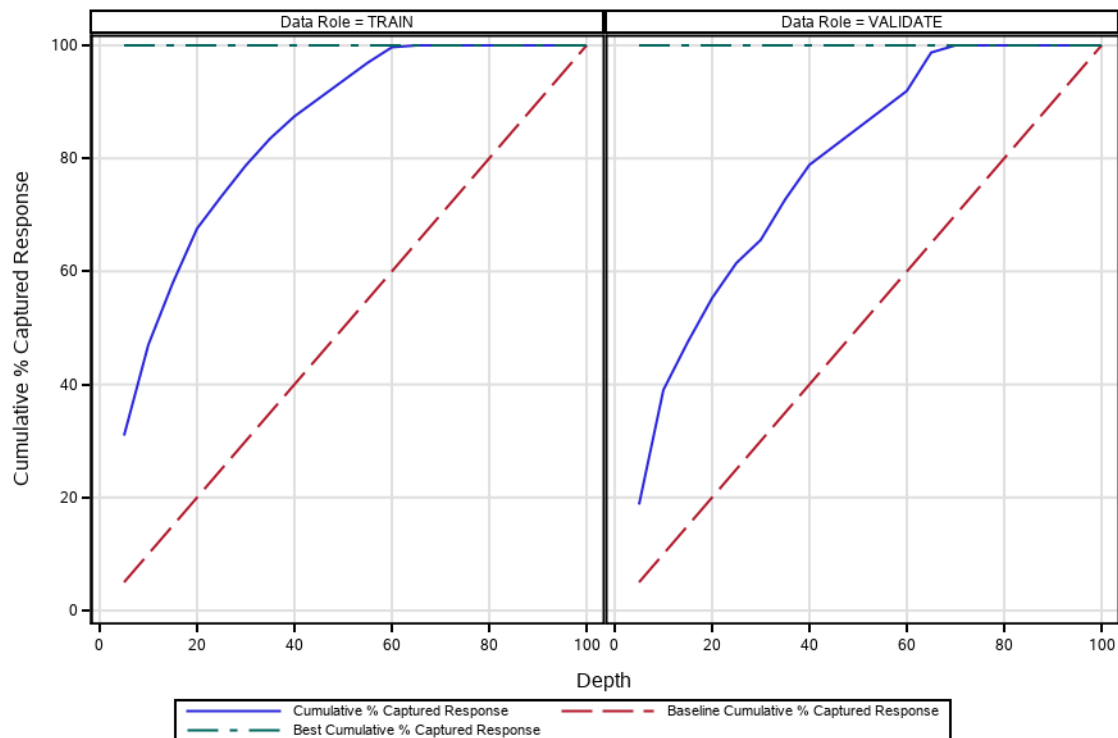
SAS Enterprise Miner Report
Node=Largest Gini Tree
Score Distributions where TARGET='Target'

Node=Largest Gini Tree
Score Distributions

Target Variable=Target Data Role=TRAIN

Posterior Probability Range	Number of Events	Percentage of Events	Percentage of Nonevents	Cumulative Percentage of Events	Cumulative Percentage of Nonevents
0.20-0.25	2	0.7813	0.0152	0.781	0.015
0.15-0.20	1	0.3906	0.0102	1.172	0.025
0.05-0.10	2	0.7813	0.0558	1.953	0.081
0.00-0.05	251	98.0469	99.9188	100.000	100.000

Target Variable=Target Data Role=VALIDATE

Posterior Probability Range	Number of Events	Percentage of Events	Percentage of Nonevents	Cumulative Percentage of Events	Cumulative Percentage of Nonevents
0.20-0.25	0	0	0.0474	0	0.047
0.15-0.20	0	0	0.0355	0	0.083
0.05-0.10	0	0	0.0652	0	0.148
0.00-0.05	111	100	99.8519	100	100.000

SAS Enterprise Miner Report

Node=Forward Valid Error Regression
Summary

Node id = Reg4
Node label = Forward Valid Error Regression
Meta path = Ids => Repl => Part => Impt => Reg4
Notes =

Node=Forward Valid Error Regression
Properties

Property	Value	Default	Property	Value	Default	Property	Value	Default
Component	Regression		Force	0		PolynomialDegree	2	
AbsConvValue	-1.34078E154	-7.237006E75	GConvTimes	1		PrintDesignMatrix	N	
AbsFTime	1		GConvValue	1E-6		Rule	NONE	
AbsFValue	0		Hierarchy	CLASS		SASSPDS	N	
AbsGTime	1		InputCoding	DEVIATION		SelectionCriterion	VERROR	DEFAULT
AbsGValue	0.00001		Interactions			SelectionDefault	Y	
AbsXTime	1		LinkFunction	LOGIT		Sequential	N	
AbsXValue	1E-8		MainEffect	Y		Simple	N	
ClParm	N		MaxCPUTime	1 HOUR		SlEntry	0.05	
ConvDefaults	Y		MaxFunctionCalls	.		SlStay	0.05	
CorB	N		MaxIterations	.		Start	0	
CovB	N		MaxStep	.		StepOutput	N	
Covout	N		MinResourceUse	N		Stop	0	
Details	N		ModelDefaults	Y		SuppressIntercept	N	
Error	LOGISTIC		ModelSelection	FORWARD	NONE	SuppressOutput	N	
ExcludedVariable	REJECT		OptimizationTechnique	DEFAULT		Terms	N	
FConvTimes	1		Performance	N		TwoFactor	N	
FConvValue	0		Polynomial	N				

Node=Forward Valid Error Regression
Variable Summary

Role	Level	Frequency Count	Name
TARGET	BINARY	1	Target
INPUT	BINARY	21	AddressIdentical IMP_BadAddressHome IMP_BadAddressWork IMP_CreditHistoryStopFactors IMP_ScoreBinary M_BadAddressHome M_BadAddressWork M_CreditHistoryStopFactors M_FactCity M_FamilyStatus ... Sex
INPUT	INTERVAL	20	IMP_REP_AllCLC IMP_REP_BlockCnt IMP_REP_BlockDur IMP_REP_Circle IMP_REP_LifeTimeBin IMP_REP_PayMax IMP_REP_Score IMP_REP_ScoreFICO IMP_REP_ScoreProba REP_AfsSumm REP_Age REP_ApprovedCreditSum ...
INPUT	NOMINAL	3	EducationStatus IMP_FactCity IMP_FamilyStatus
INPUT	ORDINAL	4	CountRejectRequestLast12Month CountRejectRequestLast3Month CountRejectRequestLast6Month CountRejectRequestLastMonth

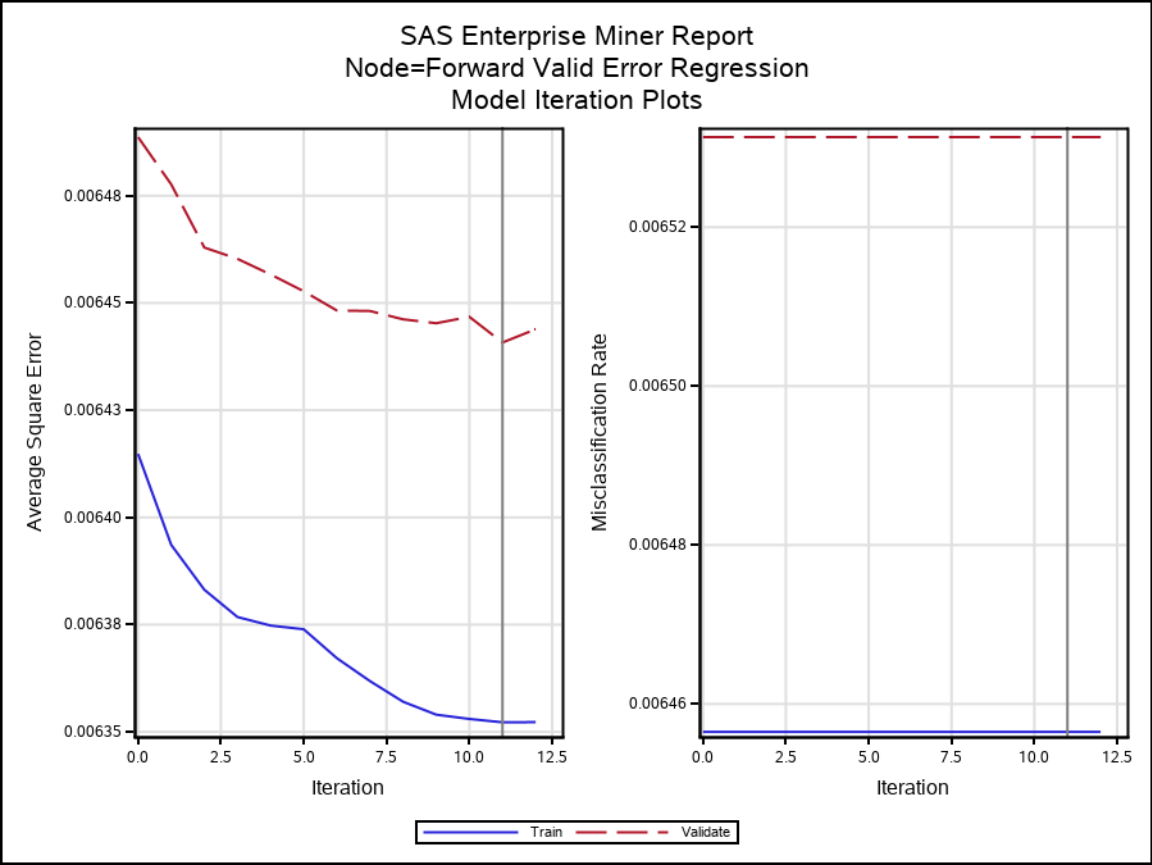## Node=Forward Valid Error Regression
Model Fit Statistics

Target=Target Target Label=Target

Label of Statistic	Train	Validation	Test
Akaike's Information Criterion	2763.21	.	.
Average Squared Error	0.01	0.01	.
Average Error Function	0.03	0.04	.
Degrees of Freedom for Error	39637.00	.	.
Model Degrees of Freedom	13.00	.	.
Total Degrees of Freedom	39650.00	.	.
Divisor for ASE	79300.00	33990.00	.
Error Function	2737.21	1224.89	.
Final Prediction Error	0.01	.	.
Maximum Absolute Error	1.00	1.00	.
Mean Square Error	0.01	0.01	.
Sum of Frequencies	39650.00	16995.00	.
Number of Estimate Weights	13.00	.	.
Root Average Sum of Squares	0.08	0.08	.
Root Final Prediction Error	0.08	.	.
Root Mean Squared Error	0.08	0.08	.
Schwarz's Bayesian Criterion	2874.85	.	.
Sum of Squared Errors	503.73	218.92	.
Sum of Case Weights Times Freq	79300.00	33990.00	.
Misclassification Rate	0.01	0.01	.
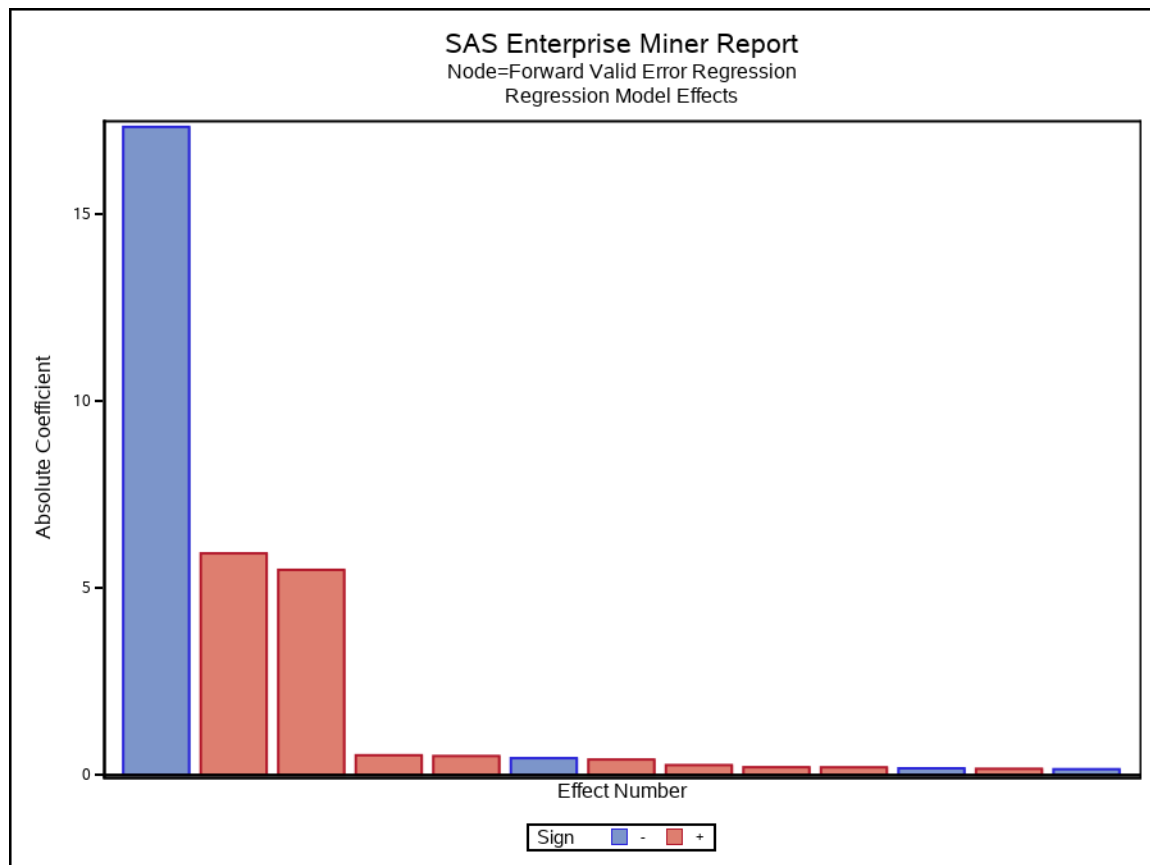
SAS Enterprise Miner Report
Node=Forward Valid Error Regression
Regression Model Effects

Effect Number	Variable	Level	Coefficient	T-value	P Value	Effect Number	Variable	Level	Coefficient	T-value	P Value
1	Intercept	1	-17.3434	-0.27483	0.78345	8	IMP_ScoreBinary	0	0.26109	3.09695	0.001955
2	IMP_CreditHistoryStopFactors	0	5.9279	0.10148	0.91917	9	IMP_FactCity	1	0.20396	1.95005	0.051171
3	M_CreditHistoryStopFactors	0	5.4870	0.22982	0.81823	10	REP_AfsSumm		0.20137	6.72913	0.000000
4	M_REP_ScoreFICO	0	0.5245	5.20534	0.00000	11	IMP_REP_LifeTimeBin		-0.17476	-3.88264	0.000103

Effect Number	Variable	Level	Coefficient	T-value	P Value	Effect Number	Variable	Level	Coefficient	T-value	P Value
5	M_FactCity	0	0.5038	2.87754	0.00401	12	REP_SumOtherPayment		0.16189	2.86284	0.004199
6	IMP_FactCity	0	-0.4465	-4.20913	0.00003	13	REP_OrgStanding		-0.15117	-2.60789	0.009110
7	REP_ApprovedCreditSum		0.4095	4.39649	0.00001	.			.	.	.

SAS Enterprise Miner Report
Node=Forward Valid Error Regression
Model Iteration Plots

SAS Enterprise Miner Report
Node=Forward Valid Error Regression
Model Assessment Scores where TARGET='Target'

Data Role = TRAIN	Data Role = VALIDATE

Gain

Depth

Gain — Baseline Gain — Best Gain

SAS Enterprise Miner Report
Node=Forward Valid Error Regression
Model Assessment Scores where TARGET='Target'

Data Role = TRAIN	Data Role = VALIDATE

Cumulative Lift

Depth

Cumulative Lift — Baseline Cumulative Lift — Best Cumulative Lift
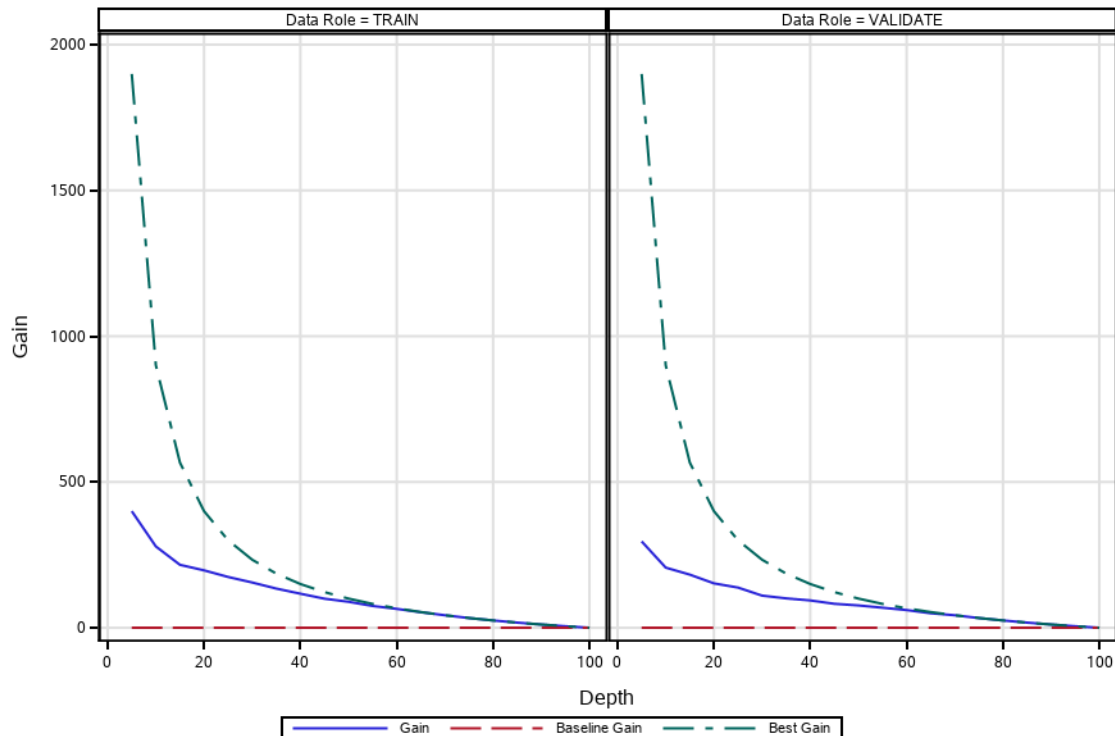
SAS Enterprise Miner Report
Node=Forward Valid Error Regression
Model Assessment Scores where TARGET='Target'
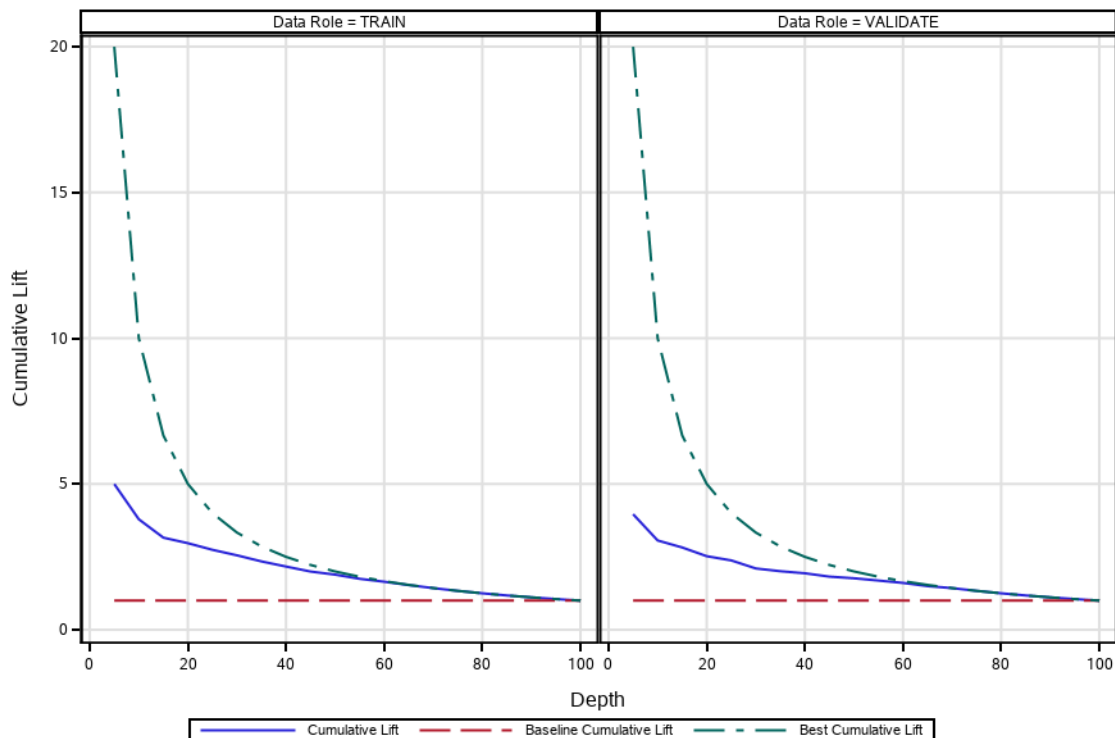
SAS Enterprise Miner Report
Node=Forward Valid Error Regression
Score Distributions where TARGET='Target'
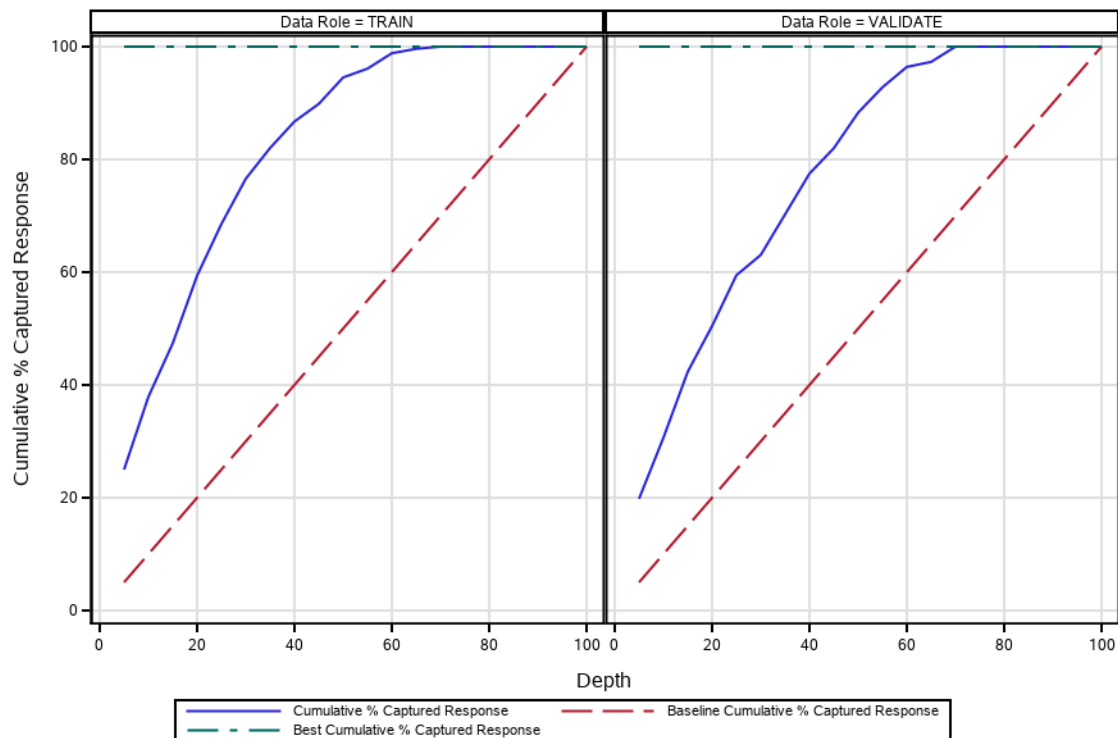
SAS Enterprise Miner Report
Node=Forward Valid Error Regression
Score Distributions where TARGET='Target'

Node=Forward Valid Error Regression
Score Distributions

Target Variable=Target Data Role=TRAIN

Posterior Probability Range	Number of Events	Percentage of Events	Percentage of Nonevents	Cumulative Percentage of Events	Cumulative Percentage of Nonevents
0.05-0.10	5	1.9531	0.2843	1.953	0.284
0.00-0.05	251	98.0469	99.7157	100.000	100.000

Target Variable=Target Data Role=VALIDATE

Posterior Probability Range	Number of Events	Percentage of Events	Percentage of Nonevents	Cumulative Percentage of Events	Cumulative Percentage of Nonevents
0.05-0.10	3	2.7027	0.2961	2.703	0.296
0.00-0.05	108	97.2973	99.7039	100.000	100.000

