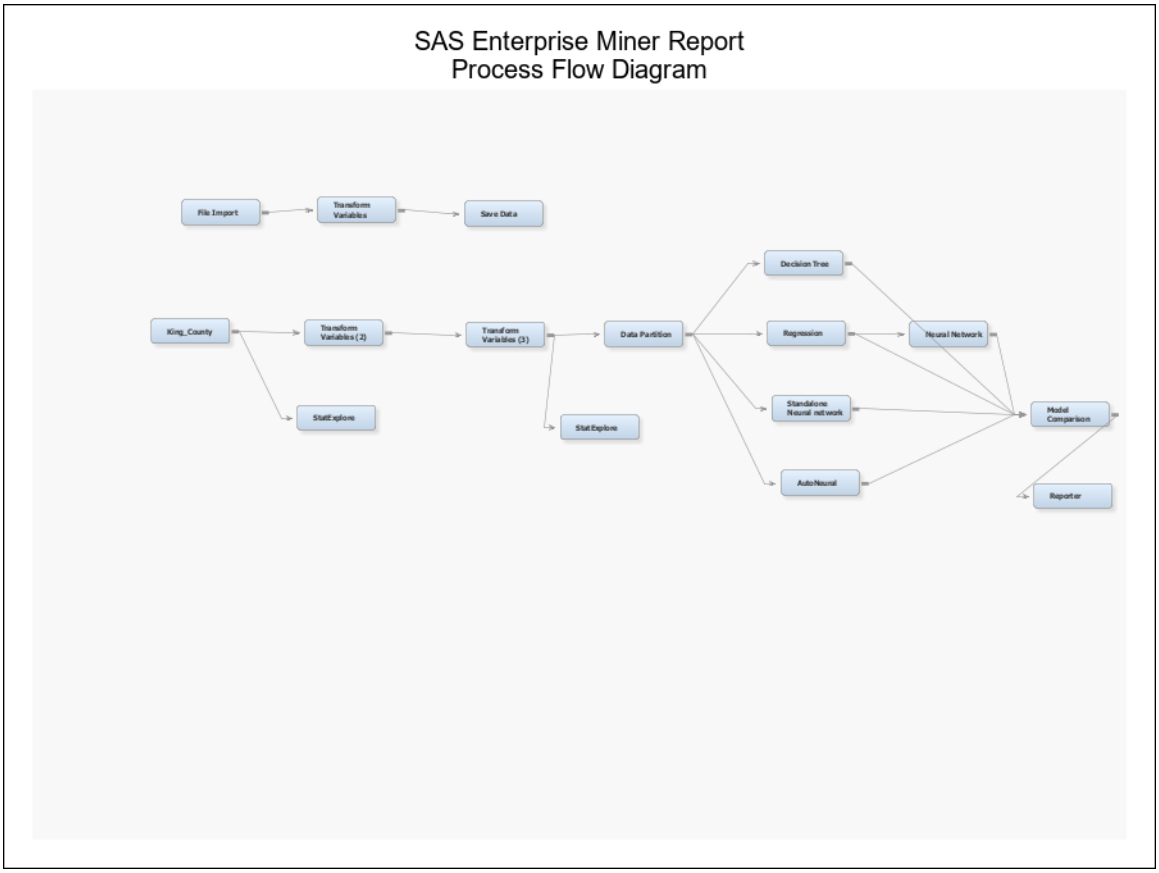
SAS Enterprise Miner Report

User = ashis
Date = 10:13:40 December 01
Project = Project_KC
Diagram = Project_King_County

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

Format = PDF
Style = LISTING



SAS Enterprise Miner Report

Node=Save Data
Summary

Node id = EMSave
Node label = Save Data
Meta path = FIMPORT => Trans => EMSave
Notes =

Node=Save Data
Properties

Property	Value	Default	Property	Value	Default	Property	Value	Default
Component	EMSave		Name			Train	Y	
AllObs	Y		OutObs	1000		Transaction	Y	
AllRoles	Y		Replace	Y		Type	SAS7BDAT	SAS7DBAT
DirectorySelector			Score	Y		Validate	Y	
Lib	KCOUNTY		Test	Y				

Node=Save Data
Variable Summary

Role	Level	Frequency Count	Name
INPUT	BINARY	1	waterfront
INPUT	INTERVAL	13	Sold_Year bathrooms lat long price sqft_above sqft_basement sqft_living sqft_living15 sqft_lot sqft_lot15 yr_built yr_renovated
INPUT	NOMINAL	5	bedrooms condition floors grade view

Node=Save Data
Data

Data Library	Output Location	Total Observations	Saved Observations	Number of Variables
KCOUNTY	C:\Users\ashis\OneDrive\Documents\Asgn2\em_save_TRAIN.sas7bdat	21613	MAX	20

SAS Enterprise Miner Report

Node=StatExplore
Summary

Node id = Stat
Node label = StatExplore
Meta path = Ids => Stat
Notes =

Node=StatExplore
Properties

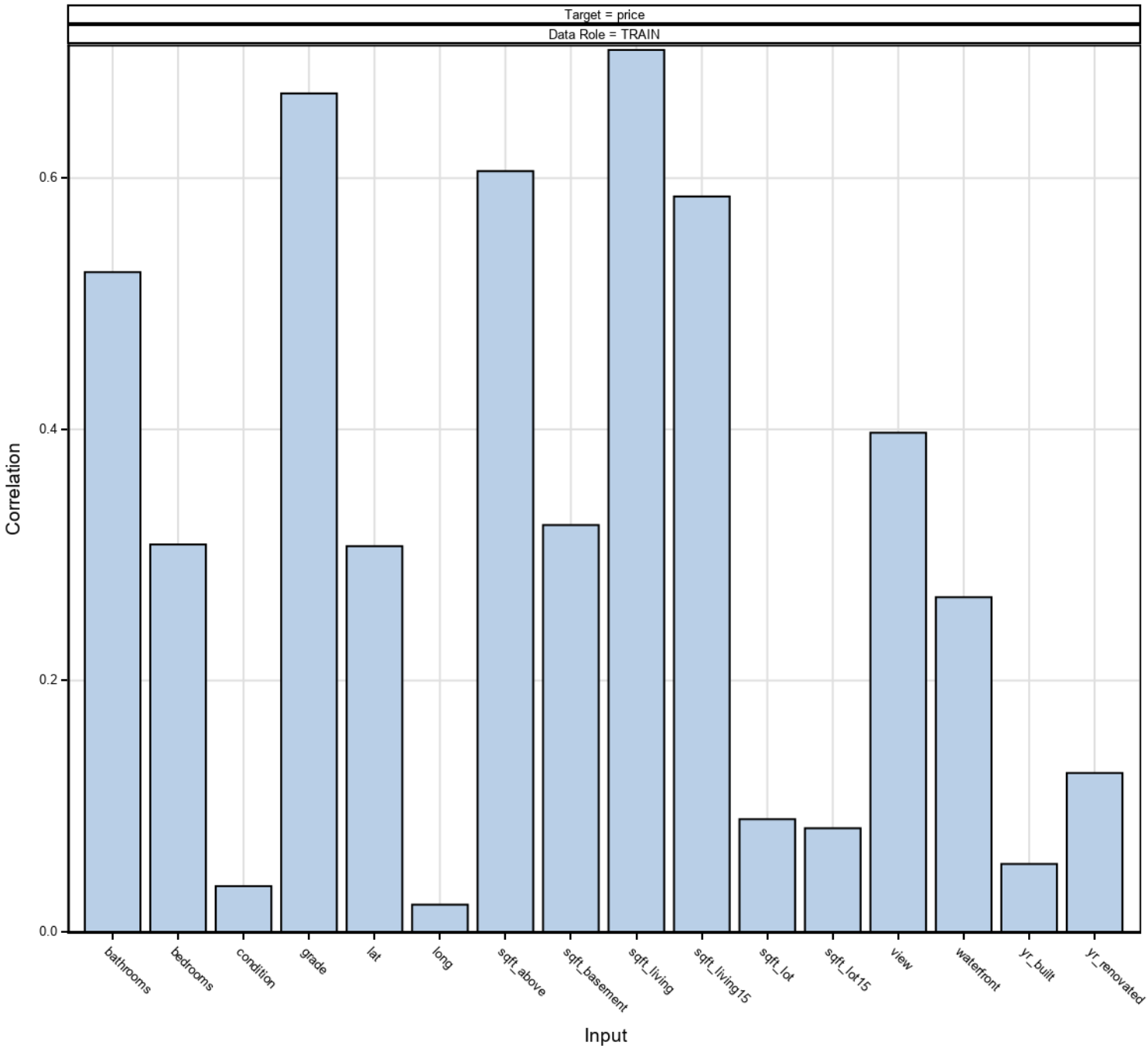
Property	Value	Default	Property	Value	Default	Property	Value	Default
Component	StatExplore		Correlation	Y		NObs	100000	1000000
BySegment	N	Y	DropRejected	Y		Pearson	Y	
ChiSquare	Y		HideVariable	Y		Spearman	N	
ChiSquareInterval	N		IntervalDistribution	Y		UseScore	N	
ChiSquareIntervalNBins	5		LevelSummary	Y		UseTest	N	
ClassDistribution	Y		MaximumVars	1000		UseValidate	N	