SAS Enterprise Miner Report

Node=Backward Valid Error Regression
Summary

Node id = Reg3
Node label = Backward Valid Error Regression
Meta path = lds => Repl => Part => Impt => Reg3
Notes =

Node=Backward Valid Error Regression
Properties

Property	Value	Default	Property	Value	Default	Property	Value	Default
Component	Regression		Force	0		PolynomialDegree	2	
AbsConvValue	-1.34078E154	-7.237006E75	GConvTimes	1		PrintDesignMatrix	N	
AbsFTime	1		GConvValue	1E-6		Rule	NONE	
AbsFValue	0		Hierarchy	CLASS		SASSPDS	N	
AbsGTime	1		InputCoding	DEVIATION		SelectionCriterion	VERROR	DEFAULT
AbsGValue	0.00001		Interactions			SelectionDefault	N	Y
AbsXTime	1		LinkFunction	LOGIT		Sequential	N	
AbsXValue	1E-8		MainEffect	Y		Simple	N	
ClParm	N		MaxCPUTime	1 HOUR		SlEntry	0.05	
ConvDefaults	Y		MaxFunctionCalls	.		SlStay	0.05	
CorB	N		MaxIterations	.		Start	0	
CovB	N		MaxStep	0	.	StepOutput	N	
Covout	N		MinResourceUse	N		Stop	0	
Details	N		ModelDefaults	Y		SuppressIntercept	N	
Error	LOGISTIC		ModelSelection	BACKWARD	NONE	SuppressOutput	N	
ExcludedVariable	REJECT		OptimizationTechnique	DEFAULT		Terms	N	
FConvTimes	1		Performance	N		TwoFactor	N	
FConvValue	0		Polynomial	N				

Node=Backward Valid Error Regression
Variable Summary

Role	Level	Frequency Count	Name
TARGET	BINARY	1	Target
INPUT	BINARY	21	AddressIdentical IMP_BadAddressHome IMP_BadAddressWork IMP_CreditHistoryStopFactors IMP_ScoreBinary M_BadAddressHome M_BadAddressWork M_CreditHistoryStopFactors M_FactCity M_FamilyStatus ... Sex
INPUT	INTERVAL	20	IMP_REP_AllCLC IMP_REP_BlockCnt IMP_REP_BlockDur IMP_REP_Circle IMP_REP_LifeTimeBin IMP_REP_PayMax IMP_REP_Score IMP_REP_ScoreFICO IMP_REP_ScoreProba REP_AfsSumm REP_Age REP_ApprovedCreditSum ...
INPUT	NOMINAL	3	EducationStatus IMP_FactCity IMP_FamilyStatus
INPUT	ORDINAL	4	CountRejectRequestLast12Month CountRejectRequestLast3Month CountRejectRequestLast6Month CountRejectRequestLastMonth

Node=Backward Valid Error Regression
Model Fit Statistics
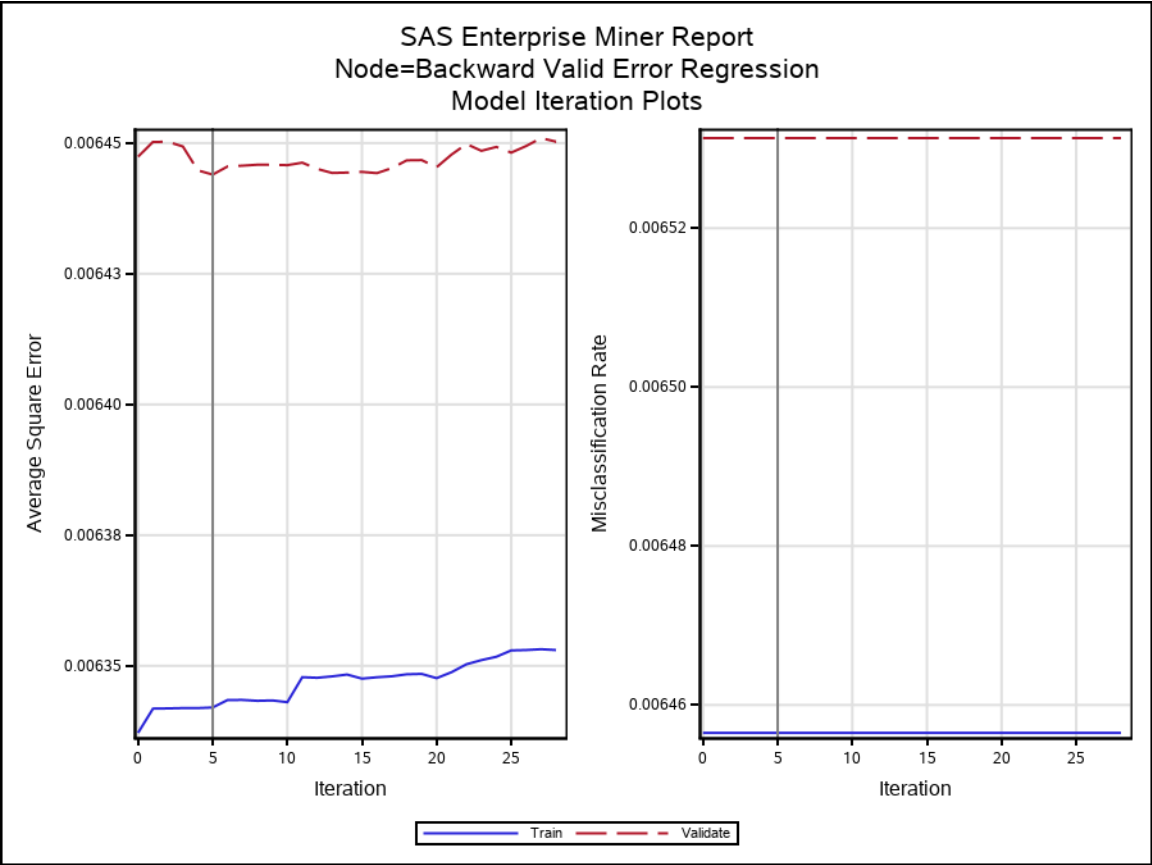
Target=Target Target Label=Target

Label of Statistic	Train	Validation	Test
Akaike's Information Criterion	2789.43	.	.
Average Squared Error	0.01	0.01	.
Average Error Function	0.03	0.04	.
Degrees of Freedom for Error	39604.00	.	.
Model Degrees of Freedom	46.00	.	.
Total Degrees of Freedom	39650.00	.	.
Divisor for ASE	79300.00	33990.00	.
Error Function	2697.43	1228.19	.
Final Prediction Error	0.01	.	.
Maximum Absolute Error	1.00	1.00	.
Mean Square Error	0.01	0.01	.
Sum of Frequencies	39650.00	16995.00	.
Number of Estimate Weights	46.00	.	.
Root Average Sum of Squares	0.08	0.08	.
Root Final Prediction Error	0.08	.	.
Root Mean Squared Error	0.08	0.08	.
Schwarz's Bayesian Criterion	3184.47	.	.
Sum of Squared Errors	502.92	219.03	.
Sum of Case Weights Times Freq	79300.00	33990.00	.
Misclassification Rate	0.01	0.01	.

SAS Enterprise Miner Report
Node=Backward Valid Error Regression
Regression Model Effects
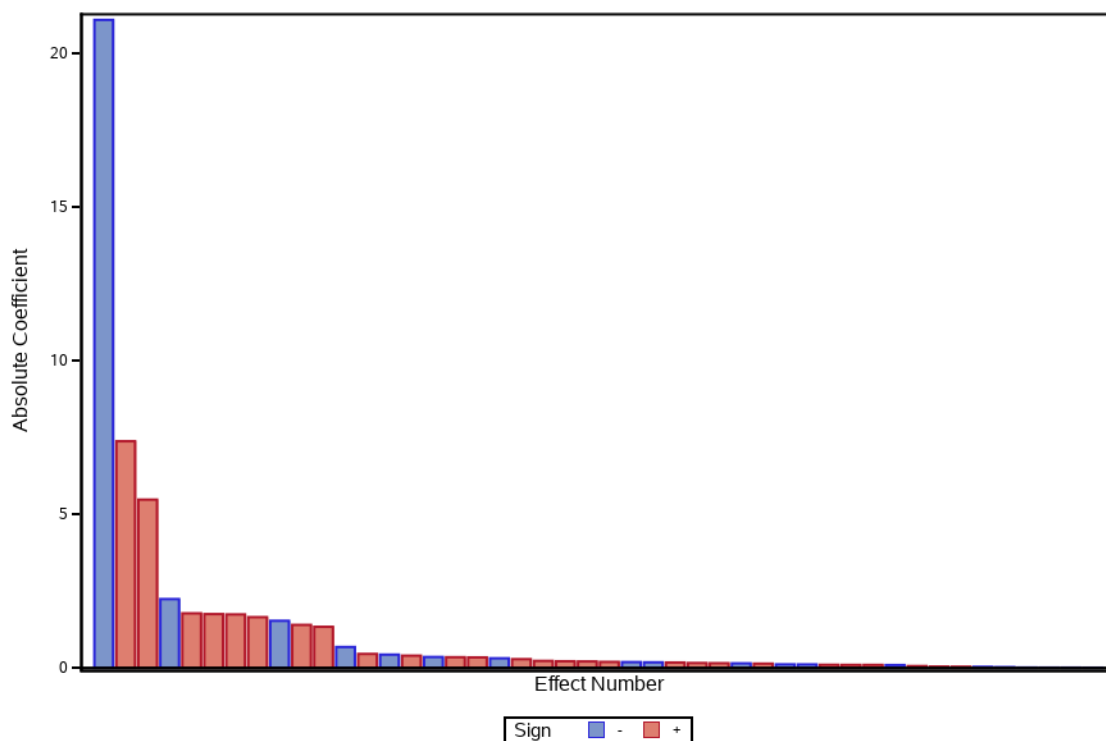
Effect Number	Variable	Level	Coefficient	T-value	P Value	Effect Number	Variable	Level	Coefficient	T-value	P Value
1	Intercept	1	-21.0959	-0.33237	0.73961	24	REP_SumOtherPayment		0.19316	2.95607	0.00312
2	CountRejectRequestLastMonth	0	7.3769	.	.	25	M_REP_ScoreProba	0	-0.18690	-1.95149	0.05100
3	M_CreditHistoryStopFactors	0	5.4767	0.25120	0.80166	26	REP_Rashod		-0.17962	-1.40295	0.16063
4	CountRejectRequestLastMonth	1	-2.2380	-0.03539	0.97177	27	IMP_FactCity	1	0.17339	1.57596	0.11504

SAS Enterprise Miner Report
Node=Backward Valid Error Regression
Regression Model Effects

Effect Number	Variable	Level	Coefficient	T-value	P Value	Effect Number	Variable	Level	Coefficient	T-value	P Value
5	EducationStatus	1	1.7741	0.02977	0.97625	28	IMP_REP_ScoreFICO		0.15714	2.21684	0.02663
6	EducationStatus	3	1.7497	0.02936	0.97658	29	IMP_REP_ScoreProba		0.15086	1.90745	0.05646
7	EducationStatus	5	1.7387	0.02917	0.97673	30	IMP_BadAddressWork	0	-0.14595	-1.22205	0.22169
8	EducationStatus	0	1.6499	0.02768	0.97792	31	IMP_FamilyStatus	0	0.13743	0.72798	0.46663
9	CountRejectRequestLastMonth	2	-1.5314	-0.00843	0.99327	32	REP_OrgStanding		-0.11264	-1.74306	0.08132
10	EducationStatus	4	1.3984	0.02346	0.98128	33	IMP_REP_LifeTimeBin		-0.11080	-1.74637	0.08075
11	EducationStatus	2	1.3359	0.02241	0.98212	34	IMP_REP_BlockCnt		0.09909	1.07224	0.28361
12	REP_CountRequest		-0.6783	-0.76668	0.44327	35	IMP_REP_Score		0.09574	0.23757	0.81221
13	M_FactCity	0	0.4522	2.47897	0.01318	36	Sex	0	0.09560	1.40664	0.15953
14	IMP_FactCity	0	-0.4306	-3.97698	0.00007	37	REP_CreditLimit		-0.09052	-0.65355	0.51340
15	REP_ApprovedCreditSum		0.3963	3.88138	0.00010	38	IMP_REP_Circle		0.05855	1.02997	0.30302
16	IMP_FamilyStatus	1	-0.3531	-1.93200	0.05336	39	REP_ConfirmedMonthlyIncome		0.04165	0.31511	0.75268
17	IMP_ScoreBinary	0	0.3461	2.89989	0.00373	40	REP_Age		0.03743	0.56100	0.57480
18	M_REP_ScoreFICO	0	0.3401	2.40415	0.01621	41	IMP_REP_PayMax		-0.03347	-0.51373	0.60744
19	M_FamilyStatus	0	-0.3107	-2.68240	0.00731	42	IMP_REP_AllCLC		-0.02371	-0.26317	0.79242
20	REP_KolichestvoDetejMladshe18		0.2821	2.89507	0.00379	43	IMP_FamilyStatus	2	-0.01035	-0.04617	0.96317
21	M_ScoreBinary	0	0.2260	0.43198	0.66575	44	IMP_REP_BlockDur		-0.00843	-0.10176	0.91895
22	IMP_BadAddressHome	0	0.2143	1.53490	0.12481	45	AddressIdentical	0	-0.00770	-0.10809	0.91392
23	REP_AfsSumm		0.2082	6.74596	0.00000	46	REP_PTI		-0.00561	-0.06323	0.94958

SAS Enterprise Miner Report
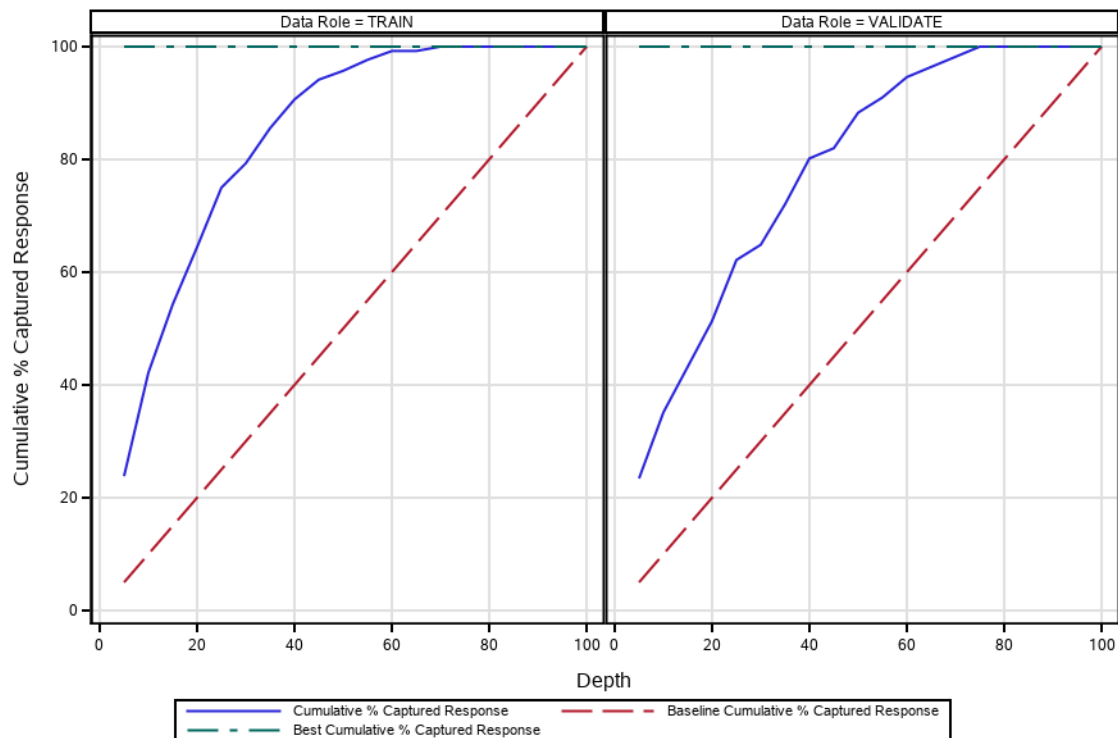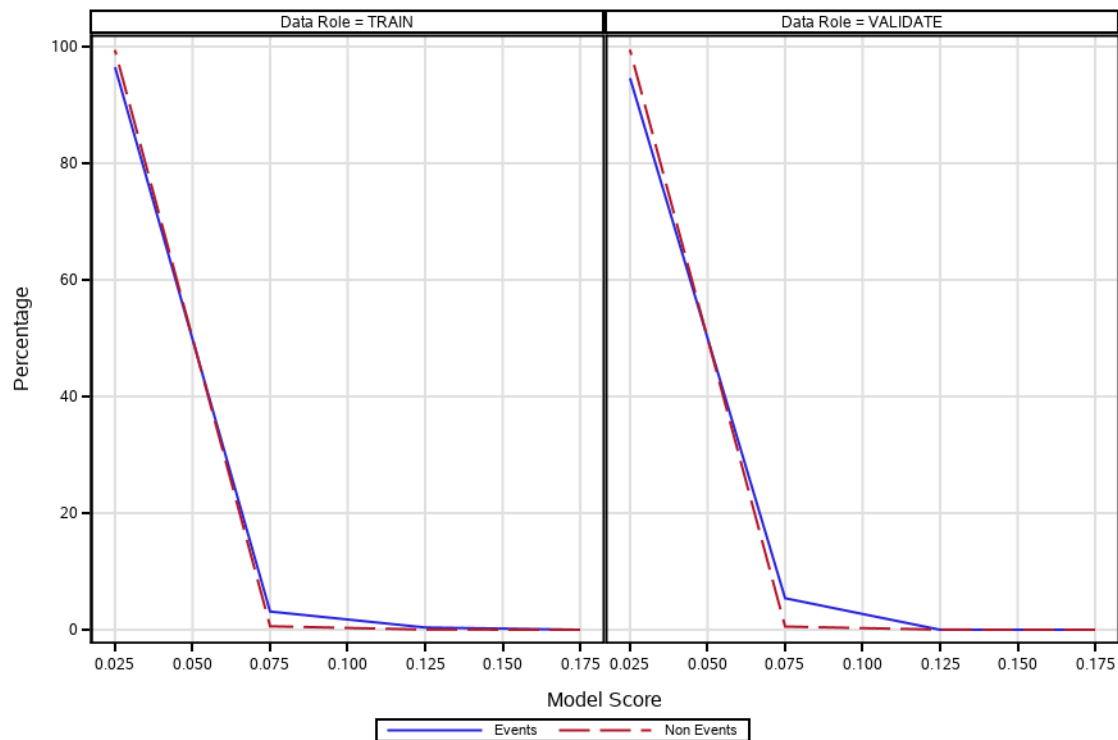Node=Backward Valid Error Regression
Model Iteration Plots

SAS Enterprise Miner Report
Node=Backward Valid Error Regression
Model Assessment Scores where TARGET='Target'

SAS Enterprise Miner Report
Node=Backward Valid Error Regression
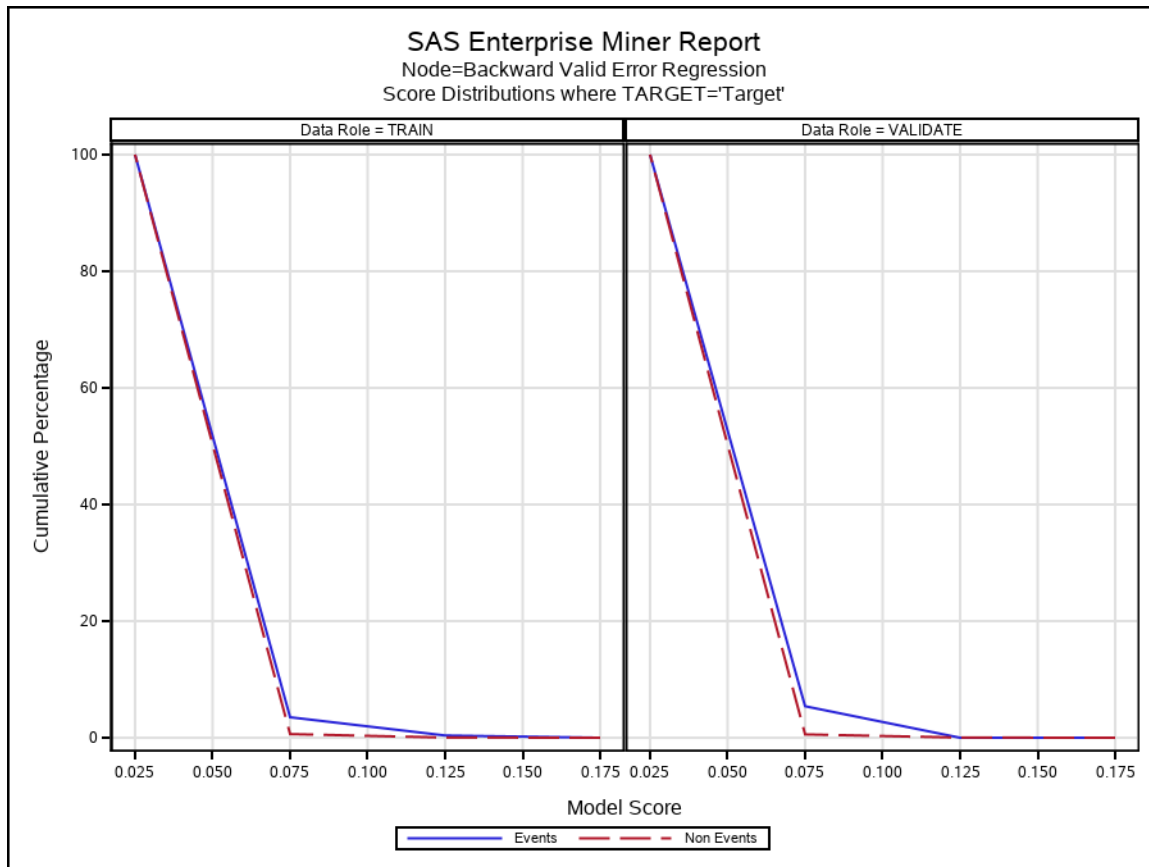Model Assessment Scores where TARGET='Target'
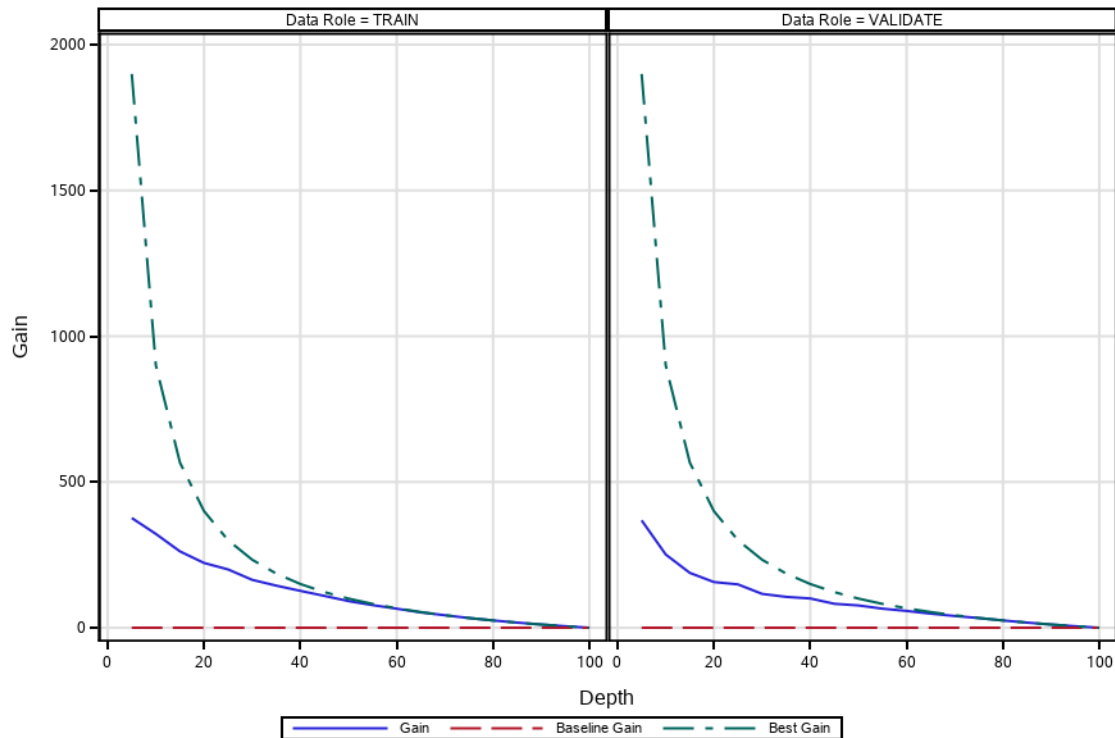
SAS Enterprise Miner Report
Node=Backward Valid Error Regression
Model Assessment Scores where TARGET='Target'
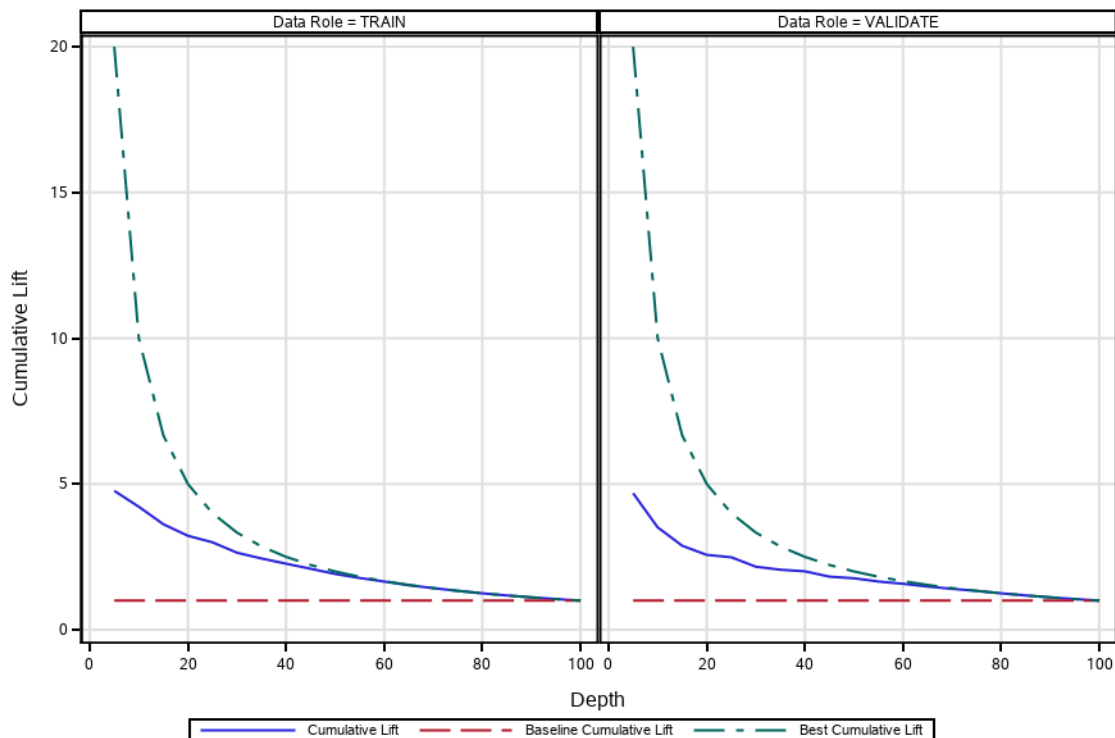
SAS Enterprise Miner Report
Node=Backward Valid Error Regression
Score Distributions where TARGET='Target'

SAS Enterprise Miner Report
Node=Backward Valid Error Regression
Score Distributions where TARGET='Target'

Node=Backward Valid Error Regression
Score Distributions

Target Variable=Target Data Role=TRAIN

Posterior Probability Range	Number of Events	Percentage of Events	Percentage of Nonevents	Cumulative Percentage of Events	Cumulative Percentage of Nonevents
0.15-0.20	0	0.0000	0.0025	0.000	0.003
0.10-0.15	1	0.3906	0.0305	0.391	0.033
0.05-0.10	8	3.1250	0.5965	3.516	0.630
0.00-0.05	247	96.4844	99.3705	100.000	100.000

Target Variable=Target Data Role=VALIDATE

Posterior Probability Range	Number of Events	Percentage of Events	Percentage of Nonevents	Cumulative Percentage of Events	Cumulative Percentage of Nonevents
0.15-0.20	0	0.0000	0.0059	0.000	0.006
0.10-0.15	0	0.0000	0.0237	0.000	0.030
0.05-0.10	6	5.4054	0.5449	5.405	0.575
0.00-0.05	105	94.5946	99.4255	100.000	100.000

SAS Enterprise Miner Report

**Node=Default Regression
Summary**

Node id = Reg2
Node label = Default Regression
Meta path = Ids => Repl => Part => Impt => Reg2
Notes =

**Node=Default Regression
Properties**

Property	Value	Default	Property	Value	Default	Property	Value	Default
Component	Regression		Force	0		PolynomialDegree	2	
AbsConvValue	-1.34078E154	-7.237006E75	GConvTimes	1		PrintDesignMatrix	N	
AbsFTime	1		GConvValue	1E-6		Rule	NONE	
AbsFValue	0		Hierarchy	CLASS		SASSPDS	N	
AbsGTime	1		InputCoding	DEVIATION		SelectionCriterion	VERROR	DEFAULT
AbsGValue	0.00001		Interactions			SelectionDefault	Y	
AbsXTime	1		LinkFunction	LOGIT		Sequential	N	
AbsXValue	1E-8		MainEffect	Y		Simple	N	
ClParm	N		MaxCPUTime	1 HOUR		SlEntry	0.05	
ConvDefaults	Y		MaxFunctionCalls	.		SlStay	0.05	
CorB	N		MaxIterations	.		Start	0	
CovB	N		MaxStep	.		StepOutput	N	
Covout	N		MinResourceUse	N		Stop	0	
Details	N		ModelDefaults	Y		SuppressIntercept	N	
Error	LOGISTIC		ModelSelection	NONE		SuppressOutput	N	
ExcludedVariable	REJECT		OptimizationTechnique	DEFAULT		Terms	N	
FConvTimes	1		Performance	N		TwoFactor	N	
FConvValue	0		Polynomial	N				

**Node=Default Regression
Variable Summary**

Role	Level	Frequency Count	Name
TARGET	BINARY	1	Target
INPUT	BINARY	21	AddressIdentical IMP_BadAddressHome IMP_BadAddressWork IMP_CreditHistoryStopFactors IMP_ScoreBinary M_BadAddressHome M_BadAddressWork M_CreditHistoryStopFactors M_FactCity M_FamilyStatus ... Sex
INPUT	INTERVAL	20	IMP_REP_AllCLC IMP_REP_BlockCnt IMP_REP_BlockDur IMP_REP_Circle IMP_REP_LifeTimeBin IMP_REP_PayMax IMP_REP_Score IMP_REP_ScoreFICO IMP_REP_ScoreProba REP_AfsSumm REP_Age REP_ApprovedCreditSum ...
INPUT	NOMINAL	3	EducationStatus IMP_FactCity IMP_FamilyStatus
INPUT	ORDINAL	4	CountRejectRequestLast12Month CountRejectRequestLast3Month CountRejectRequestLast6Month CountRejectRequestLastMonth

**Node=Default Regression
Model Fit Statistics**

Target=Target Target Label=Target

Label of Statistic	Train	Validation	Test
Akaike's Information Criterion	2796.95	.	.
Average Squared Error	0.01	0.01	.
Average Error Function	0.03	0.04	.
Degrees of Freedom for Error	39590.00	.	.
Model Degrees of Freedom	60.00	.	.
Total Degrees of Freedom	39650.00	.	.
Divisor for ASE	79300.00	33990.00	.
Error Function	2676.95	1244.38	.
Final Prediction Error	0.01	.	.
Maximum Absolute Error	1.00	1.00	.
Mean Square Error	0.01	0.01	.
Sum of Frequencies	39650.00	16995.00	.
Number of Estimate Weights	60.00	.	.
Root Average Sum of Squares	0.08	0.08	.
Root Final Prediction Error	0.08	.	.
Root Mean Squared Error	0.08	0.08	.
Schwarz's Bayesian Criterion	3312.22	.	.
Sum of Squared Errors	502.54	219.15	.
Sum of Case Weights Times Freq	79300.00	33990.00	.
Misclassification Rate	0.01	0.01	.

SAS Enterprise Miner Report
Node=Default Regression
Regression Model Effects
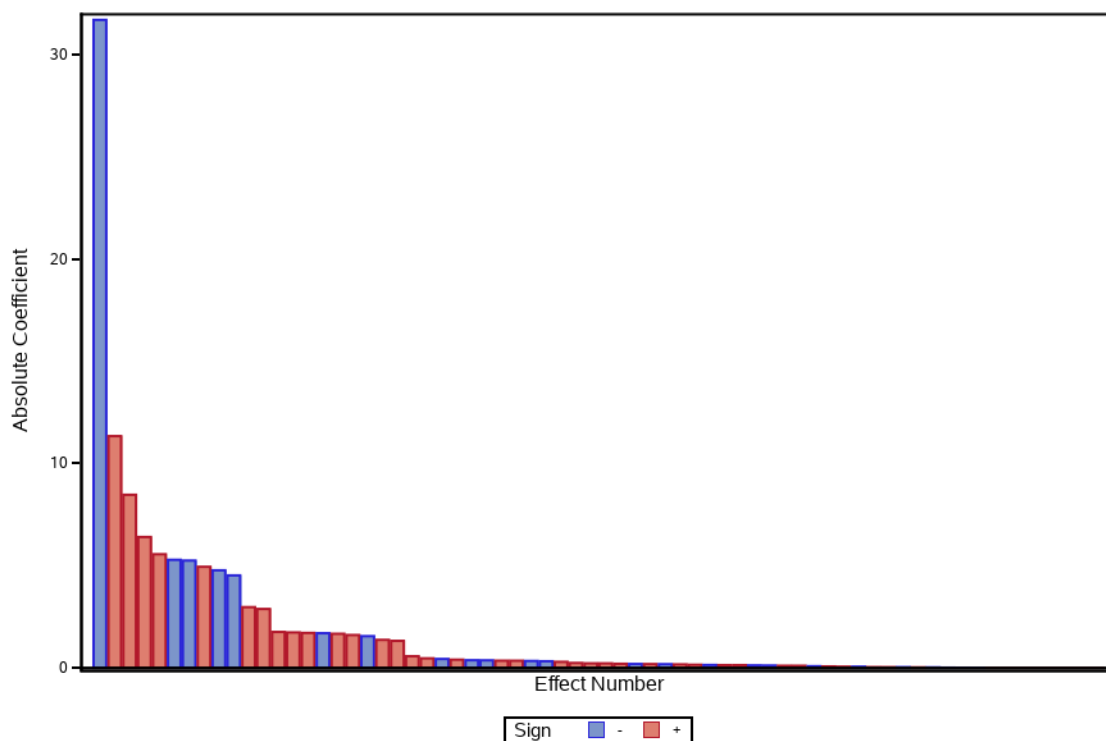
Effect Number	Variable	Level	Coefficient	T-value	P Value	Effect Number	Variable	Level	Coefficient	T-value	P Value
1	Intercept	1	-31.6907	-0.53521	0.59250	35	IMP_BadAddressHome	0	0.21819	1.56242	0.11819
2	CountRejectRequestLast12Month	0	11.3331	.	.	36	REP_AfsSumm		0.19800	6.41533	0.00000
3	CountRejectRequestLast6Month	3	8.4639	0.00275	0.99781	37	M_REP_ScoreProba	0	-0.18972	-1.98239	0.04744
4	IMP_CreditHistoryStopFactors	0	6.3986	.	.	38	REP_SumOtherPayment		0.18439	2.81554	0.00487

SAS Enterprise Miner Report
Node=Default Regression
Regression Model Effects

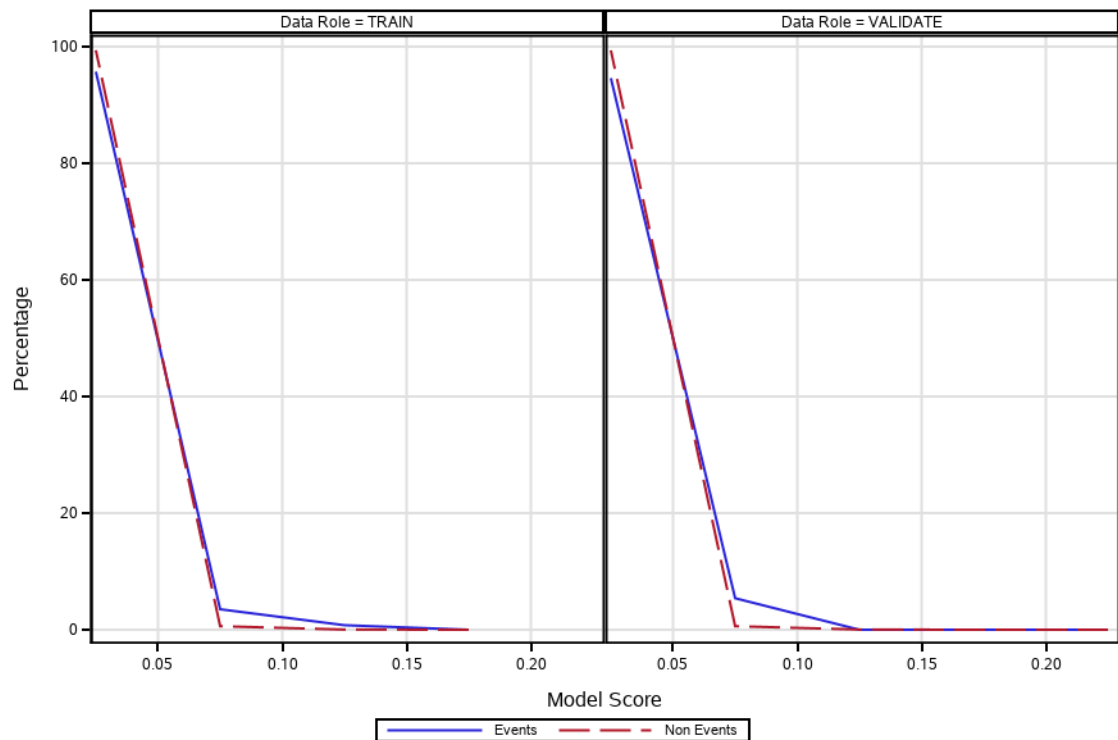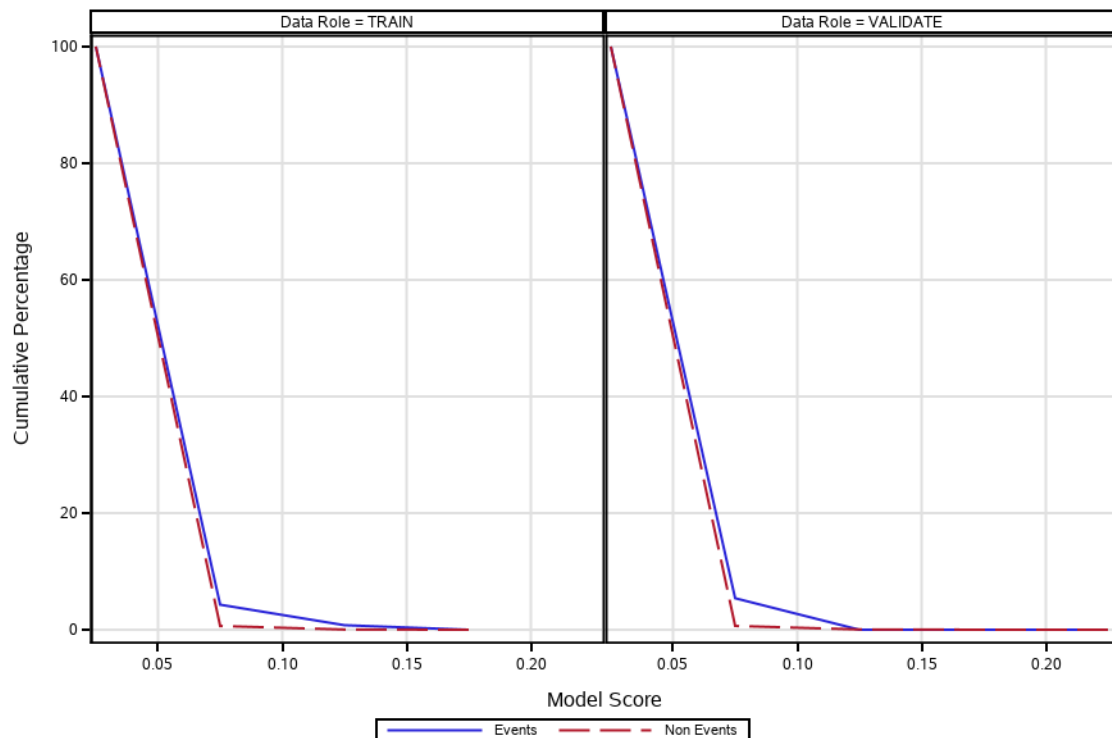| Effect Number	Variable	Level	Coefficient	T-value	P Value	Effect Number	Variable	Level	Coefficient	T-value	P Value
5	M_CreditHistoryStopFactors	0	5.5561	0.24063	0.80984	39	REP_Rashod		-0.17965	-1.39361	0.16343
6	CountRejectRequestLast6Month	2	-5.2836	-0.00346	0.99724	40	IMP_FactCity	1	0.16855	1.53008	0.12600
7	CountRejectRequestLast3Month	3	-5.2466	-0.00176	0.99859	41	IMP_REP_ScoreProba		0.15067	1.90306	0.05703
8	M_BadAddressHome	0	4.9415	.	.	42	IMP_BadAddressWork	0	-0.13976	-1.17011	0.24196
9	CountRejectRequestLast6Month	0	-4.7708	.	.	43	IMP_FamilyStatus	0	0.13339	0.70536	0.48059
10	CountRejectRequestLast6Month	1	-4.5218	-0.00580	0.99537	44	IMP_REP_ScoreFICO		0.13312	1.89005	0.05875
11	CountRejectRequestLastMonth	1	2.9686	0.00744	0.99406	45	IMP_REP_LifeTimeBin		-0.12153	-1.92069	0.05477
12	CountRejectRequestLastMonth	2	2.8795	0.00445	0.99645	46	REP_OrgStanding		-0.11461	-1.77302	0.07623
13	EducationStatus	1	1.7557	0.03221	0.97431	47	Sex	0	0.10244	1.50671	0.13189
14	EducationStatus	3	1.7318	0.03177	0.97466	48	IMP_REP_BlockCnt		0.10232	1.10463	0.26932
15	EducationStatus	5	1.7076	0.03132	0.97501	49	REP_CreditLimit		-0.08093	-0.58452	0.55887
16	CountRejectRequestLast3Month	1	-1.6929	-0.00247	0.99803	50	IMP_REP_Score		0.07045	0.17381	0.86202
17	CountRejectRequestLastMonth	0	1.6653	.	.	51	IMP_REP_Circle		0.05859	1.02907	0.30345
18	EducationStatus	0	1.6046	0.02943	0.97652	52	CountRejectRequestLast12Month	3	-0.05823	-0.00004	0.99997
19	CountRejectRequestLast3Month	0	-1.5491	.	.	53	REP_ConfirmedMonthlyIncome		0.03557	0.26889	0.78801
20	EducationStatus	4	1.3674	0.02508	0.97999	54	REP_Age		0.03380	0.50716	0.61204
21	EducationStatus	2	1.3200	0.02421	0.98068	55	IMP_REP_PayMax		-0.03329	-0.50919	0.61062
22	CountRejectRequestLast3Month	2	0.5662	0.00047	0.99963	56	REP_PTI		0.02366	0.26540	0.79070
23	M_FactCity	0	0.4648	2.54620	0.01089	57	IMP_REP_AllCLC		-0.02244	-0.24858	0.80369
24	IMP_FactCity	0	-0.4340	-4.00696	0.00006	58	AddressIdentical	0	-0.00916	-0.12844	0.89780
25	REP_ApprovedCreditSum		0.4004	3.93382	0.00008	59	IMP_REP_BlockDur		-0.00621	-0.07480	0.94037
26	REP_CountRequest		-0.3729	-0.42012	0.67440	60	IMP_FamilyStatus	2	-0.00103	-0.00460	0.99633
27	IMP_FamilyStatus	1	-0.3673	-2.00817	0.04463	61	M_BadAddressWork	0	0.00000	.	.
28	M_REP_ScoreFICO	0	0.3502	2.47850	0.01319	62	M_REP_AllCLC	0	0.00000	.	.
29	IMP_ScoreBinary	0	0.3483	2.91608	0.00354	63	M_REP_BlockCnt	0	0.00000	.	.
30	CountRejectRequestLast12Month	2	-0.3363	-0.00028	0.99978	64	M_REP_BlockDur	0	0.00000	.	.
31	M_FamilyStatus	0	-0.3224	-2.78314	0.00538	65	M_REP_Circle	0	0.00000	.	.
32	REP_KolichestvoDetejMladshe18		0.2929	3.00208	0.00268	66	M_REP_LifeTimeBin	0	0.00000	.	.
33	CountRejectRequestLast12Month	1	0.2382	0.00045	0.99964	67	M_REP_PayMax	0	0.00000	.	.
34	M_ScoreBinary	0	0.2195	0.41767	0.67619	68	M_REP_Score	0	0.00000	.	.

SAS Enterprise Miner Report
Node=Default Regression
Model Assessment Scores where TARGET='Target'

SAS Enterprise Miner Report
Node=Default Regression
Model Assessment Scores where TARGET='Target'
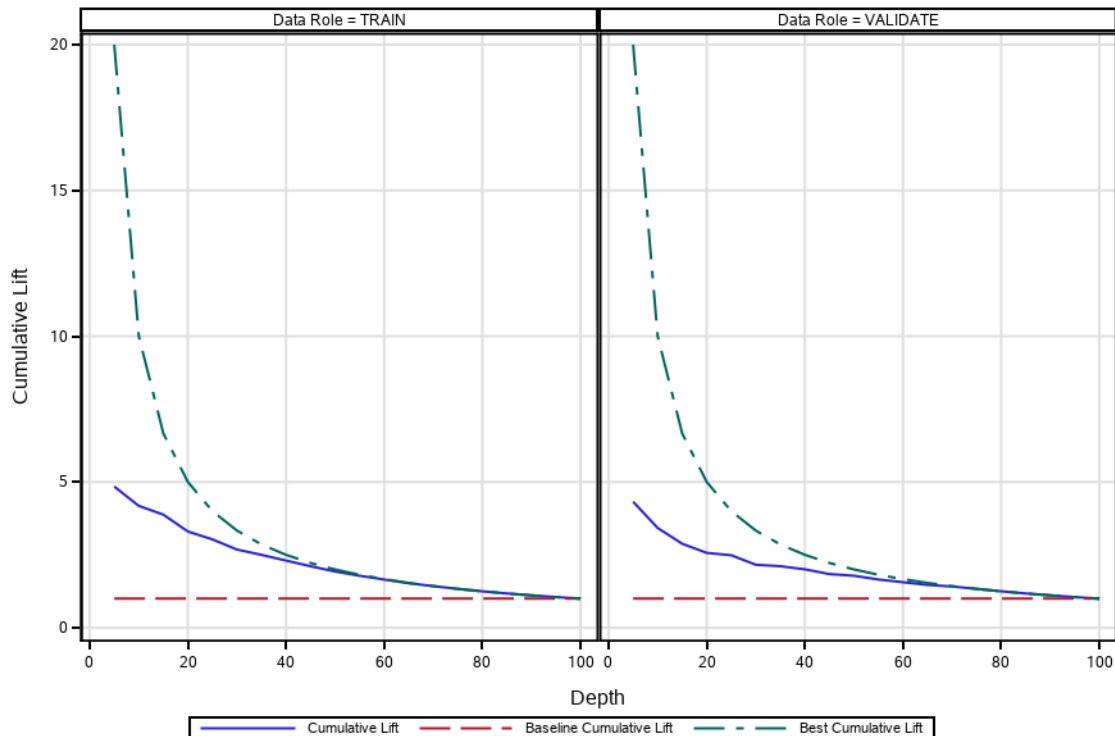
SAS Enterprise Miner Report