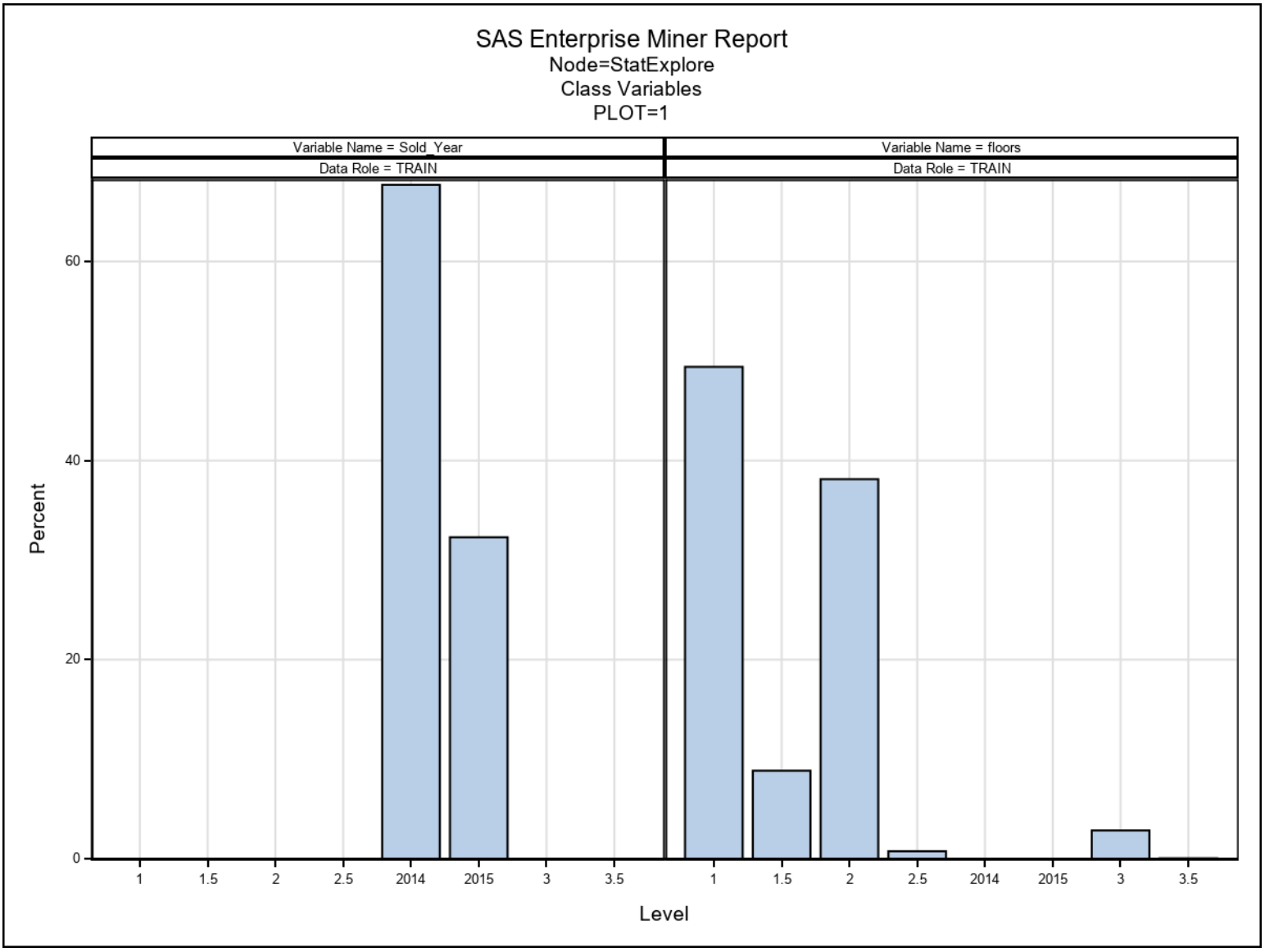
Node=StatExplore
Variable Summary

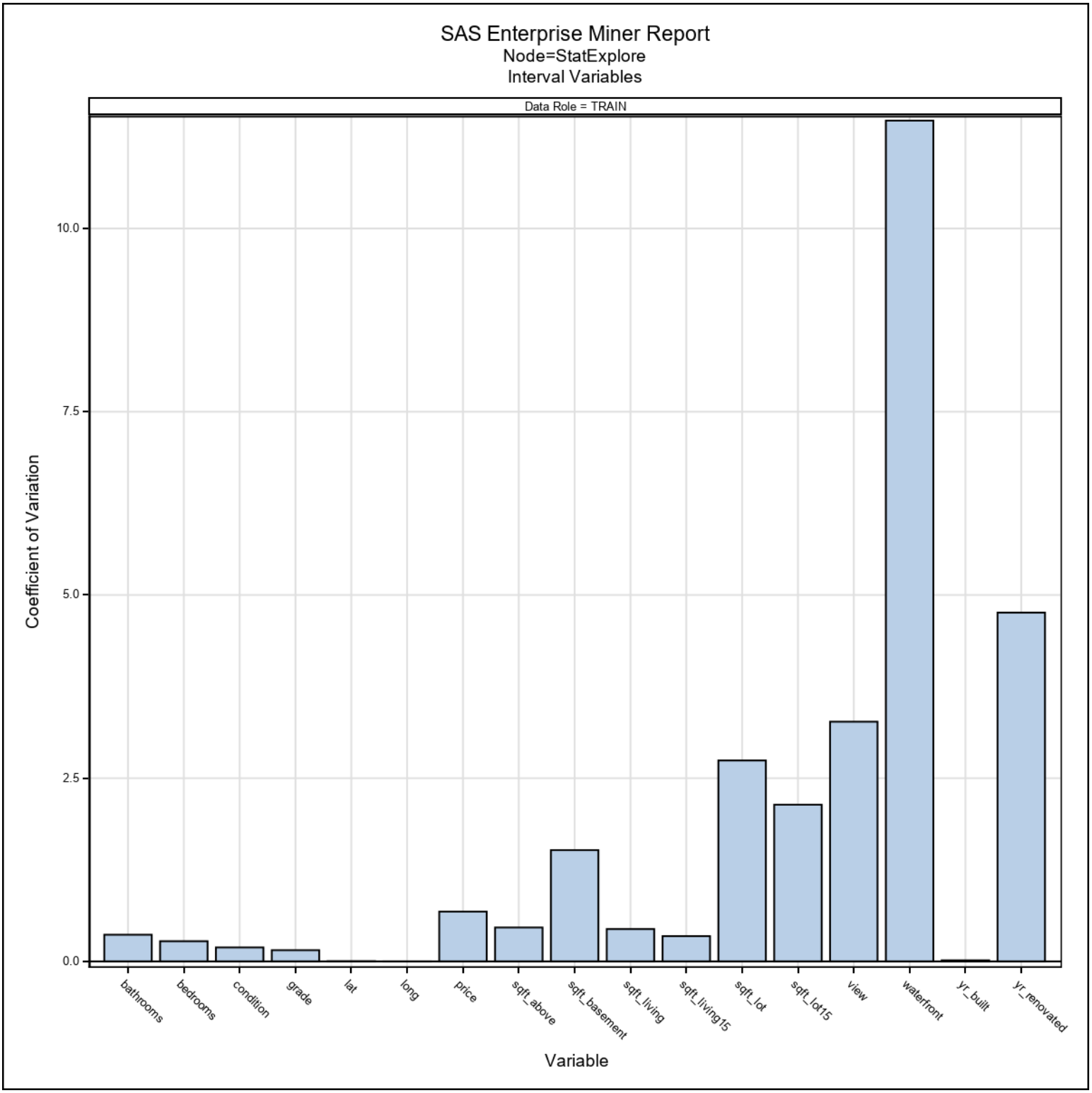
Role	Level	Frequency Count	Name
INPUT	INTERVAL	16	bathrooms bedrooms condition grade lat long sqft_above sqft_basement sqft_living sqft_living15 sqft_lot sqft_lot15 view waterfront yr_built yr_renovated
INPUT	NOMINAL	2	Sold_Year floors

Target	Variable	Importance	Worth	Analysis Variable	Label	plot
price	sqft_living	1	70097280486.19	1	sqft_living	.
price	grade	2	66268663788.26	1	grade	.
price	sqft_above	3	54120654479.50	1	sqft_above	.
price	sqft_living15	4	46286486987.59	1	sqft_living15	.
price	bathrooms	5	42259865795.94	1	bathrooms	.
price	lat	6	31147941483.57	1	lat	.
price	view	7	23683078789.07	1	view	.
price	sqft_basement	8	19084308079.48	1	sqft_basement	.
price	bedrooms	9	14190222027.09	1	bedrooms	.
price	floors	10	12098776769.40	1	floors	.
price	waterfront	11	10369091124.95	1	waterfront	.
price	sqft_lot15	12	8466438514.15	1	sqft_lot15	.
price	sqft_lot	13	7120582364.28	1	sqft_lot	.
price	yr_built	14	5538473369.29	1	yr_built	.
price	long	15	5515611407.33	1	long	.
price	yr_renovated	16	2333635428.02	1	yr_renovated	.
price	condition	17	849069719.30	1	condition	.
price	Sold_Year	18	7850845.80	1	Sold_Year	.

SAS Enterprise Miner Report
Node=StatExplore
Correlation Plot
CORRTYPE='PEARSON'




SAS Enterprise Miner Report
Node=StatExplore
Class Variables
PLOT=1
Variable Name = Sold_Year
Data Role = TRAIN
Variable Name = floors
Data Role = TRAIN
Percent
0
20
40
60
1
1.5
2
2.5
2014
2015
3
3.5
Level


SAS Enterprise Miner Report
Node=StatExplore
Interval Variables
Data Role = TRAIN
Coefficient of Variation
10.0
7.5
5.0
2.5
0.0
bathrooms
bedrooms
condition
grade
lat
long
price
sqft_above
sqft_basement
sqft_living
sqft_living15
sqft_lot
sqft_lot15
view
waterfront
yr_built
yr_renovated
Variable

SAS Enterprise Miner Report

Node=File Import
Summary

Node id = FIMPORT
Node label = File Import
Meta path = FIMPORT
Notes =

Node=File Import
Properties

Property	Value	Default	Property	Value	Default	Property	Value	Default
Component	FileImport		GuessRows	500		NameRow	Y	
AccessTable	NoTableName		IFileName	C:\Users\ashis\OneDrive\Documents\Asgn2\kc_house_data.csv		Password	NoPassword	
AdvancedAdvisor	Y	N	ImportType	Local	LOCAL	Role	TRAIN	
Delimiter	,		MaxCols	10000		SkipRows	0	
FileType	csv	XLS	MaxRows	1000000		Summarize	N	

Node=File Import
Data Attributes

Attribute	Value	Attribute	Value	Attribute	Value
Data Name	FIMPORT_DATA	Date Created	16Oct2020:14:56:34	Data Size	3998720
Data Type	DATA	Date Modified	16Oct2020:14:56:34	Role	TRAIN
Data Label		Number Rows	21613	Segment	
Engine	V9	Number Columns	21	Data Library	EMWS1

Node=File Import
Variables List

Name	Label	Role	Level	Type	Length	Format	Creator
bathrooms		INPUT	INTERVAL	N	8	BEST12.0	
bedrooms		INPUT	NOMINAL	N	8	BEST12.0	
condition		INPUT	NOMINAL	N	8	BEST12.0	
date		REJECTED	NOMINAL	C	17	$17.	
floors		INPUT	NOMINAL	C	5	$5.	
grade		INPUT	NOMINAL	N	8	BEST12.0	
id		ID	NOMINAL	C	12	$12.	
lat		INPUT	INTERVAL	N	8	BEST12.0	
long		INPUT	INTERVAL	N	8	BEST12.0	
price		INPUT	INTERVAL	N	8	BEST12.0	
sqft_above		INPUT	INTERVAL	N	8	BEST12.0	
sqft_basement		INPUT	INTERVAL	N	8	BEST12.0	
sqft_living		INPUT	INTERVAL	N	8	BEST12.0	
sqft_living15		INPUT	INTERVAL	N	8	BEST12.0	
sqft_lot		INPUT	INTERVAL	N	8	BEST12.0	
sqft_lot15		INPUT	INTERVAL	N	8	BEST12.0	
view		INPUT	NOMINAL	N	8	BEST12.0	
waterfront		INPUT	BINARY	N	8	BEST12.0	
yr_built		INPUT	INTERVAL	N	8	BEST12.0	

Name	Label	Role	Level	Type	Length	Format	Creator
yr_renovated		INPUT	INTERVAL	N	8	BEST12.0	
zipcode		REJECTED	NOMINAL	C	7	$7.	