Node=Default Regression
Model Assessment Scores where TARGET='Target'
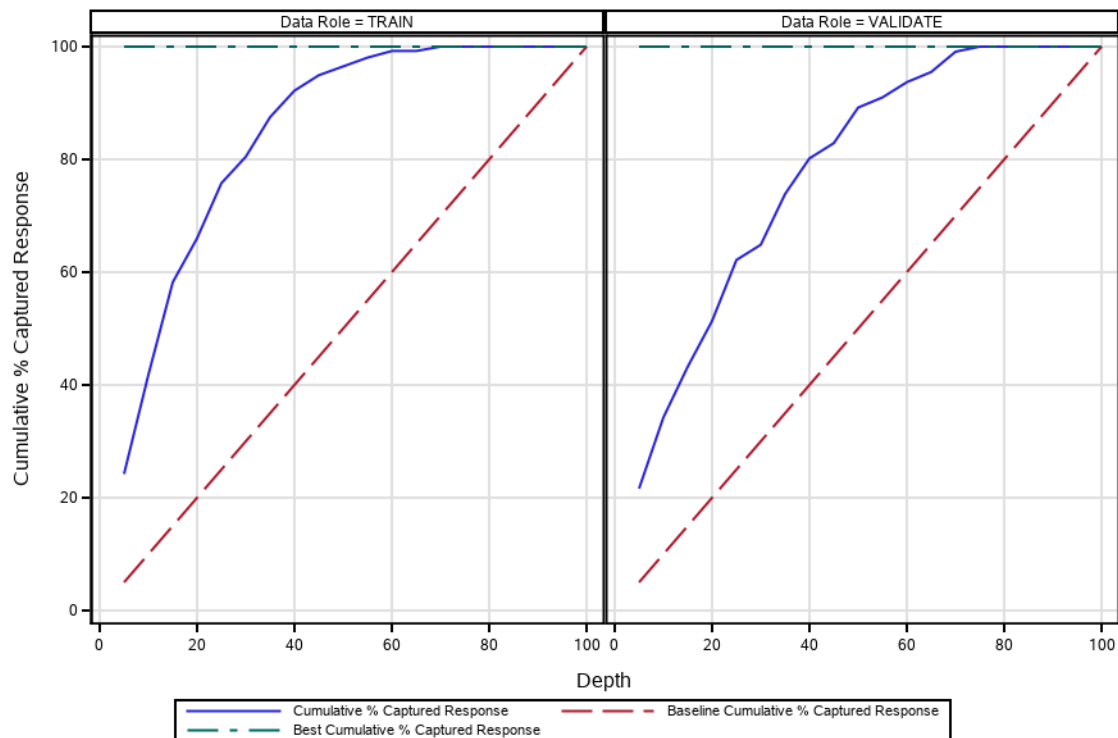
SAS Enterprise Miner Report

Node=Default Regression
Score Distributions where TARGET='Target'

SAS Enterprise Miner Report
Node=Default Regression
Score Distributions where TARGET='Target'

Node=Default Regression
Score Distributions

Target Variable=Target Data Role=TRAIN

Posterior Probability Range	Number of Events	Percentage of Events	Percentage of Nonevents	Cumulative Percentage of Events	Cumulative Percentage of Nonevents
0.15-0.20	0	0.0000	0.0051	0.000	0.005
0.10-0.15	2	0.7813	0.0330	0.781	0.038
0.05-0.10	9	3.5156	0.6067	4.297	0.645
0.00-0.05	245	95.7031	99.3552	100.000	100.000

Target Variable=Target Data Role=VALIDATE

Posterior Probability Range	Number of Events	Percentage of Events	Percentage of Nonevents	Cumulative Percentage of Events	Cumulative Percentage of Nonevents
0.20-0.25	0	0.0000	0.0059	0.000	0.006
0.15-0.20	0	0.0000	0.0059	0.000	0.012
0.10-0.15	0	0.0000	0.0355	0.000	0.047
0.05-0.10	6	5.4054	0.6100	5.405	0.657
0.00-0.05	105	94.5946	99.3426	100.000	100.000

SAS Enterprise Miner Report

Node=Misclassification Gradient Boosting
Summary

Node id = Boost2
Node label = Misclassification Gradient Boosting
Meta path = Ids => Repl => Part => Impt => Boost2
Notes =

Node=Misclassification Gradient Boosting
Properties

Property	Value	Default	Property	Value	Default	Property	Value	Default
Component	Boost		MaxBranch	2		Performance	DISK	
AssessMeasure	MISC	PROFIT	MaxDepth	2		Precision	0	
CategoricalBins	30		Measure	PROFIT		ReUseVar	1	
CreateHStat	N		MinCatSize	5		Seed	12345	
Exhaustive	5000		Missing	USEINSEARCH		Shrinkage	0.1	
Huber	NO		NSurrs	0		SplitSize	.	
IntervalBins	100		NodeSize	20000		SubSeries	BEST	
IterationNum	1		NumPairImp	0		ToolType	MODEL	
Iterations	50		NumSingleImp	5		TrainProportion	60	
LeafFraction	0.001		ObsImportance	N		VarSelection	Y	

Node=Misclassification Gradient Boosting
Variable Summary

Role	Level	Frequency Count	Name
TARGET	BINARY	1	Target
INPUT	BINARY	21	AddressIdentical IMP_BadAddressHome IMP_BadAddressWork IMP_CreditHistoryStopFactors IMP_ScoreBinary M_BadAddressHome M_BadAddressWork M_CreditHistoryStopFactors M_FactCity M_FamilyStatus … Sex
INPUT	INTERVAL	20	IMP_REP_AllCLC IMP_REP_BlockCnt IMP_REP_BlockDur IMP_REP_Circle IMP_REP_LifeTimeBin IMP_REP_PayMax IMP_REP_Score IMP_REP_ScoreFICO IMP_REP_ScoreProba REP_AfsSumm REP_Age REP_ApprovedCreditSum …
INPUT	NOMINAL	3	EducationStatus IMP_FactCity IMP_FamilyStatus
INPUT	ORDINAL	4	CountRejectRequestLast12Month CountRejectRequestLast3Month CountRejectRequestLast6Month CountRejectRequestLastMonth
ID	INTERVAL	1	_dataobs_
ID	NOMINAL	1	APPLICID

Node=Misclassification Gradient Boosting
Model Fit Statistics

Target=Target Target Label=Target

Label of Statistic	Train	Validation	Test
Sum of Frequencies	39650.00	16995.00	.
Sum of Case Weights Times Freq	79300.00	33990.00	.
Misclassification Rate	0.01	0.01	.
Maximum Absolute Error	0.99	0.99	.
Sum of Squared Errors	507.73	220.22	.
Average Squared Error	0.01	0.01	.
Root Average Squared Error	0.08	0.08	.
Divisor for ASE	79300.00	33990.00	.
Total Degrees of Freedom	39650.00	.	.

SAS Enterprise Miner Report
Node=Misclassification Gradient Boosting
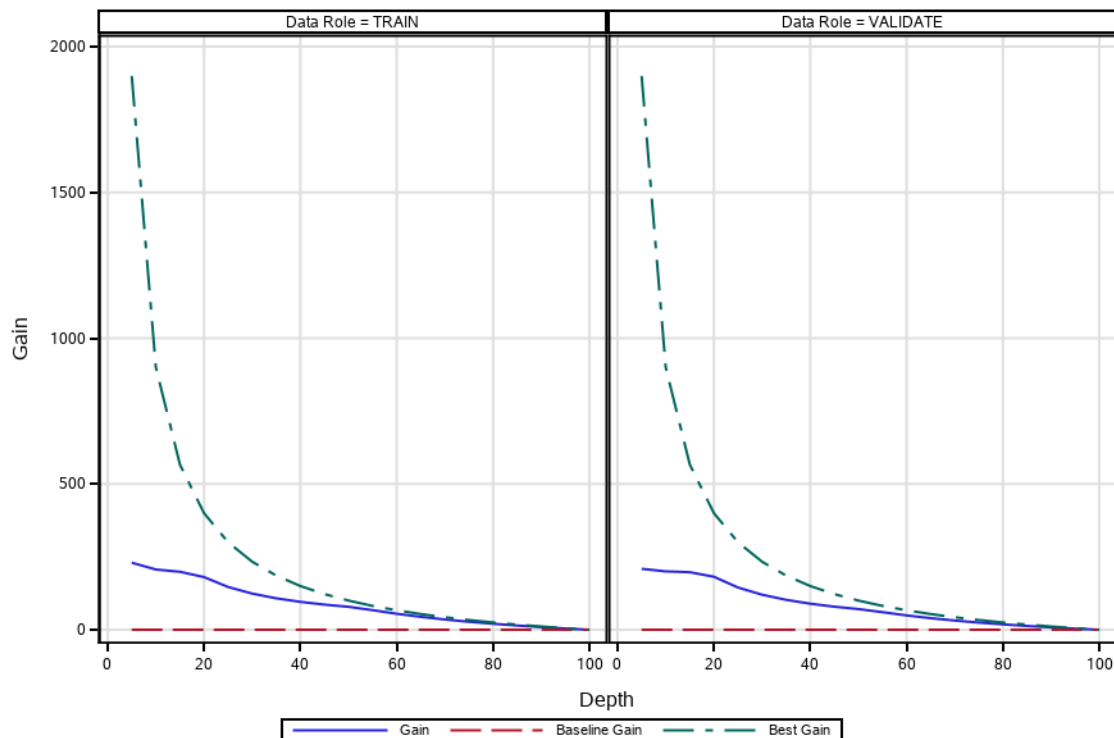### Subseries Plot
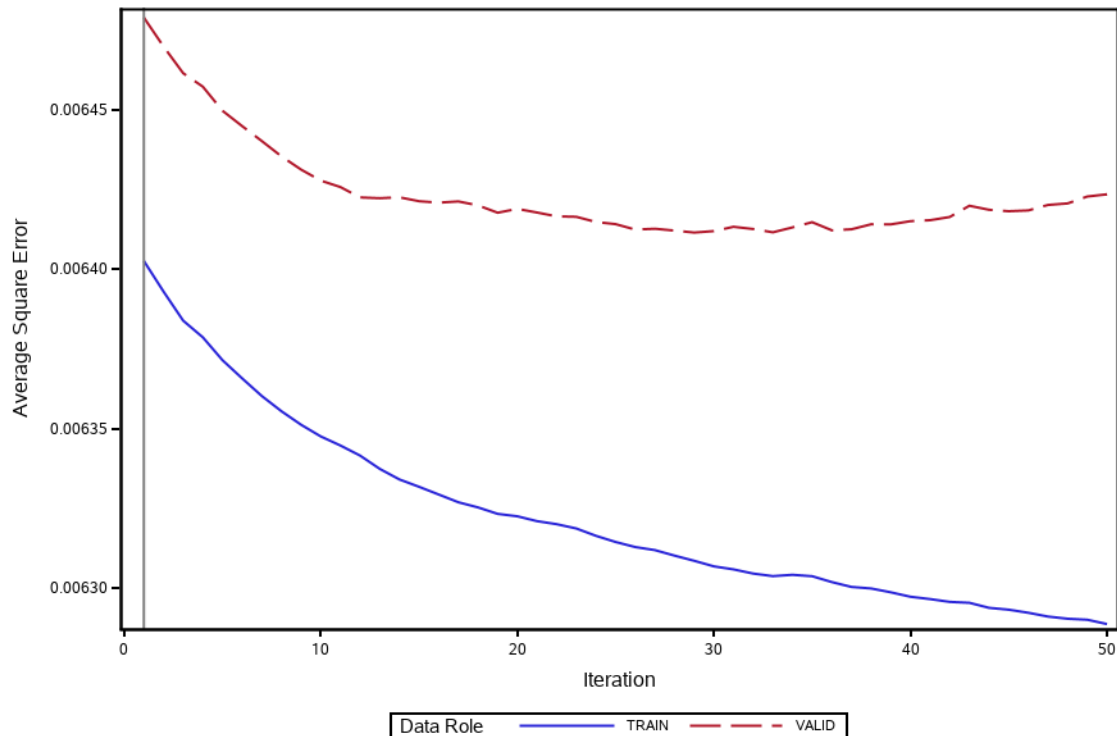
Node=Misclassification Gradient Boosting
Variable Importance

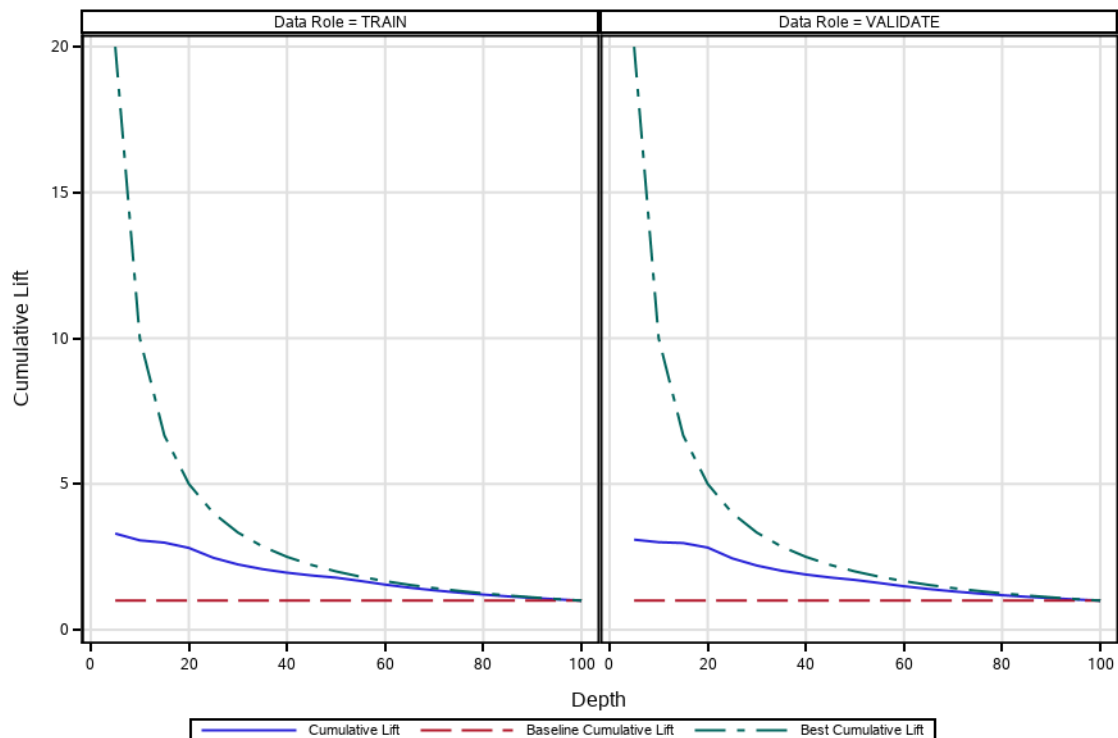| Variable Name	Label	Number of Splitting Rules	Importance	Validation Importance	Ratio of Validation to Training Importance
REP_AfsSumm	Replacement: AfsSumm	1	1.00000	1.00000	1.00000
IMP_REP_Score	Imputed: Replacement: Score	1	0.62492	0.00000	0.00000
IMP_REP_ScoreFICO	Imputed: Replacement: ScoreFICO	1	0.47276	0.31797	0.67258
IMP_ScoreBinary	Imputed: ScoreBinary	0	0.00000	0.00000	.
IMP_CreditHistoryStopFactors	Imputed: CreditHistoryStopFactors	0	0.00000	0.00000	.
IMP_REP_BlockDur	Imputed: Replacement: BlockDur	0	0.00000	0.00000	.
IMP_REP_LifeTimeBin	Imputed: Replacement: LifeTimeBin	0	0.00000	0.00000	.
IMP_REP_PayMax	Imputed: Replacement: PayMax	0	0.00000	0.00000	.
IMP_REP_AllCLC	Imputed: Replacement: AllCLC	0	0.00000	0.00000	.
IMP_REP_BlockCnt	Imputed: Replacement: BlockCnt	0	0.00000	0.00000	.
IMP_REP_ScoreProba	Imputed: Replacement: ScoreProba	0	0.00000	0.00000	.
IMP_REP_Circle	Imputed: Replacement: Circle	0	0.00000	0.00000	.
REP_Age	Replacement: Age	0	0.00000	0.00000	.
REP_ApprovedCreditSum	Replacement: ApprovedCreditSum	0	0.00000	0.00000	.
REP_ConfirmedMonthlyIncome	Replacement: ConfirmedMonthlyIncome	0	0.00000	0.00000	.
REP_CountRequest	Replacement: CountRequest	0	0.00000	0.00000	.
REP_CreditLimit	Replacement: CreditLimit	0	0.00000	0.00000	.
REP_KolichestvoDetejMladshe18	Replacement: KolichestvoDetejMladshe18	0	0.00000	0.00000	.
REP_OrgStanding	Replacement: OrgStanding	0	0.00000	0.00000	.
REP_PTI	Replacement: PTI	0	0.00000	0.00000	.
REP_Rashod	Replacement: Rashod	0	0.00000	0.00000	.
REP_SumOtherPayment	Replacement: SumOtherPayment	0	0.00000	0.00000	.
AddressIdentical	AddressIdentical	0	0.00000	0.00000	.

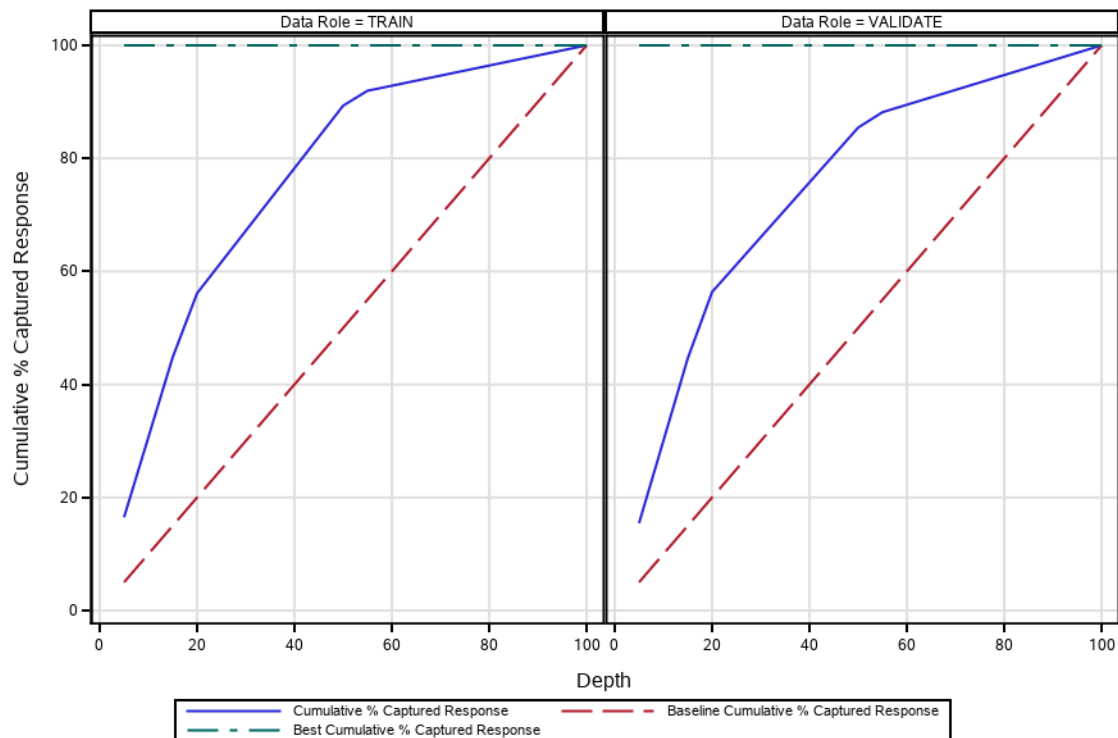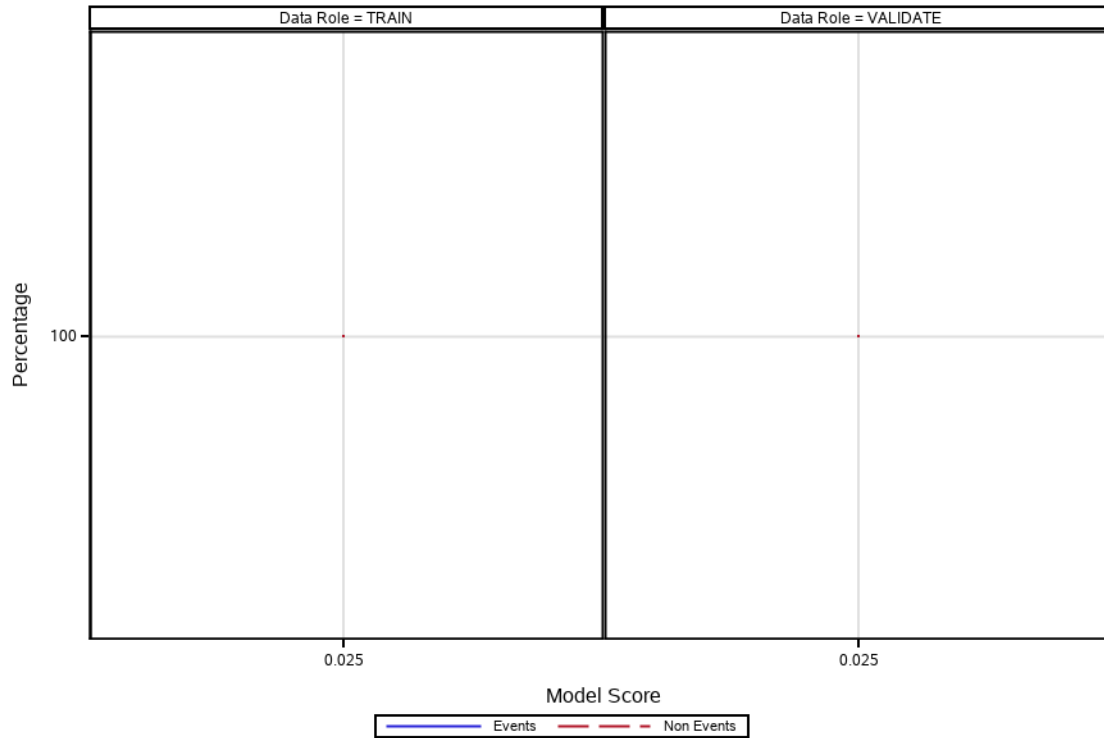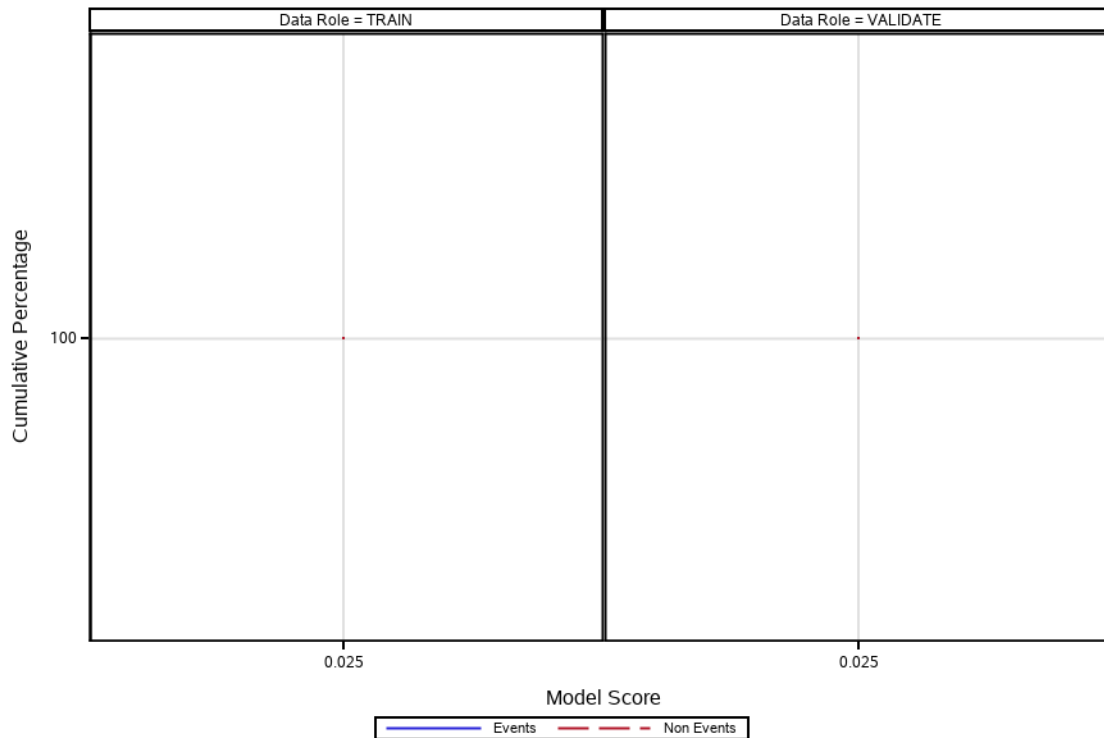| Variable Name	Label	Number of Splitting Rules	Importance	Validation Importance	Ratio of Validation to Training Importance
IMP_BadAddressHome	Imputed: BadAddressHome	0	0.00000	0.00000	.
IMP_BadAddressWork	Imputed: BadAddressWork	0	0.00000	0.00000	.
M_REP_PayMax	Imputation Indicator for REP_PayMax	0	0.00000	0.00000	.
M_REP_Score	Imputation Indicator for REP_Score	0	0.00000	0.00000	.
M_BadAddressHome	Imputation Indicator for BadAddressHome	0	0.00000	0.00000	.
M_BadAddressWork	Imputation Indicator for BadAddressWork	0	0.00000	0.00000	.
M_CreditHistoryStopFactors	Imputation Indicator for CreditHistoryStopFactors	0	0.00000	0.00000	.
M_FactCity	Imputation Indicator for FactCity	0	0.00000	0.00000	.
M_FamilyStatus	Imputation Indicator for FamilyStatus	0	0.00000	0.00000	.
M_REP_AllCLC	Imputation Indicator for REP_AllCLC	0	0.00000	0.00000	.
M_REP_BlockCnt	Imputation Indicator for REP_BlockCnt	0	0.00000	0.00000	.
M_REP_BlockDur	Imputation Indicator for REP_BlockDur	0	0.00000	0.00000	.
M_REP_Circle	Imputation Indicator for REP_Circle	0	0.00000	0.00000	.
M_REP_LifeTimeBin	Imputation Indicator for REP_LifeTimeBin	0	0.00000	0.00000	.
CountRejectRequestLastMonth	CountRejectRequestLastMonth	0	0.00000	0.00000	.
IMP_FactCity	Imputed: FactCity	0	0.00000	0.00000	.
M_REP_ScoreFICO	Imputation Indicator for REP_ScoreFICO	0	0.00000	0.00000	.
M_REP_ScoreProba	Imputation Indicator for REP_ScoreProba	0	0.00000	0.00000	.
M_ScoreBinary	Imputation Indicator for ScoreBinary	0	0.00000	0.00000	.
Sex	Sex	0	0.00000	0.00000	.
EducationStatus	EducationStatus	0	0.00000	0.00000	.
CountRejectRequestLast3Month	CountRejectRequestLast3Month	0	0.00000	0.00000	.
IMP_FamilyStatus	Imputed: FamilyStatus	0	0.00000	0.00000	.
CountRejectRequestLast12Month	CountRejectRequestLast12Month	0	0.00000	0.00000	.
CountRejectRequestLast6Month	CountRejectRequestLast6Month	0	0.00000	0.00000	.

SAS Enterprise Miner Report
Node=Misclassification Gradient Boosting
Model Assessment Scores where TARGET='Target'

SAS Enterprise Miner Report
Node=Misclassification Gradient Boosting
Model Assessment Scores where TARGET='Target'

SAS Enterprise Miner Report
Node=Misclassification Gradient Boosting
Model Assessment Scores where TARGET='Target'

SAS Enterprise Miner Report
Node=Misclassification Gradient Boosting
Score Distributions where TARGET='Target'

Data Role = TRAIN	Data Role = VALIDATE

Percentage

100

0.025   0.025

Model Score

Events — — Non Events

SAS Enterprise Miner Report
Node=Misclassification Gradient Boosting
Score Distributions where TARGET='Target'

Data Role = TRAIN	Data Role = VALIDATE

Cumulative Percentage

100

0.025   0.025

Model Score

Events — — Non Events

Node=Misclassification Gradient Boosting
Score Distributions

Target Variable=Target Data Role=TRAIN

Posterior Probability Range	Number of Events	Percentage of Events	Percentage of Nonevents	Cumulative Percentage of Events	Cumulative Percentage of Nonevents
0.00-0.05	256	100	100	100	100

Target Variable=Target Data Role=VALIDATE

Posterior Probability Range	Number of Events	Percentage of Events	Percentage of Nonevents	Cumulative Percentage of Events	Cumulative Percentage of Nonevents
0.00-0.05	111	100	100	100	100

SAS Enterprise Miner Report

**Node=Average Square Error Gradient Boosting
Summary**

Node id = Boost3
Node label = Average Square Error Gradient Boosting
Meta path = lds => Repl => Part => Impt => Boost3
Notes =

**Node=Average Square Error Gradient Boosting
Properties**

Property	Value	Default	Property	Value	Default	Property	Value	Default
Component	Boost		MaxBranch	2		Performance	DISK	
AssessMeasure	ASE	PROFIT	MaxDepth	2		Precision	0	
CategoricalBins	30		Measure	PROFIT		ReUseVar	1	
CreateHStat	N		MinCatSize	5		Seed	12345	
Exhaustive	5000		Missing	USEINSEARCH		Shrinkage	0.1	
Huber	NO		NSurrs	0		SplitSize	.	
IntervalBins	100		NodeSize	20000		SubSeries	BEST	
IterationNum	1		NumPairImp	0		ToolType	MODEL	
Iterations	50		NumSingleImp	5		TrainProportion	60	
LeafFraction	0.001		ObsImportance	N		VarSelection	Y	

**Node=Average Square Error Gradient Boosting
Variable Summary**

Role	Level	Frequency Count	Name
TARGET	BINARY	1	Target
INPUT	BINARY	21	AddressIdentical IMP_BadAddressHome IMP_BadAddressWork IMP_CreditHistoryStopFactors IMP_ScoreBinary M_BadAddressHome M_BadAddressWork M_CreditHistoryStopFactors M_FactCity M_FamilyStatus ... Sex
INPUT	INTERVAL	20	IMP_REP_AllCLC IMP_REP_BlockCnt IMP_REP_BlockDur IMP_REP_Circle IMP_REP_LifeTimeBin IMP_REP_PayMax IMP_REP_Score IMP_REP_ScoreFICO IMP_REP_ScoreProba REP_AfsSumm REP_Age REP_ApprovedCreditSum ...
INPUT	NOMINAL	3	EducationStatus IMP_FactCity IMP_FamilyStatus
INPUT	ORDINAL	4	CountRejectRequestLast12Month CountRejectRequestLast3Month CountRejectRequestLast6Month CountRejectRequestLastMonth
ID	INTERVAL	1	_dataobs_
ID	NOMINAL	1	APPLICID

**Node=Average Square Error Gradient Boosting
Model Fit Statistics**

Target=Target Target Label=Target

Label of Statistic	Train	Validation	Test
Sum of Frequencies	39650.00	16995.00	.
Sum of Case Weights Times Freq	79300.00	33990.00	.
Misclassification Rate	0.01	0.01	.
Maximum Absolute Error	1.00	1.00	.
Sum of Squared Errors	500.26	217.93	.
Average Squared Error	0.01	0.01	.
Root Average Squared Error	0.08	0.08	.
Divisor for ASE	79300.00	33990.00	.
Total Degrees of Freedom	39650.00	.	.

SAS Enterprise Miner Report
Node=Average Square Error Gradient Boosting
Subseries Plot

Average Square Error
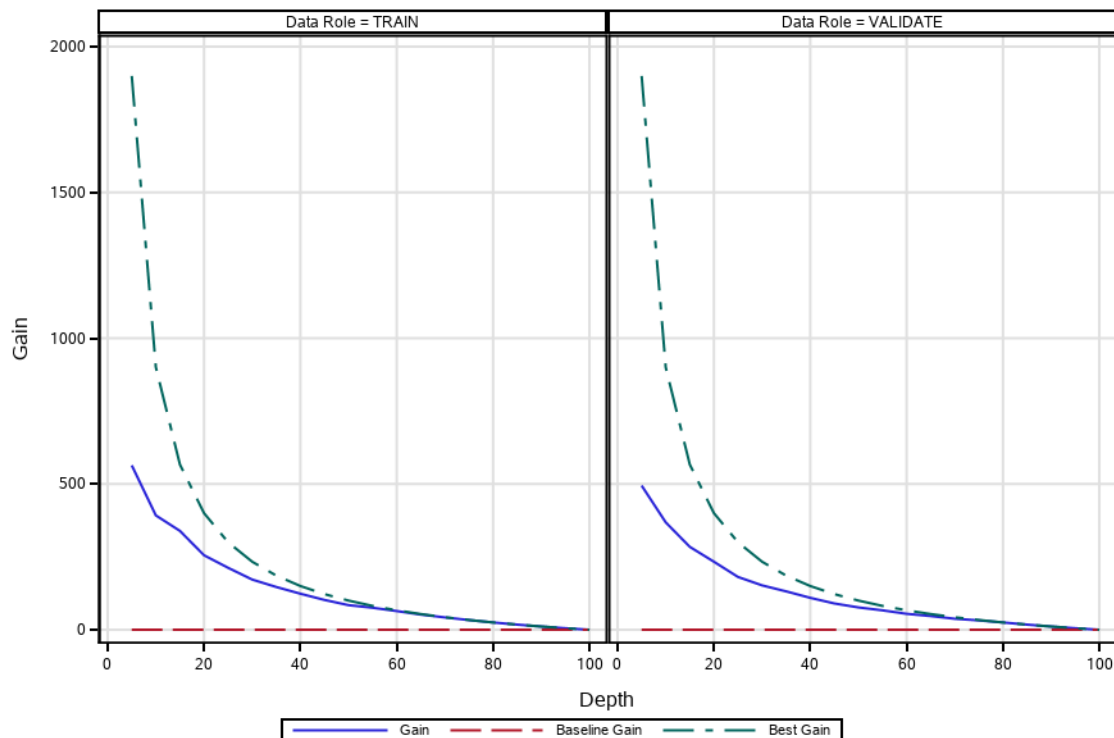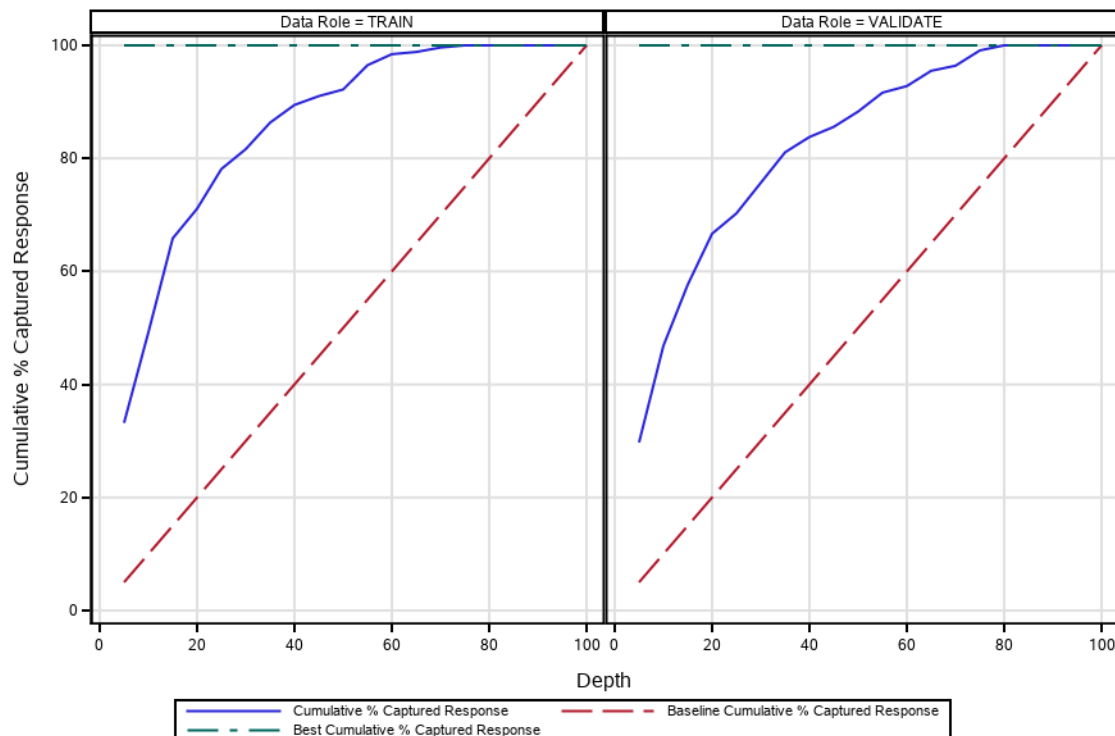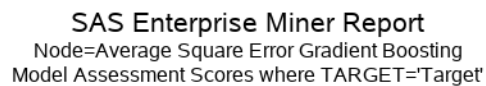
Iteration

Data Role —— TRAIN — — VALID
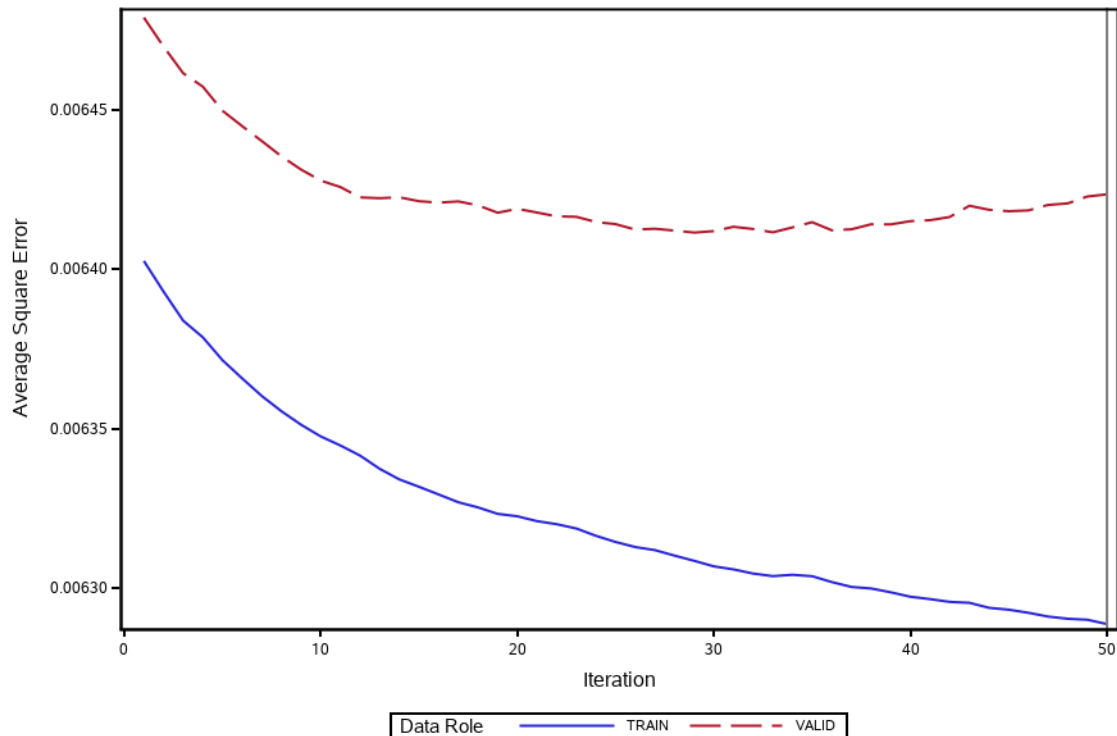
Node=Average Square Error Gradient Boosting
Variable Importance

Variable Name	Label	Number of Splitting Rules	Importance	Validation Importance	Ratio of Validation to Training Importance
REP_AfsSumm	Replacement: AfsSumm	19	1.00000	1.00000	1.00000
IMP_REP_ScoreFICO	Imputed: Replacement: ScoreFICO	23	0.96226	0.77643	0.80689
IMP_REP_LifeTimeBin	Imputed: Replacement: LifeTimeBin	7	0.56503	0.29518	0.52242
REP_SumOtherPayment	Replacement: SumOtherPayment	7	0.38397	0.01440	0.03749
EducationStatus	EducationStatus	3	0.32508	0.09014	0.27730
IMP_FactCity	Imputed: FactCity	3	0.29305	0.20142	0.68732
REP_ApprovedCreditSum	Replacement: ApprovedCreditSum	5	0.29057	0.19473	0.67017
IMP_REP_Score	Imputed: Replacement: Score	1	0.27687	0.00000	0.00000
IMP_REP_BlockCnt	Imputed: Replacement: BlockCnt	2	0.26182	0.00000	0.00000
REP_CreditLimit	Replacement: CreditLimit	4	0.22879	0.18329	0.80112
Sex	Sex	1	0.19305	0.00000	0.00000
IMP_REP_BlockDur	Imputed: Replacement: BlockDur	1	0.18556	0.00000	0.00000
M_FamilyStatus	Imputation Indicator for FamilyStatus	4	0.18548	0.00000	0.00000
M_REP_ScoreProba	Imputation Indicator for REP_ScoreProba	1	0.18414	0.00000	0.00000
M_CreditHistoryStopFactors	Imputation Indicator for CreditHistoryStopFactors	1	0.09866	0.08106	0.82160
REP_OrgStanding	Replacement: OrgStanding	1	0.08671	0.00000	0.00000
IMP_REP_PayMax	Imputed: Replacement: PayMax	1	0.08635	0.02380	0.27563
IMP_ScoreBinary	Imputed: ScoreBinary	1	0.08201	0.00000	0.00000
REP_Age	Replacement: Age	1	0.07403	0.10166	1.37325
IMP_REP_Circle	Imputed: Replacement: Circle	1	0.06930	0.06541	0.94374
IMP_REP_AllCLC	Imputed: Replacement: AllCLC	0	0.00000	0.00000	.
REP_ConfirmedMonthlyIncome	Replacement: ConfirmedMonthlyIncome	0	0.00000	0.00000	.
IMP_CreditHistoryStopFactors	Imputed: CreditHistoryStopFactors	0	0.00000	0.00000	.

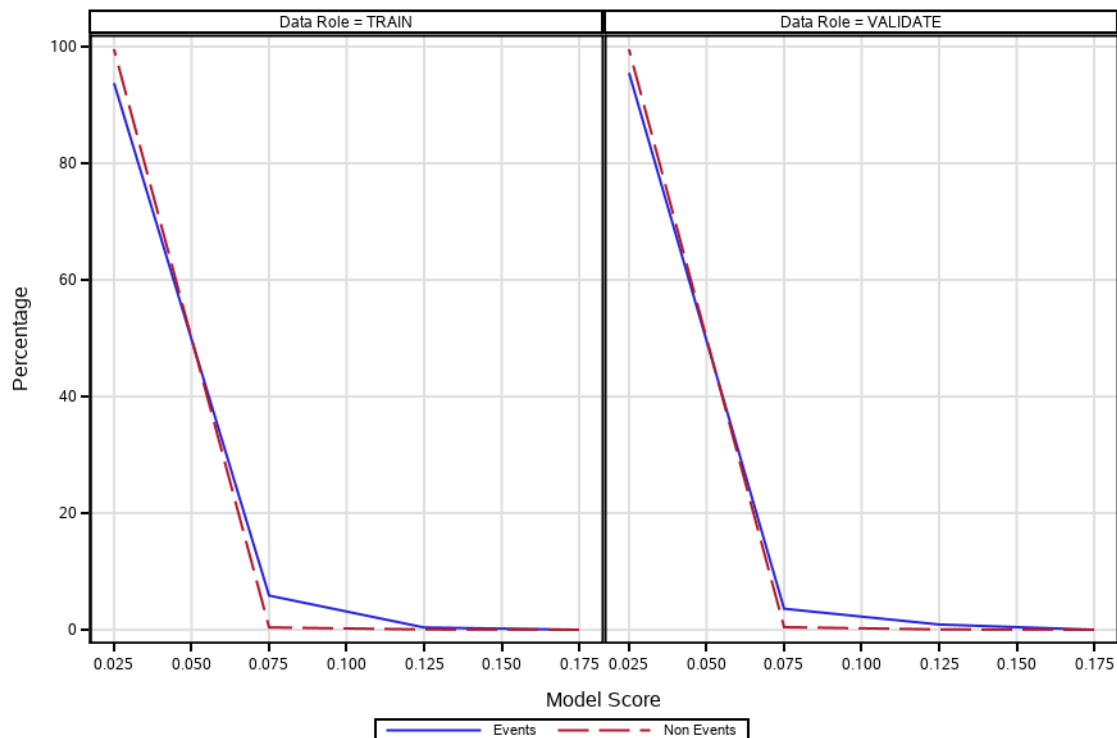| Variable Name	Label	Number of Splitting Rules	Importance	Validation Importance	Ratio of Validation to Training Importance
REP_Rashod	Replacement: Rashod	0	0.00000	0.00000	.
IMP_BadAddressWork	Imputed: BadAddressWork	0	0.00000	0.00000	.
IMP_REP_ScoreProba	Imputed: Replacement: ScoreProba	0	0.00000	0.00000	.
M_REP_Score	Imputation Indicator for REP_Score	0	0.00000	0.00000	.
M_BadAddressHome	Imputation Indicator for BadAddressHome	0	0.00000	0.00000	.
AddressIdentical	AddressIdentical	0	0.00000	0.00000	.
IMP_BadAddressHome	Imputed: BadAddressHome	0	0.00000	0.00000	.
M_FactCity	Imputation Indicator for FactCity	0	0.00000	0.00000	.
M_BadAddressWork	Imputation Indicator for BadAddressWork	0	0.00000	0.00000	.
M_REP_AllCLC	Imputation Indicator for REP_AllCLC	0	0.00000	0.00000	.
M_REP_BlockCnt	Imputation Indicator for REP_BlockCnt	0	0.00000	0.00000	.
M_REP_BlockDur	Imputation Indicator for REP_BlockDur	0	0.00000	0.00000	.
M_REP_Circle	Imputation Indicator for REP_Circle	0	0.00000	0.00000	.
M_REP_LifeTimeBin	Imputation Indicator for REP_LifeTimeBin	0	0.00000	0.00000	.
M_REP_PayMax	Imputation Indicator for REP_PayMax	0	0.00000	0.00000	.
REP_PTI	Replacement: PTI	0	0.00000	0.00000	.
M_REP_ScoreFICO	Imputation Indicator for REP_ScoreFICO	0	0.00000	0.00000	.
REP_CountRequest	Replacement: CountRequest	0	0.00000	0.00000	.
M_ScoreBinary	Imputation Indicator for ScoreBinary	0	0.00000	0.00000	.
REP_KolichestvoDetejMladshe18	Replacement: KolichestvoDetejMladshe18	0	0.00000	0.00000	.
CountRejectRequestLastMonth	CountRejectRequestLastMonth	0	0.00000	0.00000	.
CountRejectRequestLast3Month	CountRejectRequestLast3Month	0	0.00000	0.00000	.
IMP_FamilyStatus	Imputed: FamilyStatus	0	0.00000	0.00000	.
CountRejectRequestLast12Month	CountRejectRequestLast12Month	0	0.00000	0.00000	.
CountRejectRequestLast6Month	CountRejectRequestLast6Month	0	0.00000	0.00000	.