Node=File Import
Created Variables List

SAS Enterprise Miner Report

Node=Transform Variables Summary

Node id = Trans
Node label = Transform Variables
Meta path = FIMPORT => Trans
Notes =

Node=Transform Variables Properties

Property	Value	Default	Property	Value	Default	Property	Value	Default
Component	Transform		EmSampleSize	DEFAULT		MissingValue	USEINSEARCH	
DefaultClassMethod	NONE		GroupCutoff	0.1		NumberofBins	VARIABLES	
DefaultClassTargetMethod	NONE		GroupMissing	N		Offset	1	
DefaultMethod	NONE		HideVariable	Y		RejectVariable	Y	
DefaultTargetMethod	NONE		MaxOptimalBins	4		SummaryStatistics	Y	
EmRandomSeed	12345		MinOffset	Y		SummaryVariables	TRANSFORMED	
EmSampleMethod	FIRSTN		MissingAsLevel	N		UseMetaTransform	Y	

Node=Transform Variables Variable Summary

Role	Level	Frequency Count	Name
REJECTED	NOMINAL	2	date zipcode
INPUT	BINARY	1	waterfront
INPUT	INTERVAL	12	bathrooms lat long price sqft_above sqft_basement sqft_living sqft_living15 sqft_lot sqft_lot15 yr_built yr_renovated
INPUT	NOMINAL	5	bedrooms condition floors grade view

Node=Transform Variables Transformations Statistics

Source	Method	Variable Name	Formula	Number of Levels	Non Missing	Missing	Minimum	Maximum	Mean	Standard Deviation	Skewness	Kurtosis	Label
Input	Original	date		372	.	0	.	.	.	.	.	.	
Output	Formula	Sold_Year	substr(date,1,4)	2	.	0	.	.	.	.	.	.	

SAS Enterprise Miner Report

Node=King_County
Summary

Node id = Ids
Node label = King_County
Meta path = Ids
Notes =

Node=King_County
Properties

Property	Value	Default	Property	Value	Default	Property	Value	Default
Component	DataSource		DsCreatedBy	ashis		NBytes	3867648	.
ApplyIntervalLevelLowerLimit	Y		DsId	kingcounty		NCols	20	.
ApplyMaxClassLevels	Y		DsModifiedBy	ashis		NObs	21613	.
ApplyMaxPercentMissing	Y		DsModifyDate	1919535896.3		NewTable		
CMeta	WORK.M3C3ZMUR		DsSampleName			NewVariableRole	REJECT	
ComputeStatistics	N		DsSampleSize			OutputType	VIEW	
DBPassThrough	Y		DsSampleSizeType			Role	RAW	TRAIN
Data	KCOUNTY.EM_SAVE_TRAIN		DsScope	LOCAL		Sample	D	
DataSelection	DATASOURCE		IdentifyEmptyColumns	Y		SampleSizeObs	10000	
DataSource	kingcounty		IntervalLowerLimit	20		SampleSizePercent	20	
DataSourceRole	RAW		Library	KCOUNTY		SampleSizeType	PERCENT	
Description			MaxClassLevels	20		Scope	LOCAL	
DropMapVariables	Y		MaxPercentMissing	50		Segment		
DsCreateDate	1919535896.3		MetaAdvisor	BASIC		Table	EM_SAVE_TRAIN	

Node=King_County
Data Attributes

Attribute	Value	Attribute	Value	Attribute	Value
Data Name	EM_SAVE_TRAIN	Date Created	28Oct2020:20:22:32	Data Size	3867648
Data Type	DATA	Date Modified	28Oct2020:20:22:32	Role	RAW
Data Label		Number Rows	21613	Segment	
Engine	BASE	Number Columns	20	Data Library	KCOUNTY

Node=King_County
Variables List

Name	Label	Role	Level	Type	Length	Format	Creator
Sold_Year		INPUT	NOMINAL	C	17		
bathrooms		INPUT	INTERVAL	N	8	BEST12.0	
bedrooms		INPUT	INTERVAL	N	8	BEST12.0	
condition		INPUT	INTERVAL	N	8	BEST12.0	
floors		INPUT	NOMINAL	C	5	$5.	
grade		INPUT	INTERVAL	N	8	BEST12.0	
id		ID	NOMINAL	C	12	$12.	
lat		INPUT	INTERVAL	N	8	BEST12.0	
long		INPUT	INTERVAL	N	8	BEST12.0	
price		TARGET	INTERVAL	N	8	BEST12.0	
sqft_above		INPUT	INTERVAL	N	8	BEST12.0	

Name	Label	Role	Level	Type	Length	Format	Creator
sqft_basement		INPUT	INTERVAL	N	8	BEST12.0	
sqft_living		INPUT	INTERVAL	N	8	BEST12.0	
sqft_living15		INPUT	INTERVAL	N	8	BEST12.0	
sqft_lot		INPUT	INTERVAL	N	8	BEST12.0	
sqft_lot15		INPUT	INTERVAL	N	8	BEST12.0	
view		INPUT	INTERVAL	N	8	BEST12.0	
waterfront		INPUT	INTERVAL	N	8	BEST12.0	
yr_built		INPUT	INTERVAL	N	8	BEST12.0	
yr_renovated		INPUT	INTERVAL	N	8	BEST12.0	

SAS Enterprise Miner Report

Node=Transform Variables (2)
Summary

Node id = Trans2
Node label = Transform Variables (2)
Meta path = Ids => Trans2
Notes =

Node=Transform Variables (2)
Properties

Property	Value	Default	Property	Value	Default	Property	Value	Default
Component	Transform		EmSampleSize	DEFAULT		MissingValue	USEINSEARCH	
DefaultClassMethod	NONE		GroupCutoff	0.1		NumberofBins	VARIABLES	
DefaultClassTargetMethod	NONE		GroupMissing	N		Offset	1	
DefaultMethod	NONE		HideVariable	Y		RejectVariable	Y	
DefaultTargetMethod	NONE		MaxOptimalBins	4		SummaryStatistics	Y	
EmRandomSeed	12345		MinOffset	Y		SummaryVariables	TRANSFORMED	
EmSampleMethod	FIRSTN		MissingAsLevel	N		UseMetaTransform	Y	

Node=Transform Variables (2)
Variable Summary

Role	Level	Frequency Count	Name
TARGET	INTERVAL	1	price
INPUT	INTERVAL	16	bathrooms bedrooms condition grade lat long sqft_above sqft_basement sqft_living sqft_living15 sqft_lot sqft_lot15 view waterfront yr_built yr_renovated
INPUT	NOMINAL	2	Sold_Year floors

Node=Transform Variables (2)
Transformations Statistics

Source	Method	Variable Name	Formula	Number of Levels	Non Missing	Missing	Minimum	Maximum	Mean	Standard Deviation	Skewness	Kurtosis	Label
Input	Original	Sold_Year		2	.	0	.	.	.	.	.	.	
Input	Original	bathrooms		.	21613	0	0	8	2.11	0.770	0.51111	1.2799	
Input	Original	yr_built		.	21613	0	1900	2015	1971.01	29.373	-0.46981	-0.6574	
Input	Original	yr_renovated		.	21613	0	0	2015	84.40	401.679	4.54949	18.7012	
Output	Formula	AGE	(Sold_Year) - (yr_built)	.	21613	0	-1	115	43.32	29.375	0.46916	-0.6580	
Output	Formula	AGE_RNV	MIN((Sold_Year - yr_renovated) ,yr_renovated)	.	21613	0	-1	80	0.78	4.895	7.97455	74.0904	
Output	Formula	Bathroom_Rounded	ROUND(bathrooms)	.	21613	0	0	8	2.31	0.865	0.27652	0.3926	

SAS Enterprise Miner Report

Node=Transform Variables (3)
Summary

Node id = Trans3
Node label = Transform Variables (3)
Meta path = Ids => Trans2 => Trans3
Notes =

Node=Transform Variables (3)
Properties

Property	Value	Default	Property	Value	Default	Property	Value	Default
Component	Transform		EmSampleSize	DEFAULT		MissingValue	USEINSEARCH	
DefaultClassMethod	NONE		GroupCutoff	0.1		NumberofBins	VARIABLES	
DefaultClassTargetMethod	NONE		GroupMissing	N		Offset	1	
DefaultMethod	NONE		HideVariable	Y		RejectVariable	Y	
DefaultTargetMethod	NONE		MaxOptimalBins	4		SummaryStatistics	Y	
EmRandomSeed	12345		MinOffset	Y		SummaryVariables	TRANSFORMED	
EmSampleMethod	FIRSTN		MissingAsLevel	N		UseMetaTransform	Y	

Node=Transform Variables (3)
Variable Summary

Role	Level	Frequency Count	Name
TARGET	INTERVAL	1	price
INPUT	INTERVAL	18	AGE AGE_RNV Bathroom_Rounded bedrooms condition grade lat long sqft_above sqft_basement sqft_living sqft_living15 sqft_lot sqft_lot15 view waterfront yr_built yr_renovated
INPUT	NOMINAL	2	Sold_Year floors