SAS Enterprise Miner Report
Node=Average Square Error Gradient Boosting
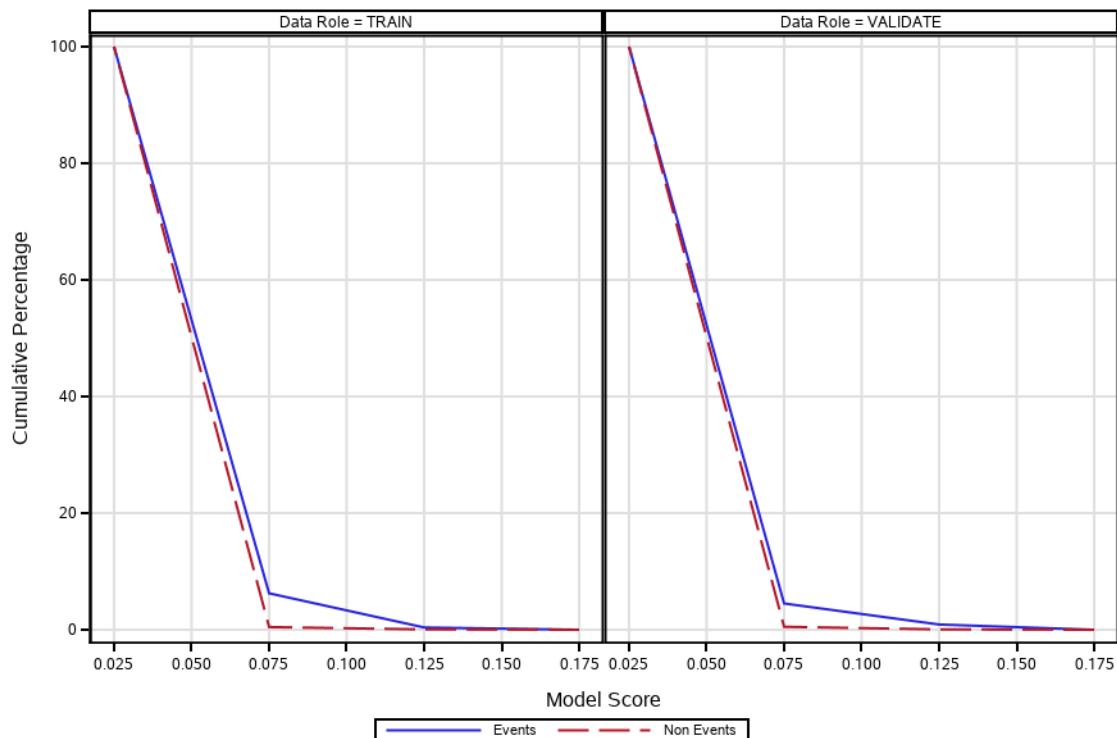Model Assessment Scores where TARGET='Target'

SAS Enterprise Miner Report
Node=Average Square Error Gradient Boosting
Model Assessment Scores where TARGET='Target'

SAS Enterprise Miner Report
Node=Average Square Error Gradient Boosting
Model Assessment Scores where TARGET='Target'

**Node=Average Square Error Gradient Boosting
Score Distributions**

Target Variable=Target Data Role=TRAIN

Posterior Probability Range	Number of Events	Percentage of Events	Percentage of Nonevents	Cumulative Percentage of Events	Cumulative Percentage of Nonevents
0.15-0.20	0	0.0000	0.0102	0.000	0.010
0.10-0.15	1	0.3906	0.0508	0.391	0.061
0.05-0.10	15	5.8594	0.4036	6.250	0.465
0.00-0.05	240	93.7500	99.5355	100.000	100.000

Target Variable=Target Data Role=VALIDATE

Posterior Probability Range	Number of Events	Percentage of Events	Percentage of Nonevents	Cumulative Percentage of Events	Cumulative Percentage of Nonevents
0.15-0.20	0	0.0000	0.0059	0.000	0.006
0.10-0.15	1	0.9009	0.0592	0.901	0.065
0.05-0.10	4	3.6036	0.4442	4.505	0.509
0.00-0.05	106	95.4955	99.4906	100.000	100.000

SAS Enterprise Miner Report

**Node=Decisiom Gradient Boosting
Summary**

Node id = Boost
Node label = Decisiom Gradient Boosting
Meta path = lds => Repl => Part => Impt => Boost
Notes =

**Node=Decisiom Gradient Boosting
Properties**

Property	Value	Default	Property	Value	Default	Property	Value	Default
Component	Boost		MaxBranch	2		Performance	DISK	
AssessMeasure	PROFIT		MaxDepth	2		Precision	0	
CategoricalBins	30		Measure	PROFIT		ReUseVar	1	
CreateHStat	N		MinCatSize	5		Seed	12345	
Exhaustive	5000		Missing	USEINSEARCH		Shrinkage	0.1	
Huber	NO		NSurrs	0		SplitSize	.	
IntervalBins	100		NodeSize	20000		SubSeries	LONGEST	BEST
IterationNum	1		NumPairImp	0		ToolType	MODEL	
Iterations	50		NumSingleImp	5		TrainProportion	60	
LeafFraction	0.001		ObsImportance	N		VarSelection	Y	

**Node=Decisiom Gradient Boosting
Variable Summary**

Role	Level	Frequency Count	Name
TARGET	BINARY	1	Target
INPUT	BINARY	21	AddressIdentical IMP_BadAddressHome IMP_BadAddressWork IMP_CreditHistoryStopFactors IMP_ScoreBinary M_BadAddressHome M_BadAddressWork M_CreditHistoryStopFactors M_FactCity M_FamilyStatus ... Sex
INPUT	INTERVAL	20	IMP_REP_AllCLC IMP_REP_BlockCnt IMP_REP_BlockDur IMP_REP_Circle IMP_REP_LifeTimeBin IMP_REP_PayMax IMP_REP_Score IMP_REP_ScoreFICO IMP_REP_ScoreProba REP_AfsSumm REP_Age REP_ApprovedCreditSum ...
INPUT	NOMINAL	3	EducationStatus IMP_FactCity IMP_FamilyStatus
INPUT	ORDINAL	4	CountRejectRequestLast12Month CountRejectRequestLast3Month CountRejectRequestLast6Month CountRejectRequestLastMonth
ID	INTERVAL	1	_dataobs_
ID	NOMINAL	1	APPLICID

**Node=Decisiom Gradient Boosting
Model Fit Statistics**

Target=Target Target Label=Target

Label of Statistic	Train	Validation	Test
Sum of Frequencies	39650.00	16995.00	.
Sum of Case Weights Times Freq	79300.00	33990.00	.
Misclassification Rate	0.01	0.01	.
Maximum Absolute Error	1.00	1.00	.
Sum of Squared Errors	498.69	218.34	.
Average Squared Error	0.01	0.01	.
Root Average Squared Error	0.08	0.08	.
Divisor for ASE	79300.00	33990.00	.
Total Degrees of Freedom	39650.00	.	.

SAS Enterprise Miner Report
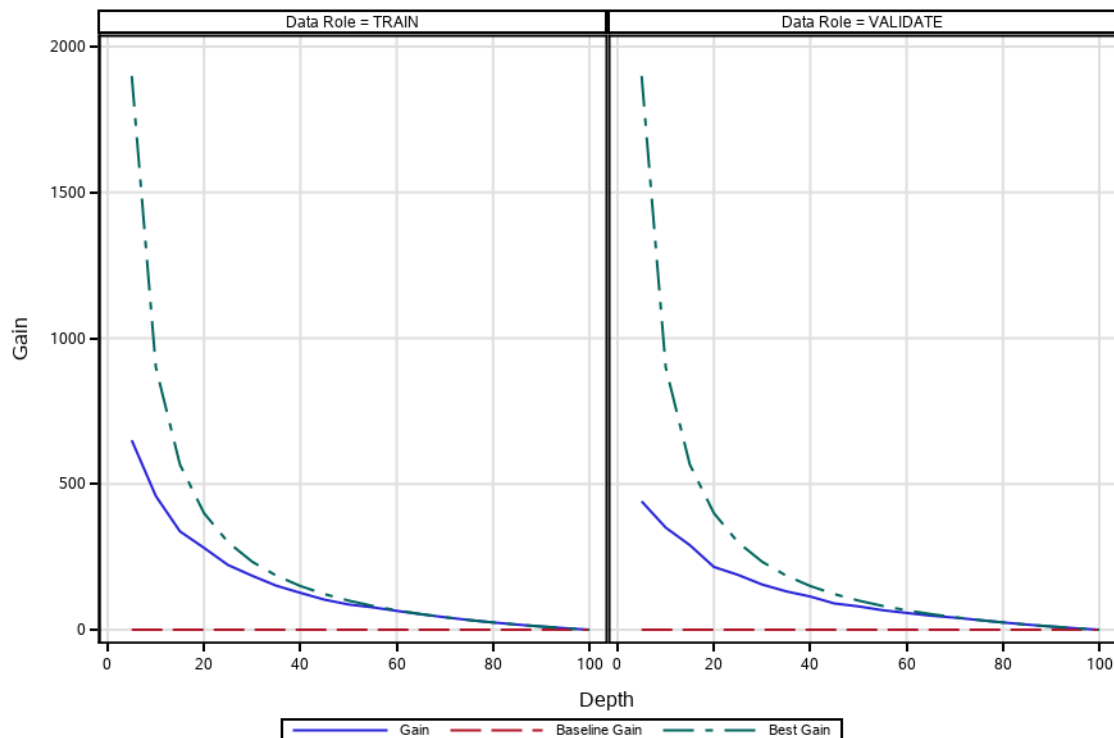Node=Decisiom Gradient Boosting
Subseries Plot
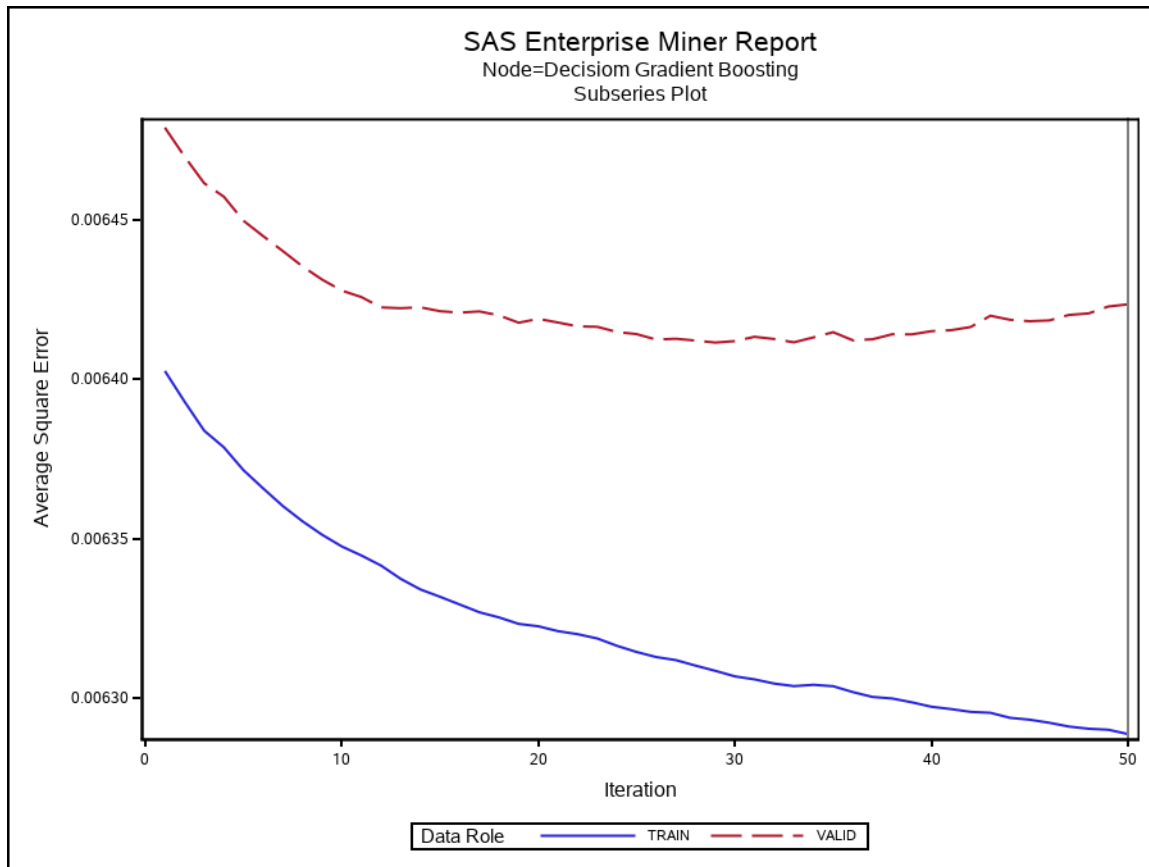
Node=Decisiom Gradient Boosting
Variable Importance

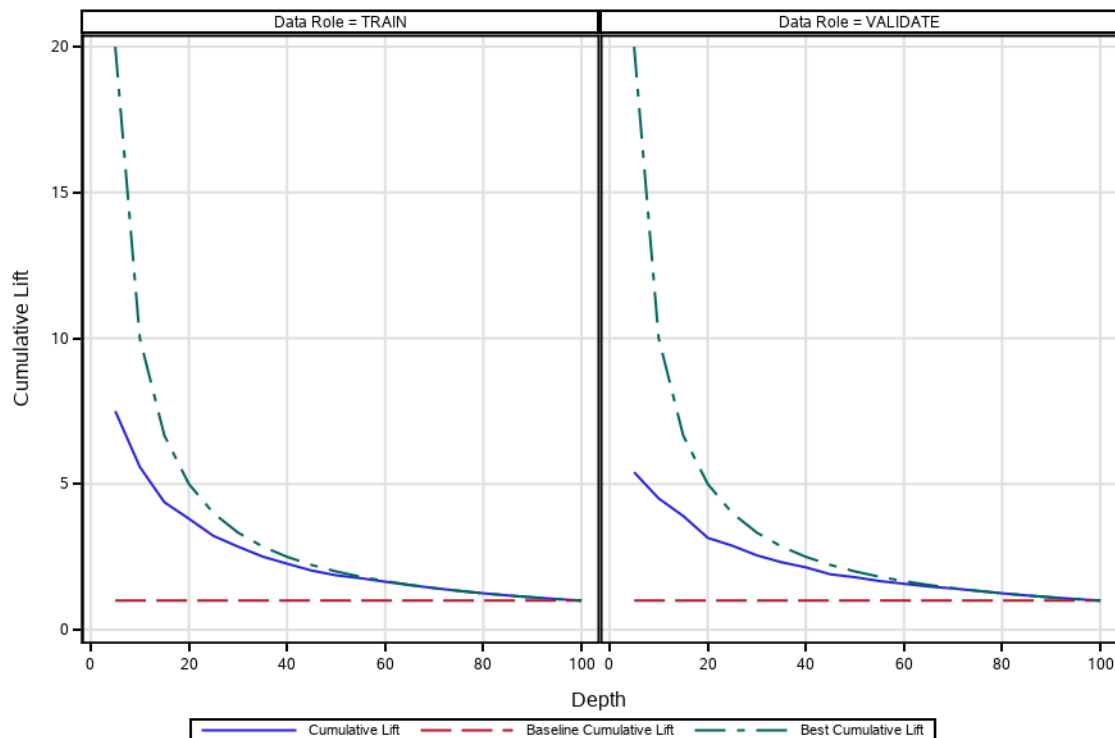| Variable Name	Label	Number of Splitting Rules	Importance	Validation Importance	Ratio of Validation to Training Importance
REP_AfsSumm	Replacement: AfsSumm	36	1.00000	1.00000	1.00000
IMP_REP_ScoreFICO	Imputed: Replacement: ScoreFICO	29	0.90600	0.77432	0.85466
IMP_REP_LifeTimeBin	Imputed: Replacement: LifeTimeBin	8	0.51978	0.29226	0.56227
REP_SumOtherPayment	Replacement: SumOtherPayment	10	0.37369	0.06176	0.16528
EducationStatus	EducationStatus	6	0.34196	0.08925	0.26100
REP_ApprovedCreditSum	Replacement: ApprovedCreditSum	8	0.31005	0.22578	0.72820
IMP_REP_Score	Imputed: Replacement: Score	2	0.29563	0.00000	0.00000
IMP_FactCity	Imputed: FactCity	5	0.28617	0.20595	0.71966
IMP_REP_BlockCnt	Imputed: Replacement: BlockCnt	4	0.25920	0.00000	0.00000
REP_CreditLimit	Replacement: CreditLimit	5	0.23020	0.18148	0.78833
REP_OrgStanding	Replacement: OrgStanding	5	0.21372	0.00000	0.00000
IMP_REP_BlockDur	Imputed: Replacement: BlockDur	3	0.20732	0.00000	0.00000
M_REP_ScoreProba	Imputation Indicator for REP_ScoreProba	2	0.18657	0.00000	0.00000
IMP_FamilyStatus	Imputed: FamilyStatus	4	0.18336	0.07475	0.40767
Sex	Sex	1	0.17391	0.00000	0.00000
M_FamilyStatus	Imputation Indicator for FamilyStatus	4	0.16709	0.00000	0.00000
REP_PTI	Replacement: PTI	1	0.15362	0.00000	0.00000
REP_KolichestvoDetejMladshe18	Replacement: KolichestvoDetejMladshe18	3	0.14629	0.00000	0.00000
IMP_REP_PayMax	Imputed: Replacement: PayMax	3	0.13250	0.03208	0.24208
IMP_REP_Circle	Imputed: Replacement: Circle	2	0.10912	0.06476	0.59346
IMP_ScoreBinary	Imputed: ScoreBinary	2	0.10559	0.00000	0.00000
REP_Rashod	Replacement: Rashod	1	0.10350	0.00000	0.00000
M_CreditHistoryStopFactors	Imputation Indicator for CreditHistoryStopFactors	1	0.08888	0.08026	0.90300

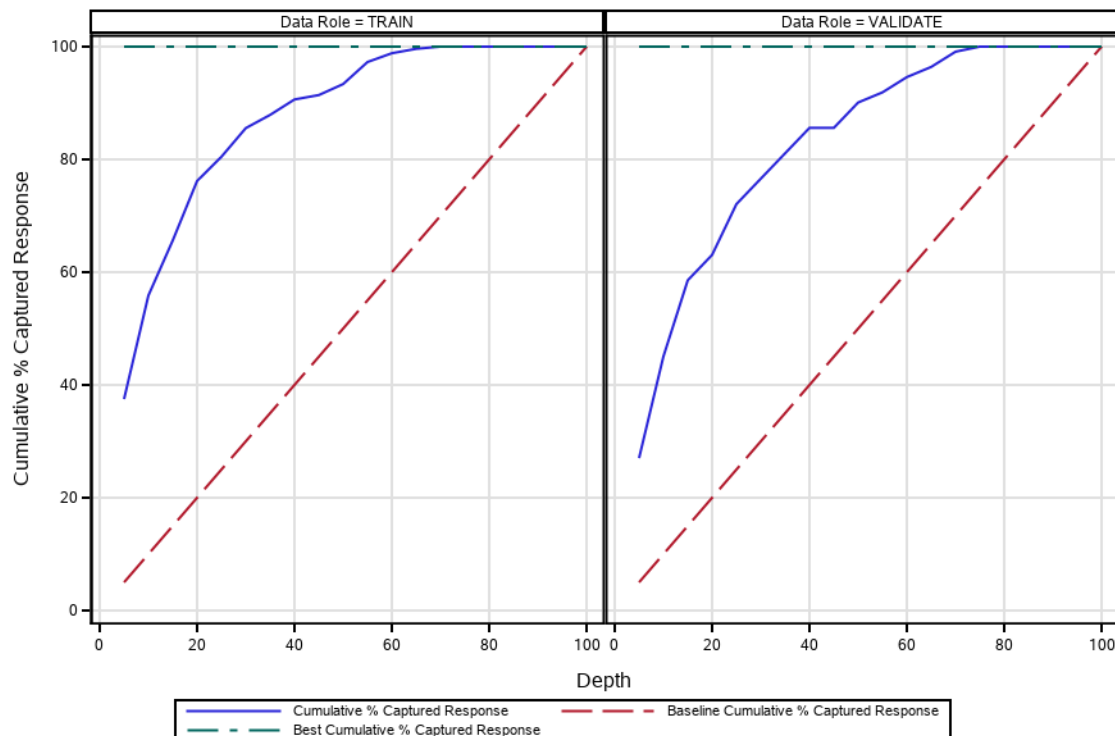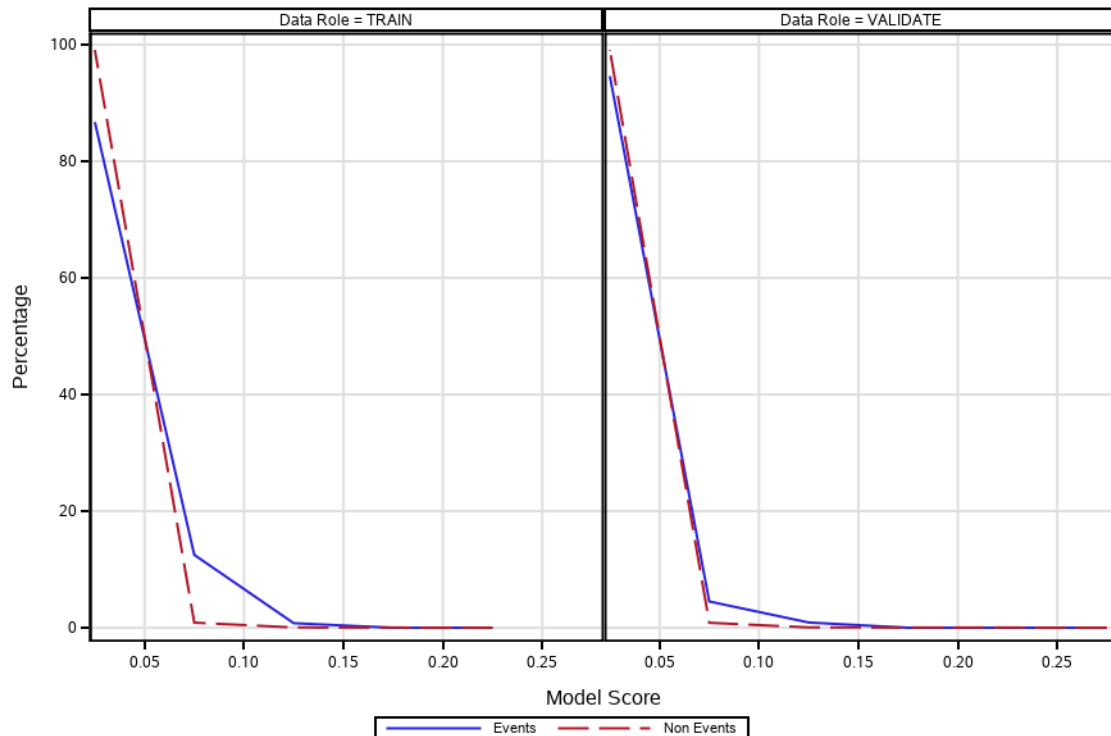| Variable Name	Label	Number of Splitting Rules	Importance	Validation Importance	Ratio of Validation to Training Importance
M_FactCity	Imputation Indicator for FactCity	1	0.08595	0.00000	0.00000
IMP_REP_AllCLC	Imputed: Replacement: AllCLC	2	0.07658	0.13242	1.72917
REP_Age	Replacement: Age	1	0.06669	0.10065	1.50932
AddressIdentical	AddressIdentical	1	0.06506	0.00000	0.00000
REP_ConfirmedMonthlyIncome	Replacement: ConfirmedMonthlyIncome	0	0.00000	0.00000	.
IMP_REP_ScoreProba	Imputed: Replacement: ScoreProba	0	0.00000	0.00000	.
IMP_BadAddressHome	Imputed: BadAddressHome	0	0.00000	0.00000	.
IMP_CreditHistoryStopFactors	Imputed: CreditHistoryStopFactors	0	0.00000	0.00000	.
M_BadAddressWork	Imputation Indicator for BadAddressWork	0	0.00000	0.00000	.
M_REP_Score	Imputation Indicator for REP_Score	0	0.00000	0.00000	.
M_BadAddressHome	Imputation Indicator for BadAddressHome	0	0.00000	0.00000	.
M_REP_BlockDur	Imputation Indicator for REP_BlockDur	0	0.00000	0.00000	.
M_REP_Circle	Imputation Indicator for REP_Circle	0	0.00000	0.00000	.
IMP_BadAddressWork	Imputed: BadAddressWork	0	0.00000	0.00000	.
M_REP_PayMax	Imputation Indicator for REP_PayMax	0	0.00000	0.00000	.
M_REP_AllCLC	Imputation Indicator for REP_AllCLC	0	0.00000	0.00000	.
M_REP_ScoreFICO	Imputation Indicator for REP_ScoreFICO	0	0.00000	0.00000	.
REP_CountRequest	Replacement: CountRequest	0	0.00000	0.00000	.
M_ScoreBinary	Imputation Indicator for ScoreBinary	0	0.00000	0.00000	.
M_REP_LifeTimeBin	Imputation Indicator for REP_LifeTimeBin	0	0.00000	0.00000	.
CountRejectRequestLastMonth	CountRejectRequestLastMonth	0	0.00000	0.00000	.
CountRejectRequestLast3Month	CountRejectRequestLast3Month	0	0.00000	0.00000	.
M_REP_BlockCnt	Imputation Indicator for REP_BlockCnt	0	0.00000	0.00000	.
CountRejectRequestLast12Month	CountRejectRequestLast12Month	0	0.00000	0.00000	.
CountRejectRequestLast6Month	CountRejectRequestLast6Month	0	0.00000	0.00000	.