Node=Transform Variables (3)
Transformations Statistics

Source	Method	Variable Name	Formula	Number of Levels	Non Missing
Input	Original	lat		.	21613
Input	Original	long		.	21613
Input	Original	price		.	21613
Input	Original	sqft_above		.	21613
Input	Original	sqft_basement		.	21613
Input	Original	sqft_living		.	21613
Input	Original	sqft_living15		.	21613
Input	Original	sqft_lot		.	21613
Input	Original	sqft_lot15		.	21613
Input	Original	yr_built		.	21613
Input	Original	yr_renovated		.	21613
Output	Computed	OPT_yr_built	Optimal Binning(4)	4	.
Output	Computed	OPT_yr_renovated	Optimal Binning(4)	2	.
Output	Computed	STD_lat	(lat - 47.560052519) / 0.1385637102	.	21613
Output	Computed	STD_long	(long - -122.2138964) / 0.1408283426	.	21613
Output	Computed	STD_price	(price - 540088.14177) / 367127.19648	.	21613
Output	Computed	STD_sqft_above	(sqft_above - 1788.3906908) / 828.09097765	.	21613
Output	Computed	STD_sqft_basement	(sqft_basement - 291.50904548) / 442.57504268	.	21613
Output	Computed	STD_sqft_living	(sqft_living - 2079.8997363) / 918.44089705	.	21613
Output	Computed	STD_sqft_living15	(sqft_living15 - 1986.5524916) / 685.39130425	.	21613
Output	Computed	STD_sqft_lot	(sqft_lot - 15106.967566) / 41420.511515	.	21613
Output	Computed	STD_sqft_lot15	(sqft_lot15 - 12768.455652) / 27304.179631	.	21613

Missing	Minimum	Maximum	Mean	Standard Deviation	Skewness	Kurtosis	Label
0	47.16	47.78	47.56	0.14	-0.4853	-0.677	
0	-122.52	-121.32	-122.21	0.14	0.8850	0.960	
0	75000.00	7700000.00	540088.14	367127.20	4.0241	34.586	
0	290.00	9410.00	1788.39	828.09	1.4467	3.402	
0	0.00	4820.00	291.51	442.58	1.5780	2.716	
0	290.00	13540.00	2079.90	918.44	1.4716	5.243	
0	399.00	6210.00	1986.55	685.39	1.1082	1.597	
0	520.00	1651359.00	15106.97	41420.51	13.0600	285.078	
0	651.00	871200.00	12768.46	27304.18	9.5067	150.763	
0	1900.00	2015.00	1971.01	29.37	-0.4698	-0.657	
0	0.00	2015.00	84.40	401.68	4.5495	18.701	
0	.	.	.	.	.	.	Transformed yr_built
0	.	.	.	.	.	.	Transformed yr_renovated
0	-2.92	1.57	0.00	1.00	-0.4853	-0.676	Transformed lat
0	-2.17	6.38	-0.00	1.00	0.8851	1.050	Transformed long
0	-1.27	19.50	-0.00	1.00	4.0241	34.586	Transformed price
0	-1.81	9.20	-0.00	1.00	1.4467	3.402	Transformed sqft_above
0	-0.66	10.23	0.00	1.00	1.5780	2.716	Transformed sqft_basement
0	-1.95	12.48	-0.00	1.00	1.4716	5.243	Transformed sqft_living
0	-2.32	6.16	-0.00	1.00	1.1082	1.597	Transformed sqft_living15
0	-0.35	39.50	-0.00	1.00	13.0600	285.078	Transformed sqft_lot
0	-0.44	31.44	-0.00	1.00	9.5067	150.763	Transformed sqft_lot15

SAS Enterprise Miner Report

Node=Data Partition
Summary

Node id = Part
Node label = Data Partition
Meta path = Ids => Trans2 => Trans3 => 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	50	40
IntervalDistribution	Y		RandomSeed	12345		ValidatePct	50	30

Node=Data Partition
Variable Summary

Role	Level	Frequency Count	Name
TARGET	INTERVAL	1	STD_price
INPUT	INTERVAL	16	AGE AGE_RNV Bathroom_Rounded STD_lat STD_long STD_sqft_above STD_sqft_basement STD_sqft_living STD_sqft_living15 STD_sqft_lot STD_sqft_lot15 bedrooms condition grade view waterfront
INPUT	NOMINAL	4	OPT_yr_built OPT_yr_renovated Sold_Year floors
ID	NOMINAL	1	id

SAS Enterprise Miner Report

Node=StatExplore
Summary

Node id = Stat2
Node label = StatExplore
Meta path = Ids => Trans2 => Trans3 => Stat2
Notes =