SAS Enterprise Miner Report
Node=Decisiom Gradient Boosting
Model Assessment Scores where TARGET='Target'

SAS Enterprise Miner Report
Node=Decisiom Gradient Boosting
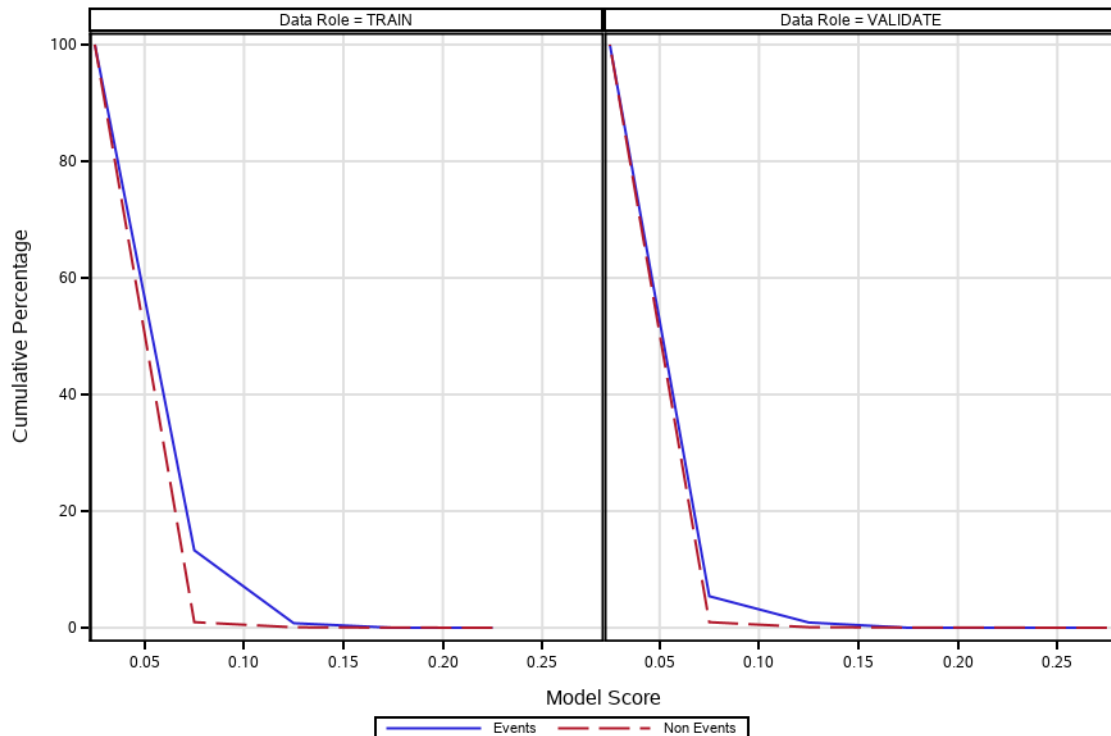Model Assessment Scores where TARGET='Target'

SAS Enterprise Miner Report
Node=Decisiom Gradient Boosting
Model Assessment Scores where TARGET='Target'

SAS Enterprise Miner Report
Node=Decisiom Gradient Boosting
Score Distributions where TARGET='Target'

SAS Enterprise Miner Report
Node=Decisiom Gradient Boosting
Score Distributions where TARGET='Target'

Node=Decisiom Gradient Boosting
Score Distributions

Target Variable=Target Data Role=TRAIN

Posterior Probability Range	Number of Events	Percentage of Events	Percentage of Nonevents	Cumulative Percentage of Events	Cumulative Percentage of Nonevents
0.20-0.25	0	0.0000	0.0076	0.000	0.008
0.15-0.20	0	0.0000	0.0203	0.000	0.028
0.10-0.15	2	0.7813	0.0533	0.781	0.081
0.05-0.10	32	12.5000	0.8758	13.281	0.957
0.00-0.05	222	86.7188	99.0430	100.000	100.000

Target Variable=Target Data Role=VALIDATE

Posterior Probability Range	Number of Events	Percentage of Events	Percentage of Nonevents	Cumulative Percentage of Events	Cumulative Percentage of Nonevents
0.25-0.30	0	0.0000	0.0059	0.000	0.006
0.15-0.20	0	0.0000	0.0355	0.000	0.041
0.10-0.15	1	0.9009	0.0592	0.901	0.101
0.05-0.10	5	4.5045	0.8529	5.405	0.954
0.00-0.05	105	94.5946	99.0464	100.000	100.000

SAS Enterprise Miner Report

**Node=Tree Model Comparison
Summary**

Node id = MdlComp2
Node label = Tree Model Comparison
Meta path = Ids => Repl => Part => Impt => Tree2 => MdlComp2
Notes =

**Node=Tree Model Comparison
Properties**

Property	Value	Default	Property	Value	Default	Property	Value	Default
Component	ModelCompare		NumberOfReportedLevels	1E-6		SelectionData	DEFAULT	
AssessAllTargetLevels	N		NumberofBins	20		SelectionDepth	10	
DecileBin	20		ProfitEpsilon	1E-6		SelectionTable	TRAIN	TABLE
HPCriteria	DEFAULT		RecomputeAssess	N		StatisticUsed	_VMISC_	
LiftEpsilon	1E-6		RocChart	Y		TargetLabel	Target	
ModelCriteria	Valid: Misclassification Rate		RocEpsilon	0.01		TargetName	Target	
ModelDescription	Pruning Entropy Tree		RoiEpsilon	1E-6		classViyaCriteria	DEFAULT	
ModelId	Tree2		ScoreDistBin	20		intervalViyaCriteria	DEFAULT	
NormalizeReportingVariables	Y		SelectionCriteria	DEFAULT				

**Node=Tree Model Comparison
Variable Summary**

Role	Level	Frequency Count	Name
TARGET	BINARY	1	Target

**Node=Tree Model Comparison
Fit Statistics Table**

Selected Model	Predecessor Node	Model Node	Model Description	Target Variable	Target Label	Selection Criterion: Valid: Misclassification Rate	Train: Average Squared Error	Train: Misclassification Rate	Train: Kolmogorov-Smirnov Statistic
Y	Tree2	Tree2	Pruning Entropy Tree	Target	Target	.006531333	.006355872	.006456494	0.431
	Tree4	Tree4	Largest Gini Tree	Target	Target	.006531333	.006309635	.006456494	0.491

Selected Model	Predecessor Node	Model Node	Model Description	Target Variable	Target Label	Selection Criterion: Valid: Misclassification Rate	Valid: Average Squared Error	Valid: Misclassification Rate	Valid: Kolmogorov-Smirnov Statistic
Y	Tree2	Tree2	Pruning Entropy Tree	Target	Target	.006531333	.006431364	.006531333	0.420
	Tree4	Tree4	Largest Gini Tree	Target	Target	.006531333	.006504738	.006531333	0.399

SAS Enterprise Miner Report
Node=Tree Model Comparison
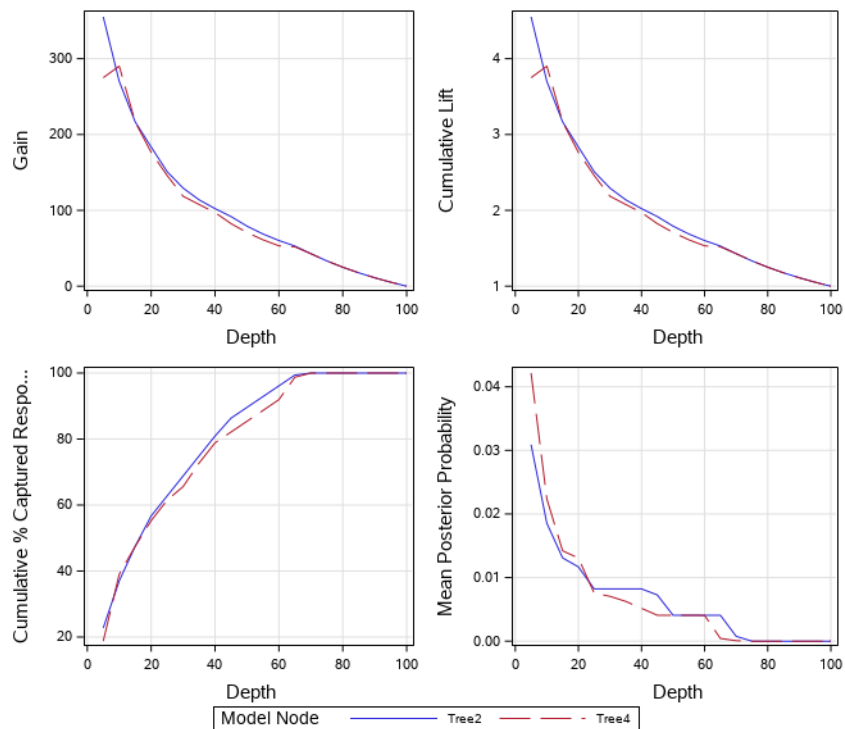Classification Chart
TARGET='Target' and _TYPE_='PREDICTION'

SAS Enterprise Miner Report
Node=Tree Model Comparison
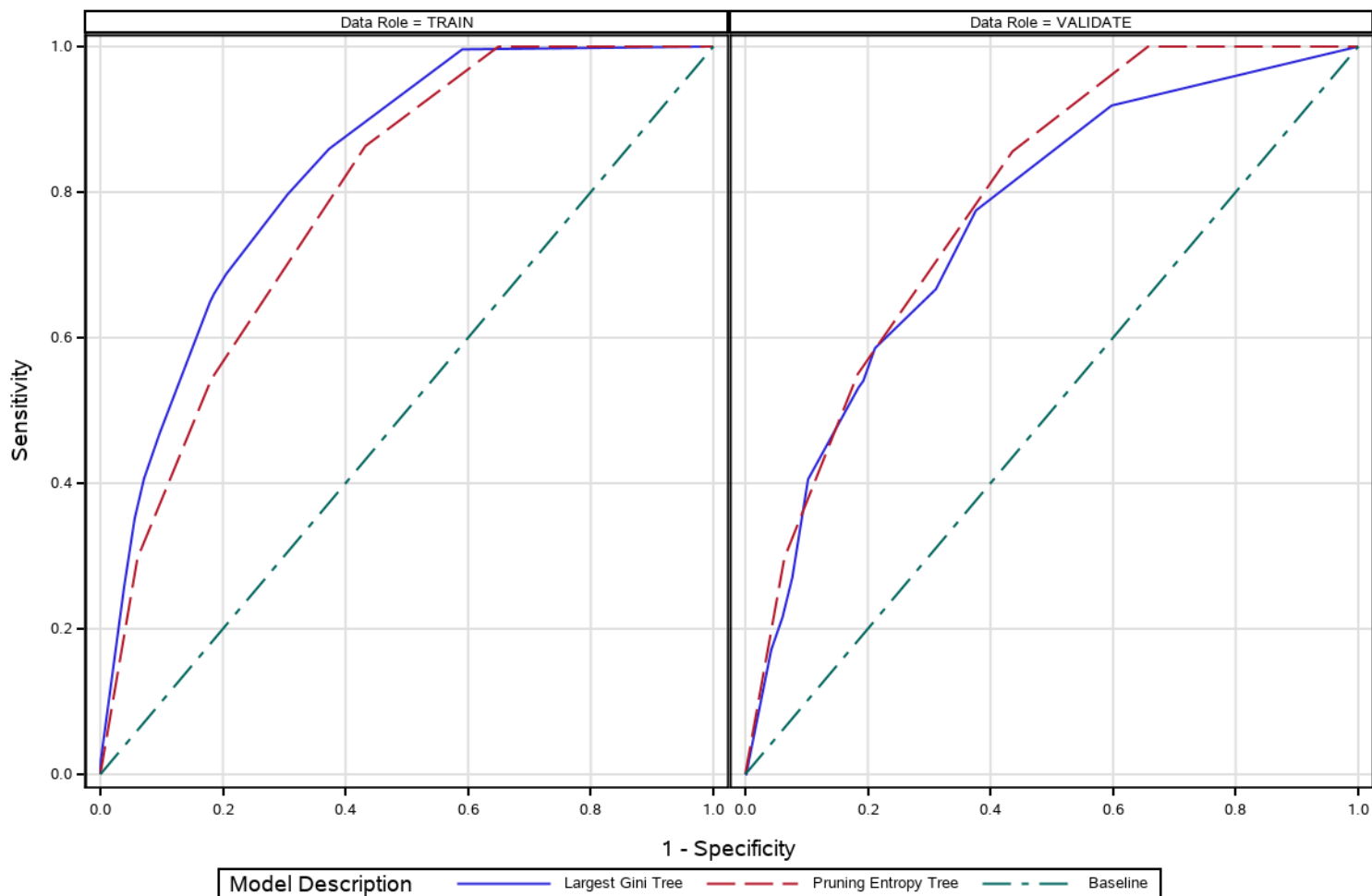Multiple Model Assessment Scores where DataRole=TRAIN
TARGET='Target'
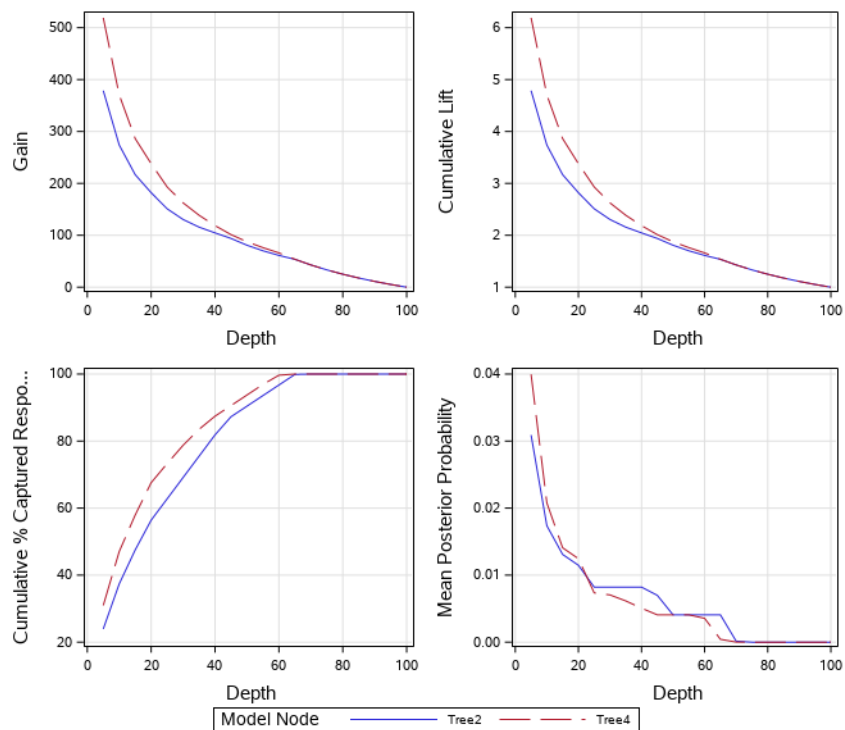
SAS Enterprise Miner Report
Node=Tree Model Comparison
Multiple Model Assessment Scores where DataRole=VALIDATE
TARGET='Target'

SAS Enterprise Miner Report
Node=Tree Model Comparison
ROC Chart
TARGET='Target' and EVENT='1'

SAS Enterprise Miner Report

**Node=Regression Model Comparison
Summary**

Node id = MdlComp
Node label = Regression Model Comparison
Meta path = Ids => Repl => Part => Impt => Reg4 => MdlComp
Notes =

**Node=Regression Model Comparison
Properties**

Property	Value	Default	Property	Value	Default	Property	Value	Default
Component	ModelCompare		NumberOfReportedLevels	1E-6		SelectionData	DEFAULT	
AssessAllTargetLevels	N		NumberofBins	20		SelectionDepth	10	
DecileBin	20		ProfitEpsilon	1E-6		SelectionTable	TRAIN	TABLE
HPCriteria	DEFAULT		RecomputeAssess	N		StatisticUsed	_VMISC_	
LiftEpsilon	1E-6		RocChart	Y		TargetLabel	Target	
ModelCriteria	Valid: Misclassification Rate		RocEpsilon	0.01		TargetName	Target	
ModelDescription	Forward Valid Error Regression		RoiEpsilon	1E-6		classViyaCriteria	DEFAULT	
ModelId	Reg4		ScoreDistBin	20		intervalViyaCriteria	DEFAULT	
NormalizeReportingVariables	Y		SelectionCriteria	DEFAULT				

**Node=Regression Model Comparison
Variable Summary**

Role	Level	Frequency Count	Name
TARGET	BINARY	1	Target

**Node=Regression Model Comparison
Fit Statistics Table**

Selected Model	Predecessor Node	Model Node	Model Description	Target Variable	Target Label	Selection Criterion: Valid: Misclassification Rate	Train: Average Squared Error	Train: Misclassification Rate	Train: Kolmogorov-Smirnov Statistic
Y	Reg4	Reg4	Forward Valid Error Regression	Target	Target	.006531333	.006352227	.006456494	0.471
	Reg3	Reg3	Backward Valid Error Regression	Target	Target	.006531333	.006342035	.006456494	0.500
	Reg2	Reg2	Default Regression	Target	Target	.006531333	.006337182	.006456494	0.524

Selected Model	Predecessor Node	Model Node	Model Description	Target Variable	Target Label	Selection Criterion: Valid: Misclassification Rate	Valid: Average Squared Error	Valid: Misclassification Rate	Valid: Kolmogorov-Smirnov Statistic
Y	Reg4	Reg4	Forward Valid Error Regression	Target	Target	.006531333	.006440786	.006531333	0.381
	Reg3	Reg3	Backward Valid Error Regression	Target	Target	.006531333	.006443967	.006531333	0.409
	Reg2	Reg2	Default Regression	Target	Target	.006531333	.006447386	.006531333	0.410

SAS Enterprise Miner Report
Node=Regression Model Comparison
Classification Chart
TARGET='Target' and _TYPE_='PREDICTION'
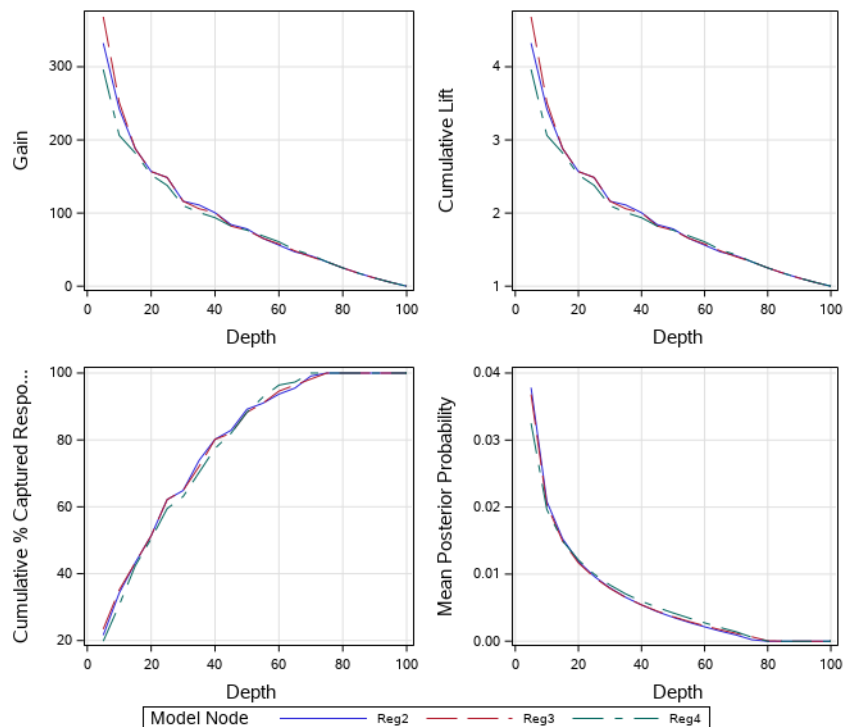
SAS Enterprise Miner Report

Node=Regression Model Comparison
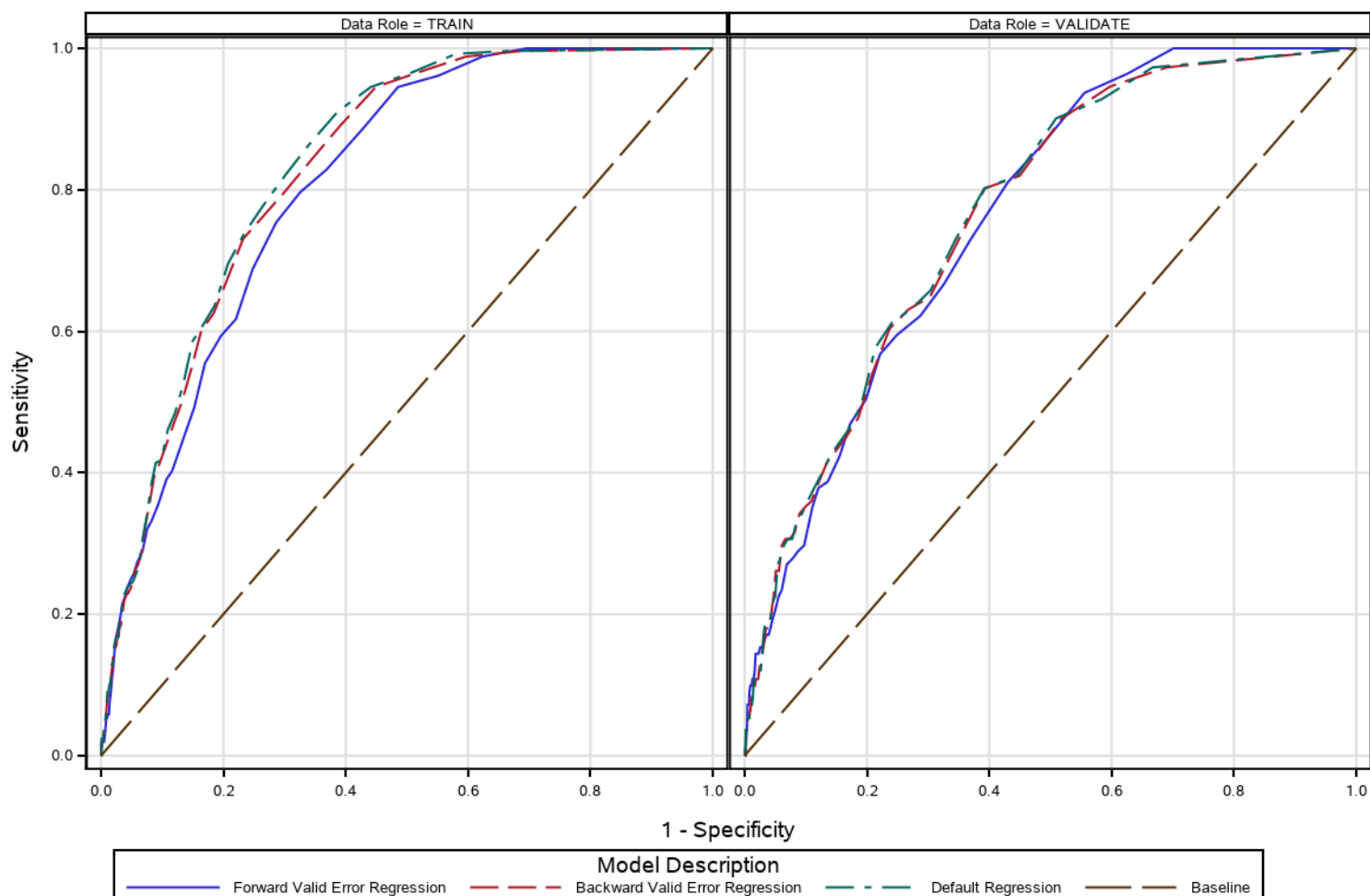Multiple Model Assessment Scores where DataRole=TRAIN
TARGET='Target'
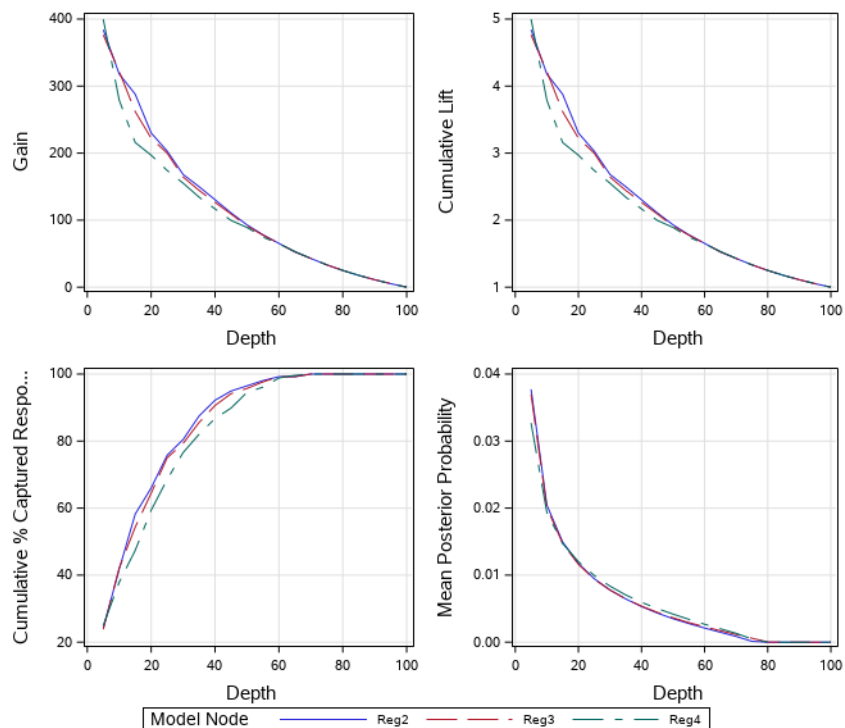
SAS Enterprise Miner Report

Node=Regression Model Comparison
Multiple Model Assessment Scores where DataRole=VALIDATE
TARGET='Target'

SAS Enterprise Miner Report
Node=Regression Model Comparison
ROC Chart
TARGET='Target' and EVENT='1'

SAS Enterprise Miner Report

Node=Gradient Boosting Model Comparison
Summary

Node id = MdlComp3
Node label = Gradient Boosting Model Comparison
Meta path = Ids => Repl => Part => Impt => Boost3 => MdlComp3
Notes =

Node=Gradient Boosting Model Comparison
Properties

Property	Value	Default	Property	Value	Default	Property	Value	Default
Component	ModelCompare		NumberOfReportedLevels	1E-6		SelectionData	DEFAULT	
AssessAllTargetLevels	N		NumberofBins	20		SelectionDepth	10	
DecileBin	20		ProfitEpsilon	1E-6		SelectionTable	TRAIN	TABLE
HPCriteria	DEFAULT		RecomputeAssess	N		StatisticUsed	_VMISC_	
LiftEpsilon	1E-6		RocChart	Y		TargetLabel	Target	
ModelCriteria	Valid: Misclassification Rate		RocEpsilon	0.01		TargetName	Target	
ModelDescription	Average Square Error Gradient Boosting		RoiEpsilon	1E-6		classViyaCriteria	DEFAULT	
ModelId	Boost3		ScoreDistBin	20		intervalViyaCriteria	DEFAULT	
NormalizeReportingVariables	Y		SelectionCriteria	DEFAULT				