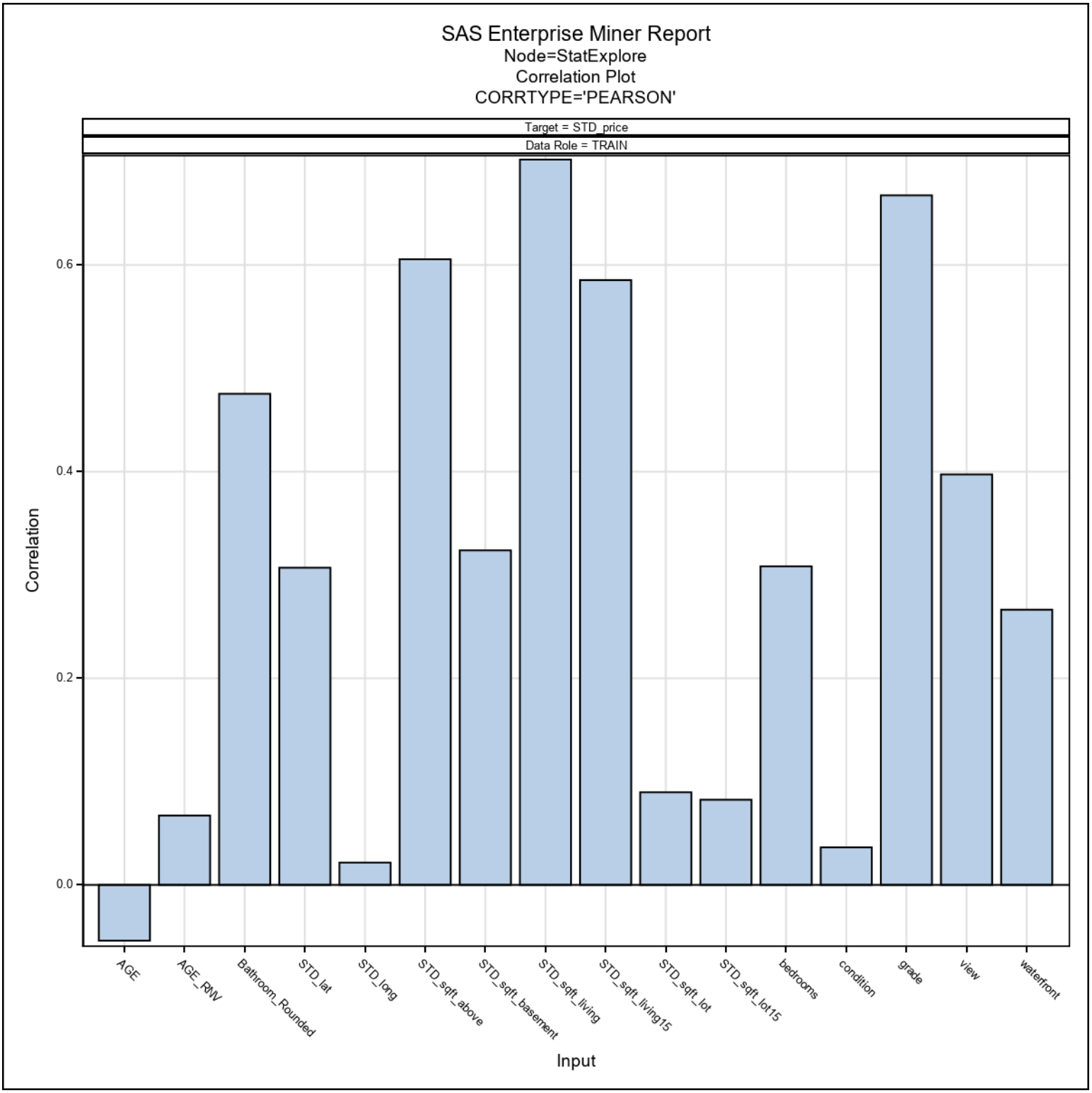
Node=StatExplore
Properties

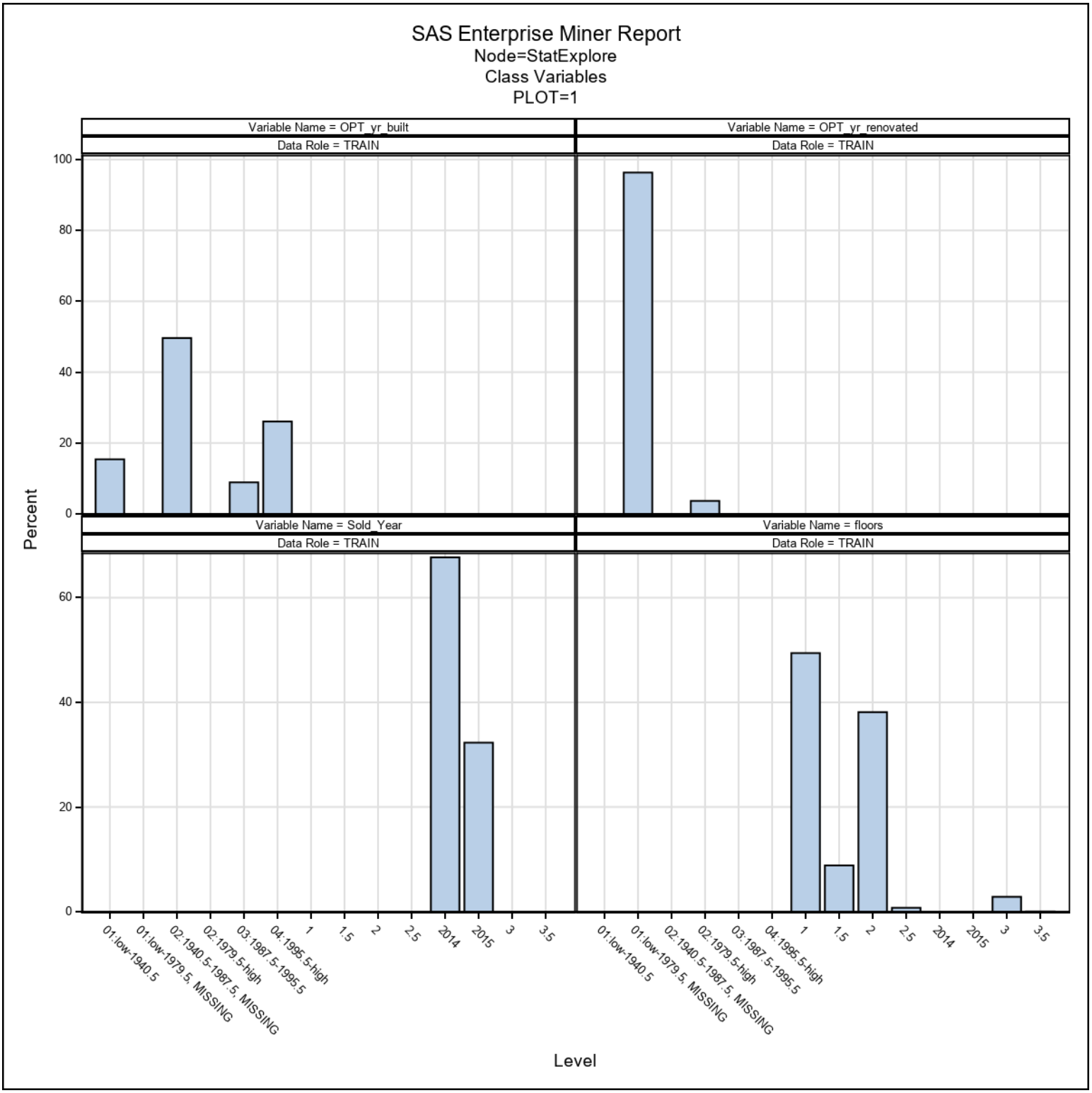
Property	Value	Default	Property	Value	Default	Property	Value	Default
Component	StatExplore		Correlation	Y		NObs	100000	1000000
BySegment	N	Y	DropRejected	Y		Pearson	Y	
ChiSquare	Y		HideVariable	Y		Spearman	N	
ChiSquareInterval	N		IntervalDistribution	Y		UseScore	N	
ChiSquareIntervalNBins	5		LevelSummary	Y		UseTest	N	
ClassDistribution	Y		MaximumVars	1000		UseValidate	N	

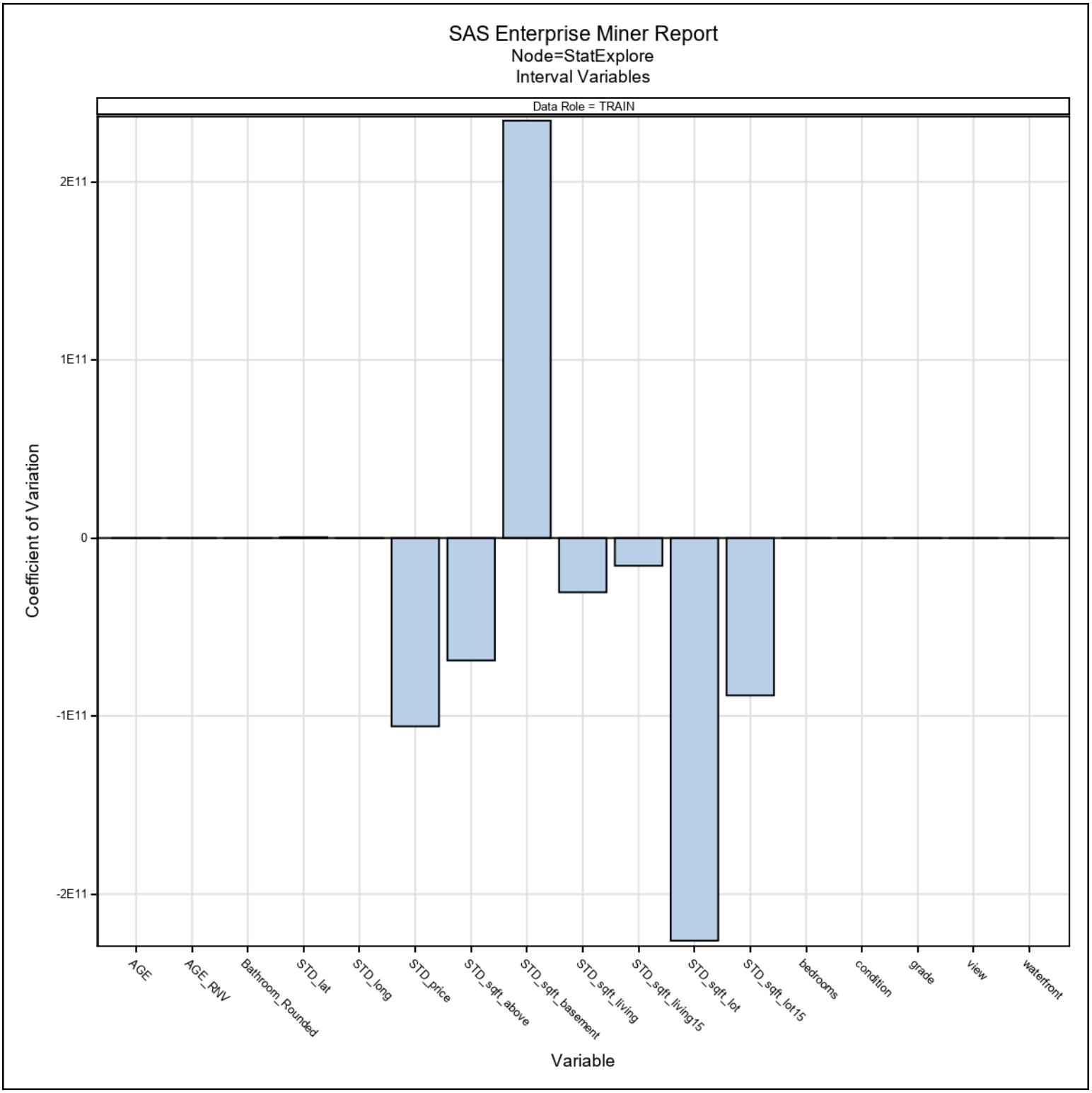
Node=StatExplore
Variable Summary

Role	Level	Frequency Count	Name
INPUT	INTERVAL	16	AGE AGE_RNV Bathroom_Rounded STD_lat STD_long STD_sqft_above STD_sqft_basement STD_sqft_living STD_sqft_living15 STD_sqft_lot STD_sqft_lot15 bedrooms condition grade view waterfront
INPUT	NOMINAL	4	OPT_yr_built OPT_yr_renovated Sold_Year floors

Target	Variable	Importance	Worth	Analysis Variable	Label	plot
STD_price	STD_sqft_living	1	0.52008	1	Transformed sqft_living	.
STD_price	grade	2	0.49167	1	grade	.
STD_price	STD_sqft_above	3	0.40154	1	Transformed sqft_above	.
STD_price	STD_sqft_living15	4	0.34342	1	Transformed sqft_living15	.
STD_price	Bathroom_Rounded	5	0.27255	1	Bathroom_Rounded	.
STD_price	STD_lat	6	0.23110	1	Transformed lat	.
STD_price	view	7	0.17571	1	view	.
STD_price	STD_sqft_basement	8	0.14159	1	Transformed sqft_basement	.
STD_price	bedrooms	9	0.10528	1	bedrooms	.
STD_price	floors	10	0.08977	1	floors	.
STD_price	waterfront	11	0.07693	1	waterfront	.
STD_price	STD_sqft_lot15	12	0.06282	1	Transformed sqft_lot15	.
STD_price	STD_sqft_lot	13	0.05283	1	Transformed sqft_lot	.
STD_price	STD_long	14	0.04092	1	Transformed long	.
STD_price	AGE	15	0.04081	1	AGE	.
STD_price	OPT_yr_built	16	0.03751	1	Transformed yr_built	.
STD_price	AGE_RNV	17	0.02099	1	AGE_RNV	.
STD_price	OPT_yr_renovated	18	0.01728	1	Transformed yr_renovated	.
STD_price	condition	19	0.00630	1	condition	.
STD_price	Sold_Year	20	0.00006	1	Sold_Year	.


SAS Enterprise Miner Report
Node=StatExplore
Correlation Plot
CORRTYPE='PEARSON'
Target = STD_price
Data Role = TRAIN
Correlation
0.6
0.4
0.2
0.0
AGE
AGE_RNV
Bathroom_Rounded
STD_lat
STD_long
STD_sqft_above
STD_sqft_basement
STD_sqft_living
STD_sqft_living15
STD_sqft_lot
STD_sqft_lot15
bedrooms
condition
grade
view
waterfront
Input


SAS Enterprise Miner Report
Node=StatExplore
Class Variables
PLOT=1
Variable Name = OPT_yr_built
Data Role = TRAIN
Variable Name = OPT_yr_renovated
Data Role = TRAIN
Variable Name = Sold_Year
Data Role = TRAIN
Variable Name = floors
Data Role = TRAIN
Percent
0
20
40
60
80
100
01:low-1940.5
01:low-1979.5, MISSING
02:1940.5-1987.5, MISSING
02:1979.5-high
03:1987.5-1995.5
04:1995.5-high
1
1.5
2
2.5
2014
2015
3
3.5
Level


SAS Enterprise Miner Report
Node=StatExplore
Interval Variables
Data Role = TRAIN
2E11
1E11
0
-1E11
-2E11
Coefficient of Variation
AGE
AGE_RNV
Bathroom_Rounded
STD_lat
STD_long
STD_price
STD_sqft_above
STD_sqft_basement
STD_sqft_living
STD_sqft_living15
STD_sqft_lot
STD_sqft_lot15
bedrooms
condition
grade
view
waterfront
Variable

SAS Enterprise Miner Report

Node=Regression
Summary

Node id = Reg
Node label = Regression
Meta path = Ids => Trans2 => Trans3 => Part => Reg
Notes =

Node=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	0	.	StepOutput	N	
Covout	N		MinResourceUse	N		Stop	0	
Details	N		ModelDefaults	Y		SuppressIntercept	N	
Error	LOGISTIC		ModelSelection	STEPWISE	NONE	SuppressOutput	N	
ExcludedVariable	REJECT		OptimizationTechnique	DEFAULT		Terms	N	
FConvTimes	1		Performance	N		TwoFactor	N	
FConvValue	0		Polynomial	N				