Node=Gradient Boosting Model Comparison
Variable Summary

Role	Level	Frequency Count	Name
TARGET	BINARY	1	Target

Node=Gradient Boosting Model Comparison
## Fit Statistics Table

Selected Model	Predecessor Node	Model Node	Model Description	Target Variable	Target Label	Selection Criterion: Valid: Misclassification Rate	Train: Average Squared Error	Train: Misclassification Rate	Train: Kolmogorov-Smirnov Statistic
Y	Boost3	Boost3	Average Square Error Gradient Boosting	Target	Target	.006531333	.006308480	.006456494	0.525
	Boost	Boost	Decisiom Gradient Boosting	Target	Target	.006531333	.006288616	.006456494	0.562
	Boost2	Boost2	Misclassification Gradient Boosting	Target	Target	.006531333	.006402655	.006456494	0.398

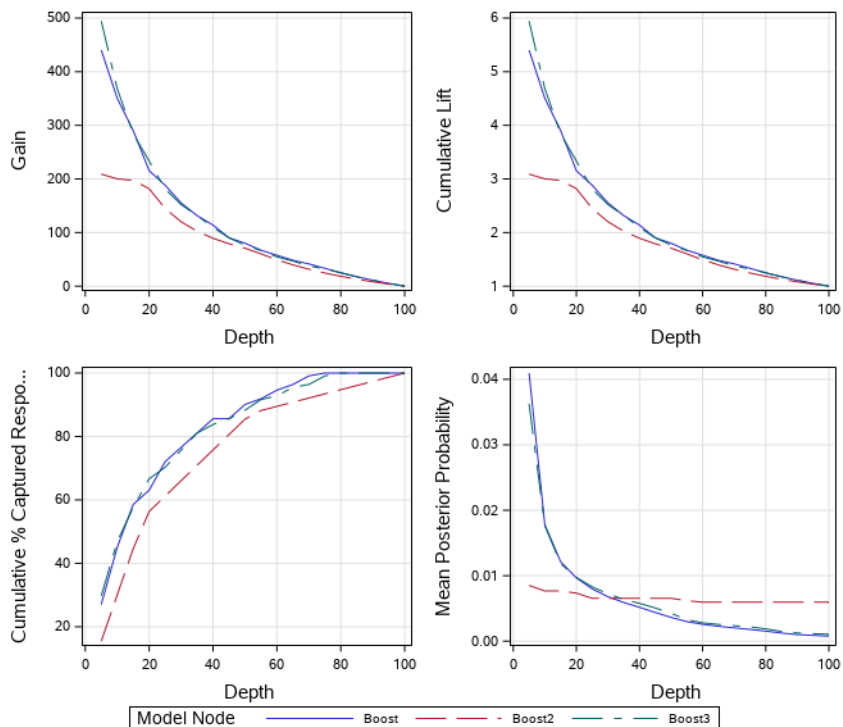| Selected Model	Predecessor Node	Model Node	Model Description	Target Variable	Target Label	Selection Criterion: Valid: Misclassification Rate	Valid: Average Squared Error	Valid: Misclassification Rate	Valid: Kolmogorov-Smirnov Statistic
Y	Boost3	Boost3	Average Square Error Gradient Boosting	Target	Target	.006531333	.006411574	.006531333	0.472
	Boost	Boost	Decisiom Gradient Boosting	Target	Target	.006531333	.006423582	.006531333	0.464
	Boost2	Boost2	Misclassification Gradient Boosting	Target	Target	.006531333	.006479090	.006531333	0.366

SAS Enterprise Miner Report
Node=Gradient Boosting Model Comparison
Classification Chart
TARGET='Target' and _TYPE_='PREDICTION'

SAS Enterprise Miner Report
Node=Gradient Boosting Model Comparison
Multiple Model Assessment Scores where DataRole=TRAIN
TARGET='Target'
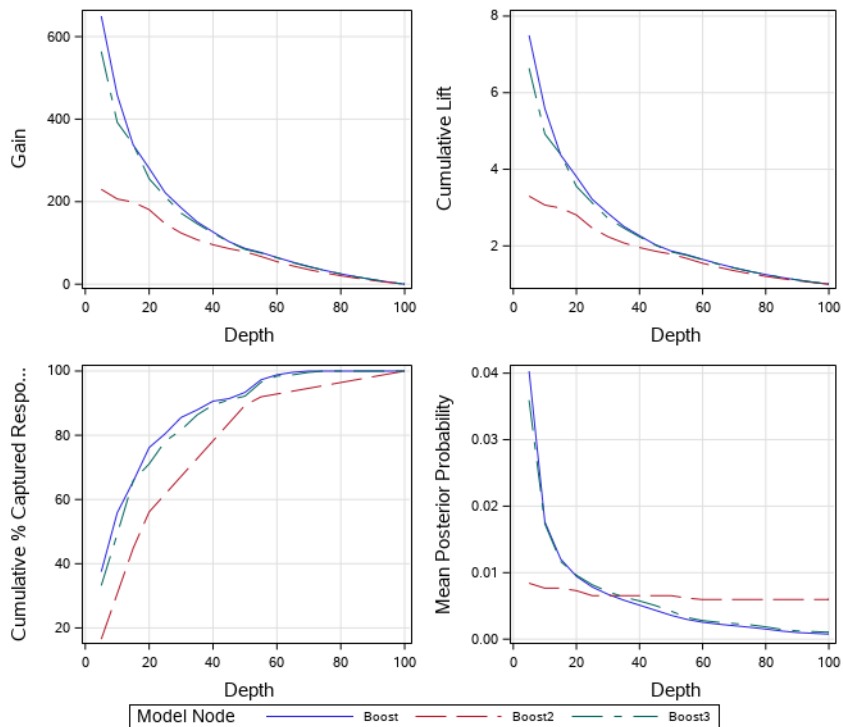
SAS Enterprise Miner Report
Node=Gradient Boosting Model Comparison
Multiple Model Assessment Scores where DataRole=VALIDATE
TARGET='Target'

SAS Enterprise Miner Report
Node=Gradient Boosting Model Comparison
ROC Chart
TARGET='Target' and EVENT='1'
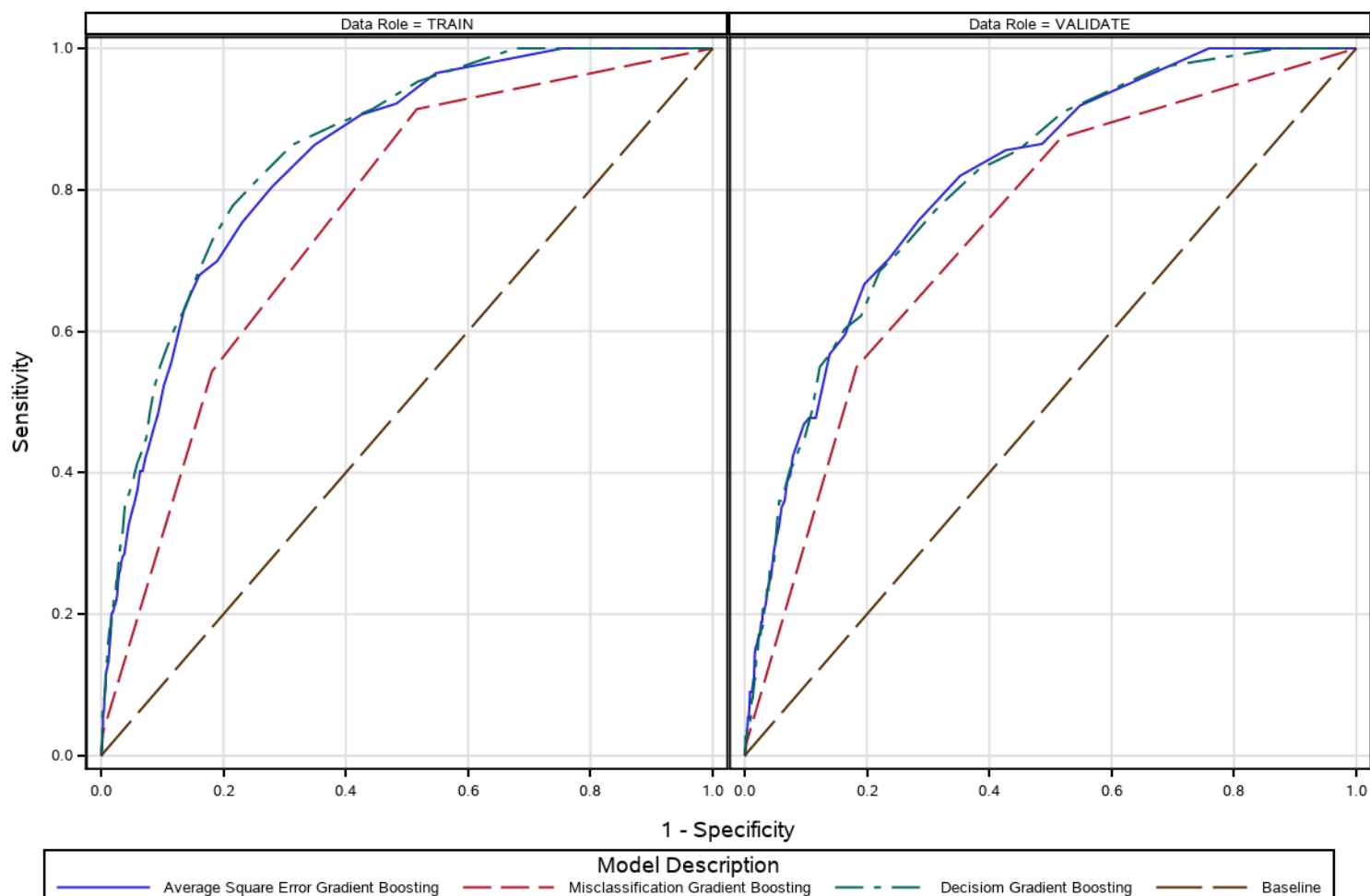
SAS Enterprise Miner Report

Node=Full Model Comparison
Summary

Node id = MdlComp4
Node label = Full Model Comparison
Meta path = lds => Repl => Part => Impt => Boost3 => MdlComp3 => MdlComp4
Notes =

Node=Full Model Comparison
Properties

Property	Value	Default	Property	Value	Default	Property	Value	Default
Component	ModelCompare		NumberOfReportedLevels	1E-6		SelectionData	DEFAULT	
AssessAllTargetLevels	N		NumberofBins	20		SelectionDepth	10	
DecileBin	20		ProfitEpsilon	1E-6		SelectionTable	TRAIN	TABLE
HPCriteria	DEFAULT		RecomputeAssess	N		StatisticUsed	_VMISC_	
LiftEpsilon	1E-6		RocChart	Y		TargetLabel	Target	
ModelCriteria	Valid: Misclassification Rate		RocEpsilon	0.01		TargetName	Target	
ModelDescription	Average Square Error Gradient Boosting		RoiEpsilon	1E-6		classViyaCriteria	DEFAULT	
ModelId	Boost3		ScoreDistBin	20		intervalViyaCriteria	DEFAULT	
NormalizeReportingVariables	Y		SelectionCriteria	DEFAULT				

Node=Full Model Comparison
Variable Summary

Role	Level	Frequency Count	Name
TARGET	BINARY	1	Target

Node=Full Model Comparison
## Fit Statistics Table

Selected Model	Predecessor Node	Model Node	Model Description	Target Variable	Target Label	Selection Criterion: Valid: Misclassification Rate	Train: Average Squared Error	Train: Misclassification Rate	Train: Kolmogorov-Smirnov Statistic
Y	MdlComp3	Boost3	Average Square Error Gradient Boosting	Target	Target	.006531333	.006308480	.006456494	0.525
	MdlComp2	Tree2	Pruning Entropy Tree	Target	Target	.006531333	.006355872	.006456494	0.431
	MdlComp	Reg4	Forward Valid Error Regression	Target	Target	.006531333	.006352227	.006456494	0.471

Selected Model	Predecessor Node	Model Node	Model Description	Target Variable	Target Label	Selection Criterion: Valid: Misclassification Rate	Valid: Average Squared Error	Valid: Misclassification Rate	Valid: Kolmogorov-Smirnov Statistic
Y	MdlComp3	Boost3	Average Square Error Gradient Boosting	Target	Target	.006531333	.006411574	.006531333	0.472
	MdlComp2	Tree2	Pruning Entropy Tree	Target	Target	.006531333	.006431364	.006531333	0.420
	MdlComp	Reg4	Forward Valid Error Regression	Target	Target	.006531333	.006440786	.006531333	0.381

SAS Enterprise Miner Report
Node=Full Model Comparison
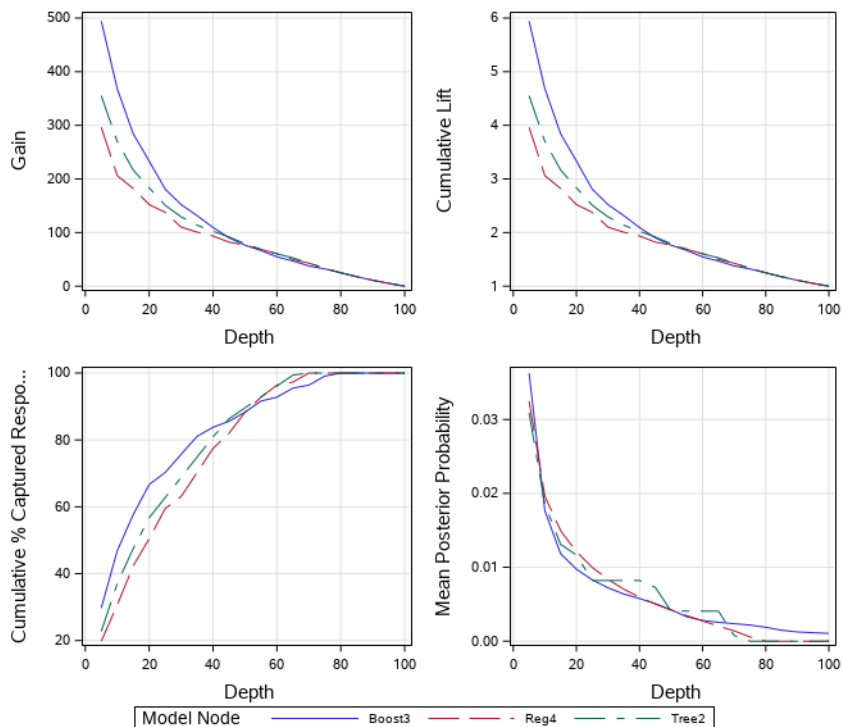## Classification Chart
TARGET='Target' and _TYPE_='PREDICTION'
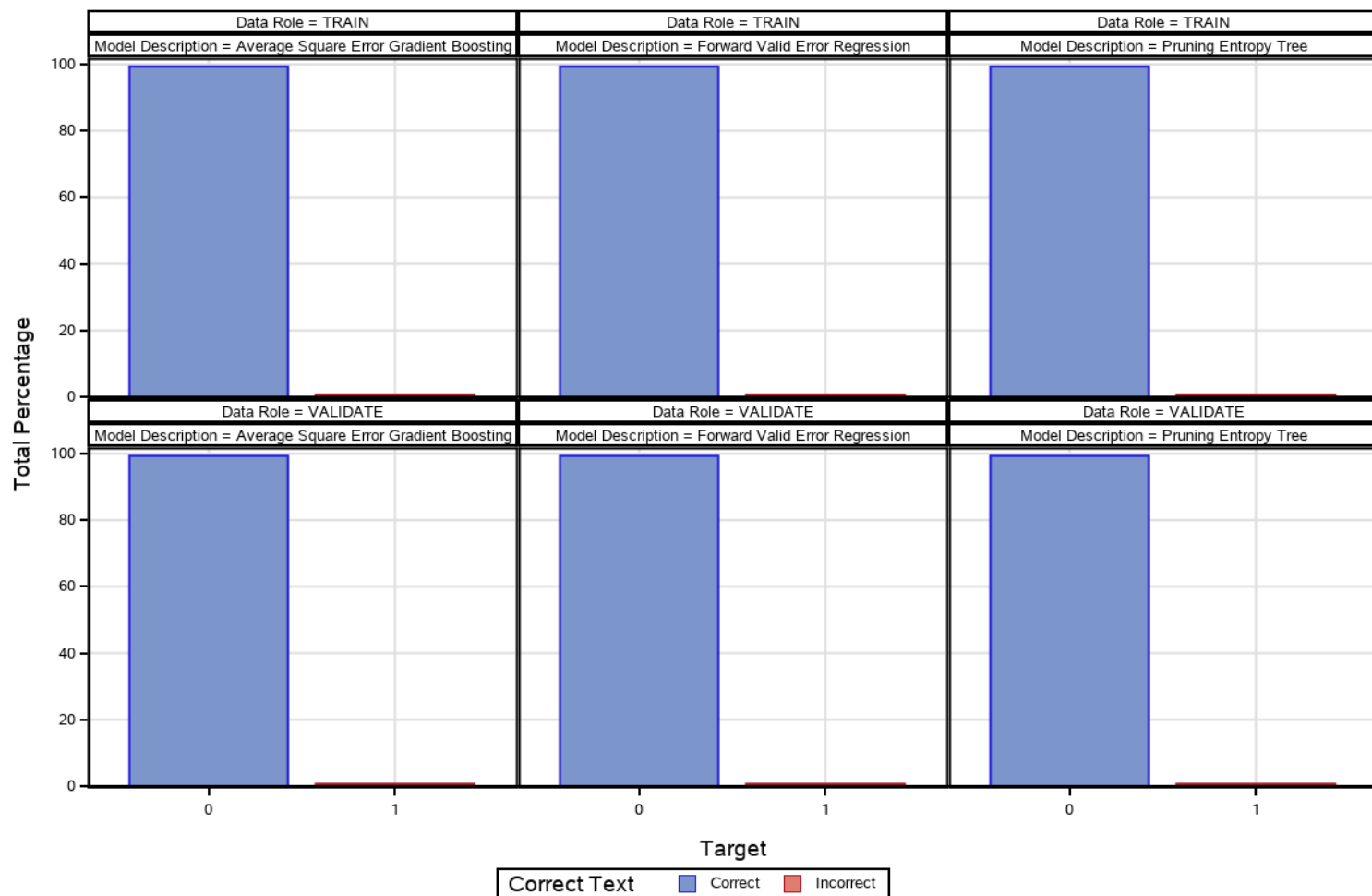
SAS Enterprise Miner Report
Node=Full Model Comparison
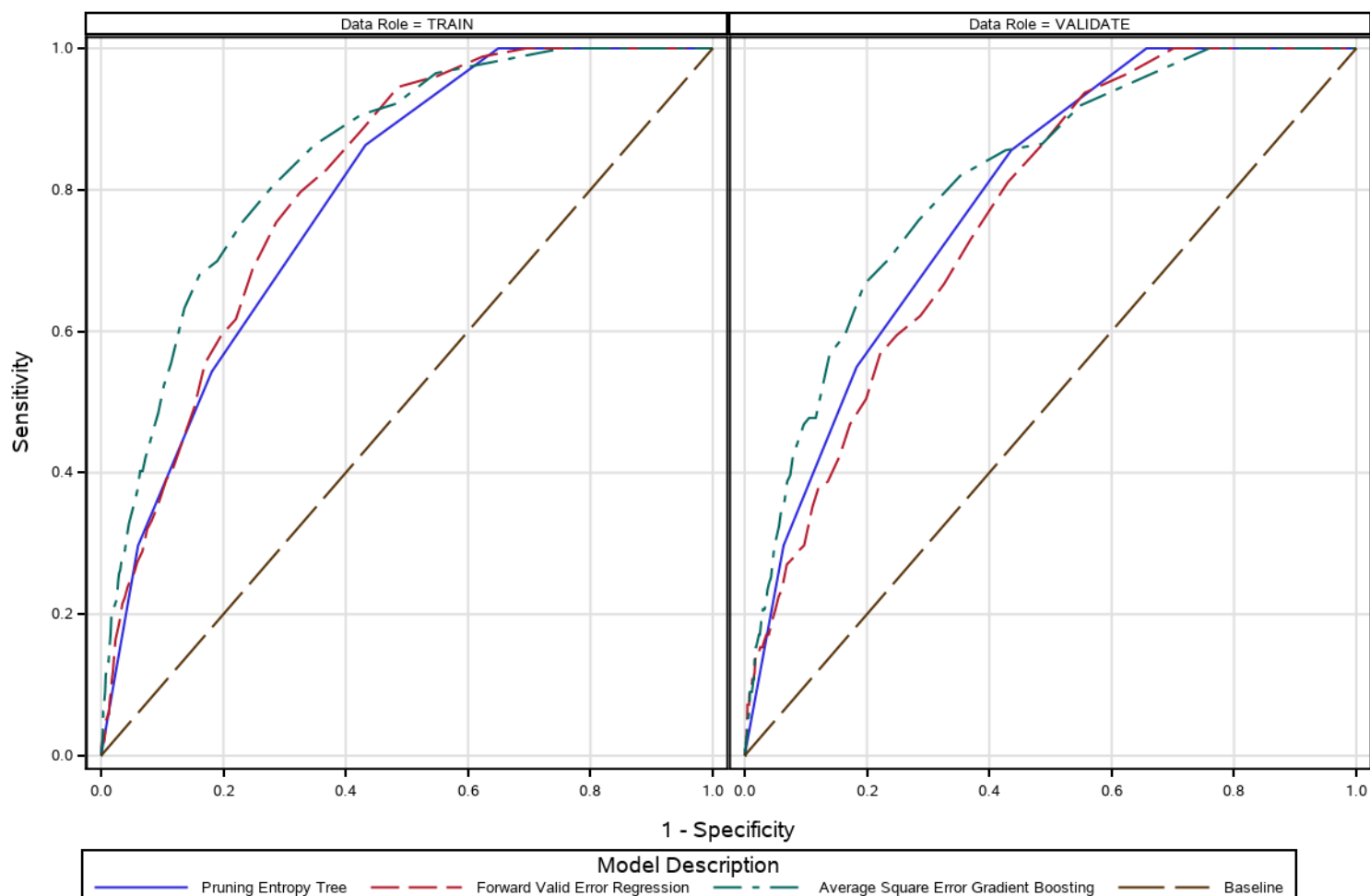Multiple Model Assessment Scores where DataRole=TRAIN
TARGET='Target'
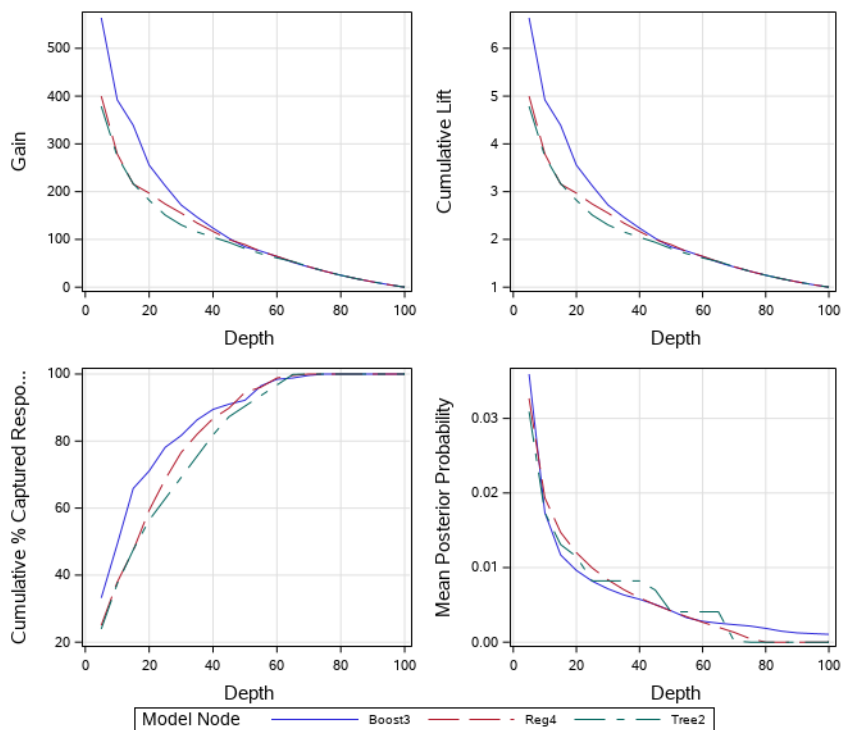
SAS Enterprise Miner Report
Node=Full Model Comparison
Multiple Model Assessment Scores where DataRole=VALIDATE
TARGET='Target'

SAS Enterprise Miner Report
Node=Full Model Comparison
ROC Chart
TARGET='Target' and EVENT='1'

End of Report