Node=Regression
Variable Summary

Role	Level	Frequency Count	Name
TARGET	INTERVAL	1	STD_price
INPUT	INTERVAL	16	AGE AGE_RNV Bathroom_Rounded STD_lat STD_long STD_sqft_above STD_sqft_basement STD_sqft_living STD_sqft_living15 STD_sqft_lot STD_sqft_lot15 bedrooms condition grade view waterfront
INPUT	NOMINAL	4	OPT_yr_built OPT_yr_renovated Sold_Year floors

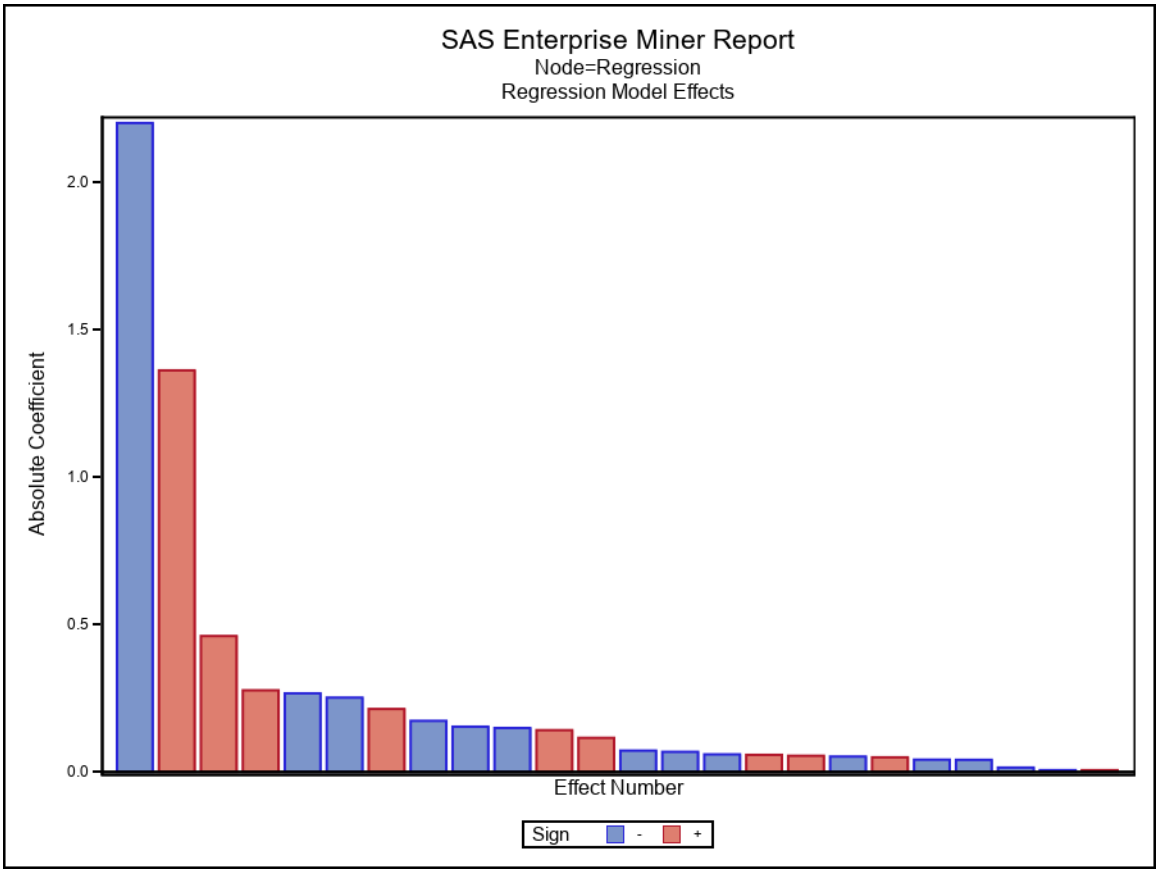
Node=Regression
Model Fit Statistics

Target=STD_price Target Label=Transformed price

Label of Statistic	Train	Validation	Test
Akaike's Information Criterion	-13913.66	.	.
Average Squared Error	0.27	0.33	.
Average Error Function	0.27	0.33	.
Degrees of Freedom for Error	10783.00	.	.
Model Degrees of Freedom	24.00	.	.
Total Degrees of Freedom	10807.00	.	.

Target=STD_price Target Label=Transformed price

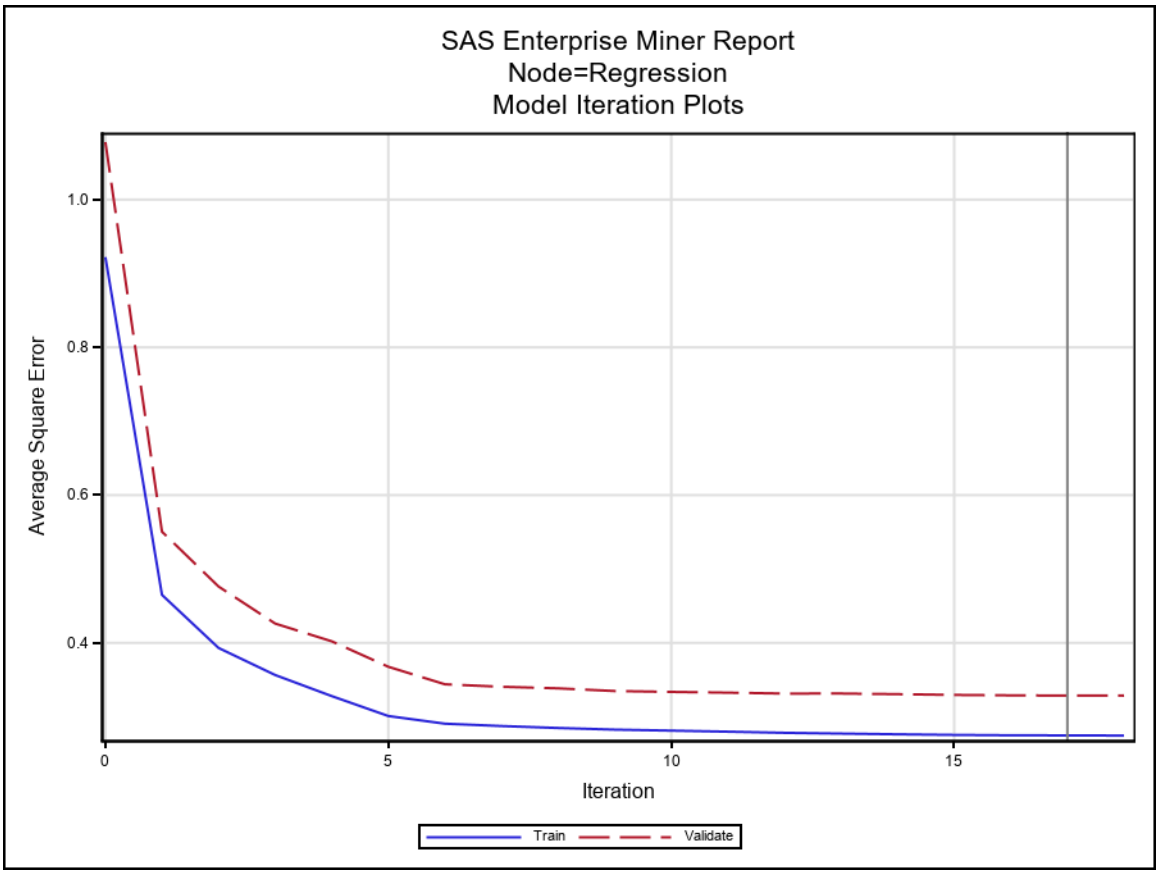
Label of Statistic	Train	Validation	Test
Divisor for ASE	10807.00	10806.00	.
Error Function	2969.18	3551.02	.
Final Prediction Error	0.28	.	.
Maximum Absolute Error	11.54	12.05	.
Mean Square Error	0.28	0.33	.
Sum of Frequencies	10807.00	10806.00	.
Number of Estimate Weights	24.00	.	.
Root Average Sum of Squares	0.52	0.57	.
Root Final Prediction Error	0.53	.	.
Root Mean Squared Error	0.52	0.57	.
Schwarz's Bayesian Criterion	-13738.75	.	.
Sum of Squared Errors	2969.18	3551.02	.
Sum of Case Weights Times Freq	10807.00	10806.00	.

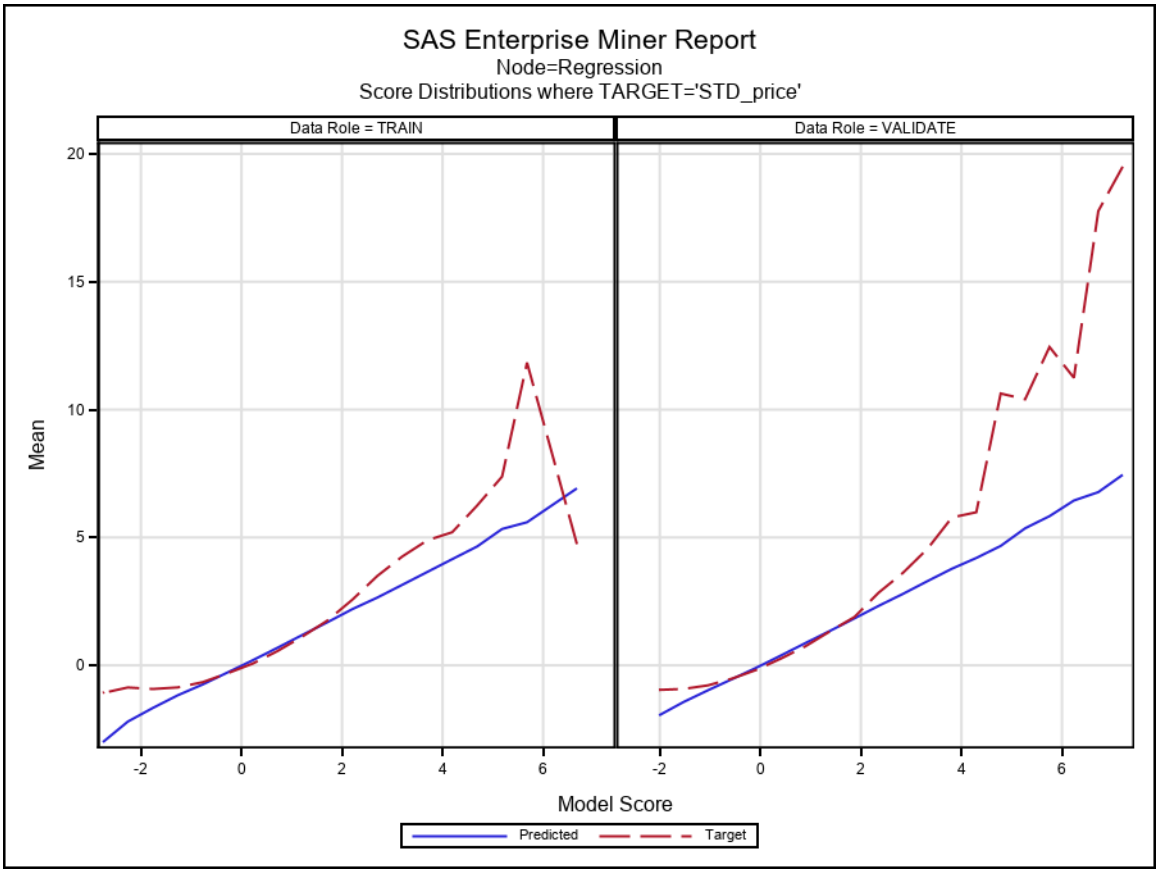


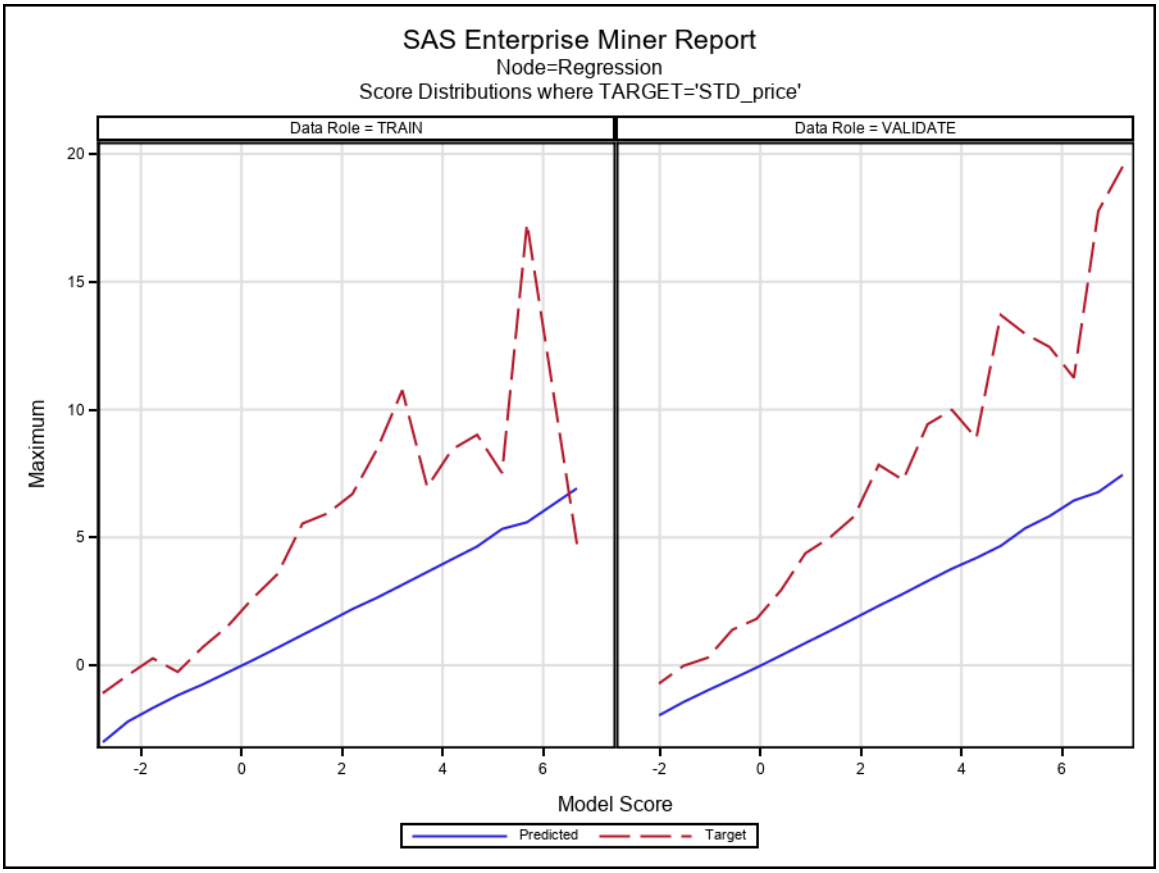
Effect Number	Variable	Level	Coefficient	T-value	P Value	Effect Number	Variable	Level	Coefficient	T-value	P Value
1	Intercept		-2.19933	-22.5521	0.000000	13	OPT_yr_built	03_1987_5_1995_5	-0.071511	-4.23395	0.00002
2	waterfront		1.36070	19.9501	0.000000	14	OPT_yr_built	02_1940_5_1987_5__MI	-0.067420	-6.61782	0.00000
3	STD_sqft_living		0.46006	38.0717	0.000000	15	bedrooms		-0.058819	-8.69417	0.00000
4	grade		0.27603	34.6709	0.000000	16	OPT_yr_built	01_LOW_1940_5	0.057137	2.12033	0.03400
5	floors	2	-0.26580	-5.0522	0.000000	17	floors	2D5	0.054024	0.76026	0.44712
6	floors	1D5	-0.25127	-4.6044	0.000004	18	STD_sqft_basement		-0.051464	-7.11009	0.00000
7	STD_lat		0.21276	39.1222	0.000000	19	STD_sqft_living15		0.048797	5.63353	0.00000
8	floors	1	-0.17248	-3.2293	0.001245	20	STD_long		-0.040872	-6.45770	0.00000
9	OPT_yr_renovated	01_LOW_1979_5__M	-0.15273	-9.5197	0.000000	21	Sold_Year	2014	-0.040315	-7.42108	0.00000
10	floors	3	-0.14826	-2.5118	0.012027	22	STD_sqft_lot15		-0.014076	-2.60325	0.00925

SAS Enterprise Miner Report
Node=Regression
Regression Model Effects

Effect Number	Variable	Level	Coefficient	T-value	P Value	Effect Number	Variable	Level	Coefficient	T-value	P Value
11	view		0.14088	17.6656	0.000000	23	AGE_RNV		-0.005389	-4.43188	0.00001
12	condition		0.11478	12.9730	0.000000	24	AGE		0.005301	9.93762	0.00000







Node=Regression
Score Distributions

Target Variable=STD_price Data Role=TRAIN

Range for Predicted	Mean Predicted	Max Predicted	Min Predicted	Mean Target	Max Target	Min Target
6.424 - 6.920	6.92034	6.92034	6.92034	4.7393	4.7393	4.73926
5.432 - 5.928	5.59473	5.74429	5.44517	11.8390	17.2826	6.39536
4.935 - 5.432	5.33126	5.40452	5.25801	7.3814	7.5176	7.24521
4.439 - 4.935	4.64695	4.82846	4.44011	6.2477	9.0157	4.31706
3.943 - 4.439	4.15027	4.41781	3.97077	5.2041	8.4462	3.10495
3.447 - 3.943	3.64929	3.83669	3.46767	4.8863	6.9728	1.55236
2.950 - 3.447	3.14781	3.42250	2.96985	4.2556	10.7562	0.70796
2.454 - 2.950	2.64940	2.94090	2.45837	3.4956	8.4709	-0.00024
1.958 - 2.454	2.19740	2.44890	1.95994	2.5675	6.7004	-0.31348
1.462 - 1.958	1.68445	1.95736	1.46339	1.7510	5.9378	-0.52976
0.965 - 1.462	1.18999	1.46164	0.96600	1.1266	5.5428	-0.32710
0.469 - 0.965	0.68676	0.96508	0.46971	0.5572	3.5680	-0.69482
-0.027 - 0.469	0.19497	0.46906	-0.02704	0.0647	2.6147	-1.00993
-0.523 - -0.027	-0.27787	-0.02719	-0.52254	-0.3113	1.5251	-1.11702
-1.020 - -0.523	-0.74892	-0.52357	-1.01895	-0.6584	0.7080	-1.22597
-1.516 - -1.020	-1.17208	-1.01964	-1.51538	-0.8646	-0.2590	-1.24504
-2.012 - -1.516	-1.66844	-1.51647	-1.97728	-0.9267	0.2721	-1.22597
-2.508 - -2.012	-2.20074	-2.04382	-2.46920	-0.8664	-0.3870	-1.26683
-3.005 - -2.508	-3.00456	-3.00456	-3.00456	-1.0843	-1.0843	-1.08433

Target Variable=STD_price Data Role=VALIDATE

Range for Predicted	Mean Predicted	Max Predicted	Min Predicted	Mean Target	Max Target	Min Target
6.965 - 7.451	7.45062	7.45062	7.45062	19.5025	19.5025	19.5025
6.480 - 6.965	6.77248	6.77248	6.77248	17.7661	17.7661	17.7661
5.995 - 6.480	6.44456	6.44456	6.44456	11.2438	11.2438	11.2438
5.509 - 5.995	5.83326	5.83326	5.83326	12.4499	12.4499	12.4499
5.024 - 5.509	5.35813	5.42644	5.24753	10.4031	12.9653	7.4577
4.539 - 5.024	4.66914	4.91460	4.56898	10.6296	13.7007	7.2452
4.053 - 4.539	4.19811	4.35448	4.05388	5.9864	8.8795	2.9211
3.568 - 4.053	3.77672	4.01104	3.59245	5.7807	9.9908	0.9803
3.083 - 3.568	3.29313	3.56370	3.09424	4.5570	9.4243	2.1380
2.597 - 3.083	2.79657	3.05253	2.60324	3.6217	7.2452	1.6211
2.112 - 2.597	2.32564	2.59174	2.11199	2.8427	7.8412	0.1632
1.627 - 2.112	1.83187	2.11112	1.63048	1.8864	5.8288	-0.4987
1.141 - 1.627	1.34433	1.62351	1.14192	1.3263	4.9980	-0.2726
0.656 - 1.141	0.87153	1.14052	0.65597	0.7457	4.3852	-0.7221
0.171 - 0.656	0.38844	0.65565	0.17075	0.2666	2.9415	-0.7656
-0.315 - 0.171	-0.08685	0.17011	-0.31465	-0.1736	1.8193	-1.1061
-0.800 - -0.315	-0.53624	-0.31501	-0.80013	-0.5170	1.3889	-1.1306
-1.285 - -0.800	-0.97743	-0.80013	-1.28424	-0.7846	0.2994	-1.2478
-1.771 - -1.285	-1.43610	-1.28903	-1.75902	-0.9241	-0.0192	-1.2587
-2.256 - -1.771	-1.95666	-1.80621	-2.25615	-0.9611	-0.7084	-1.1443

SAS Enterprise Miner Report

Node=Decision Tree
Summary

Node id = Tree
Node label = Decision Tree
Meta path = Ids => Trans2 => Trans3 => Part => Tree
Notes =

Node=Decision 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	3	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	

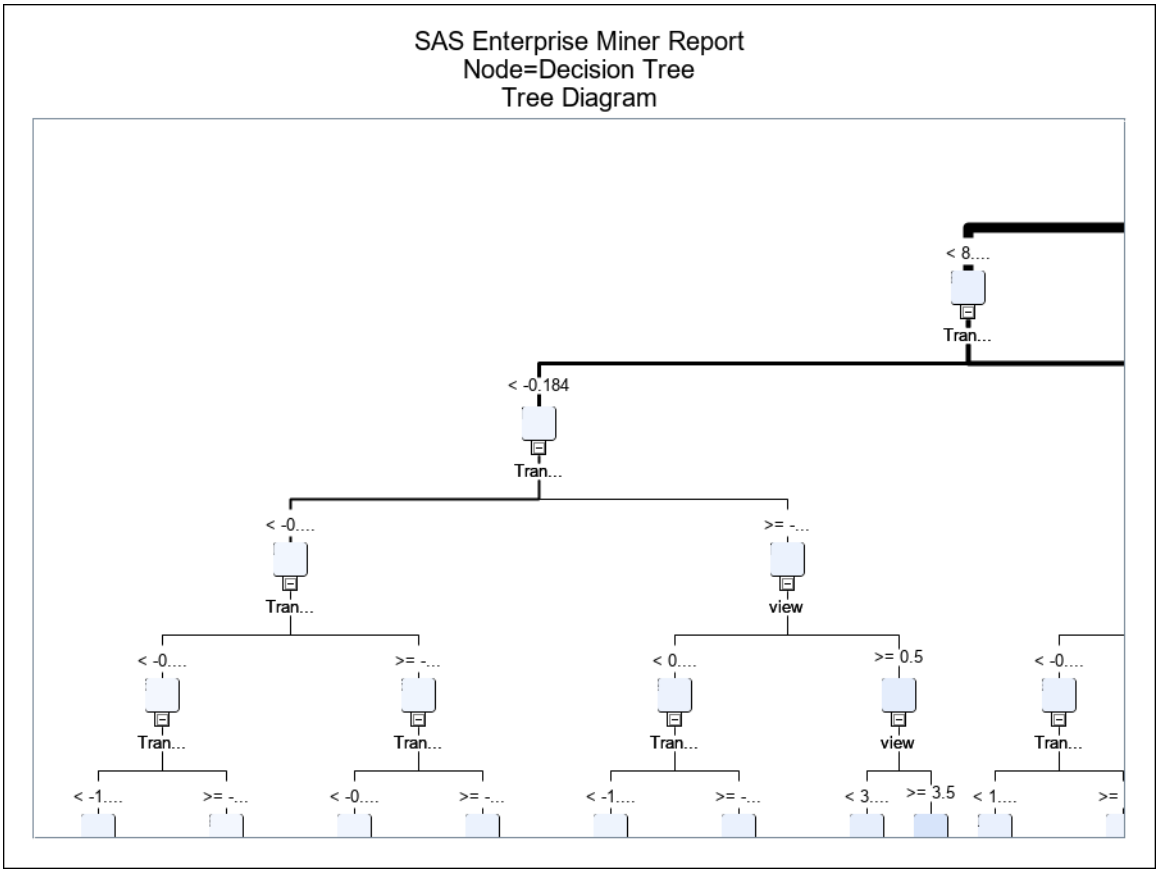
Node=Decision Tree
Variable Summary

Role	Level	Frequency Count	Name
TARGET	INTERVAL	1	STD_price
INPUT	INTERVAL	16	AGE AGE_RNV Bathroom_Rounded STD_lat STD_long STD_sqft_above STD_sqft_basement STD_sqft_living STD_sqft_living15 STD_sqft_lot STD_sqft_lot15 bedrooms condition grade view waterfront
INPUT	NOMINAL	4	OPT_yr_built OPT_yr_renovated Sold_Year floors
ID	INTERVAL	1	_dataobs_
ID	NOMINAL	1	id

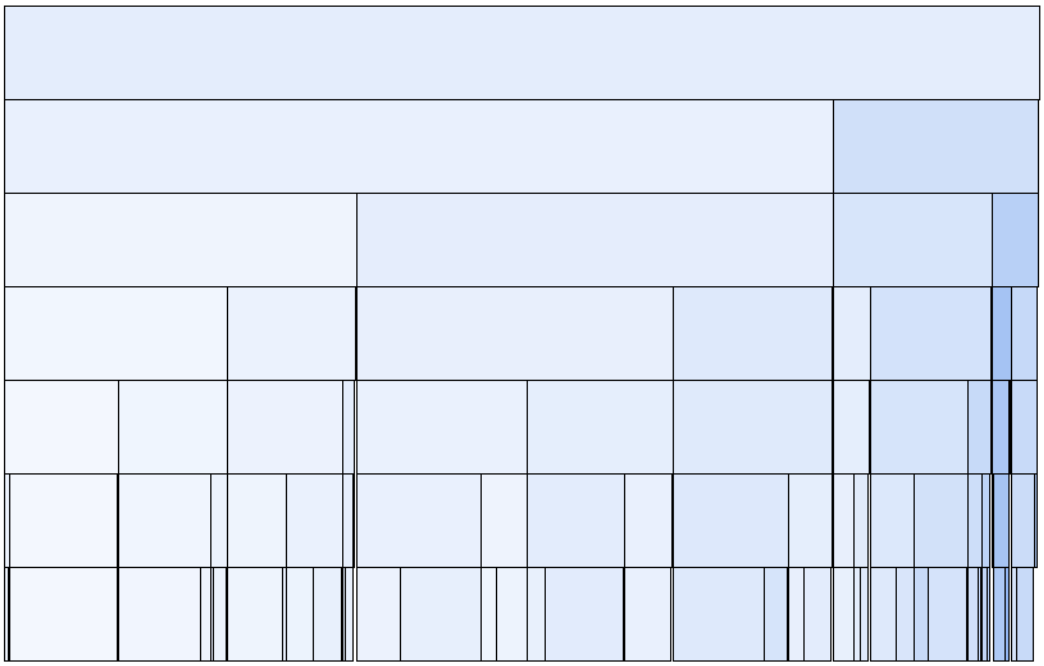
Node=Decision Tree
Model Fit Statistics

Target=STD_price Target Label=Transformed price

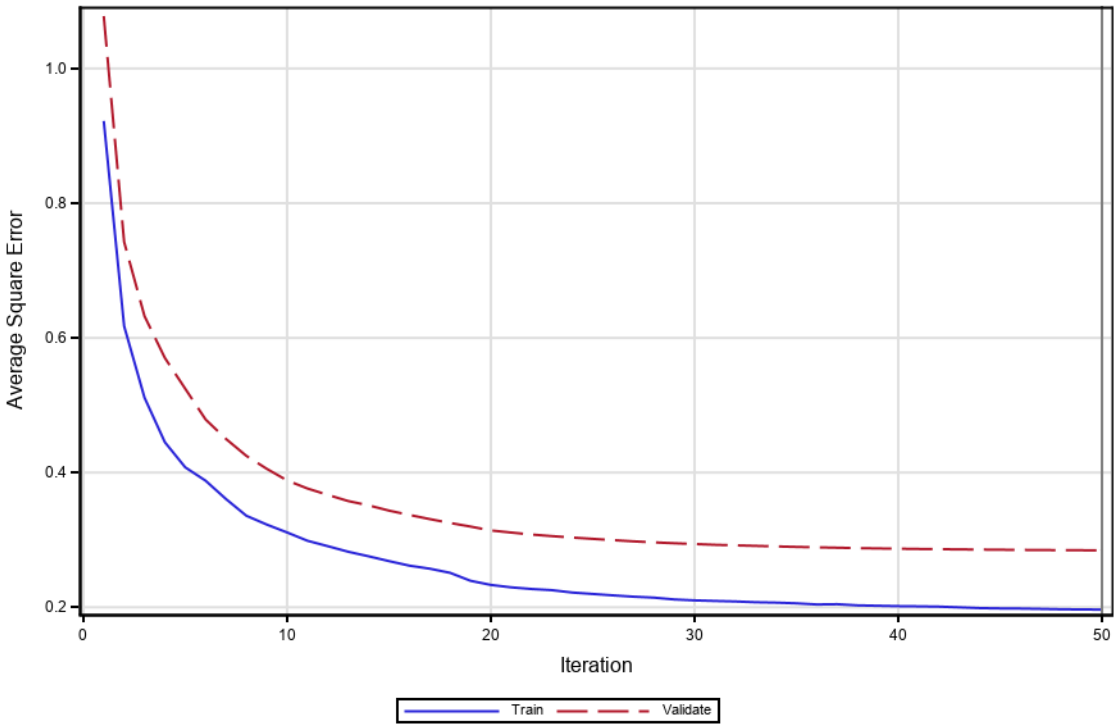
Label of Statistic	Train	Validation	Test
Sum of Frequencies	10807.00	10806.00	.
Maximum Absolute Error	10.55	13.08	.
Sum of Squared Errors	2124.22	3075.14	.
Average Squared Error	0.20	0.28	.
Root Average Squared Error	0.44	0.53	.
Divisor for ASE	10807.00	10806.00	.
Total Degrees of Freedom	10807.00	.	.

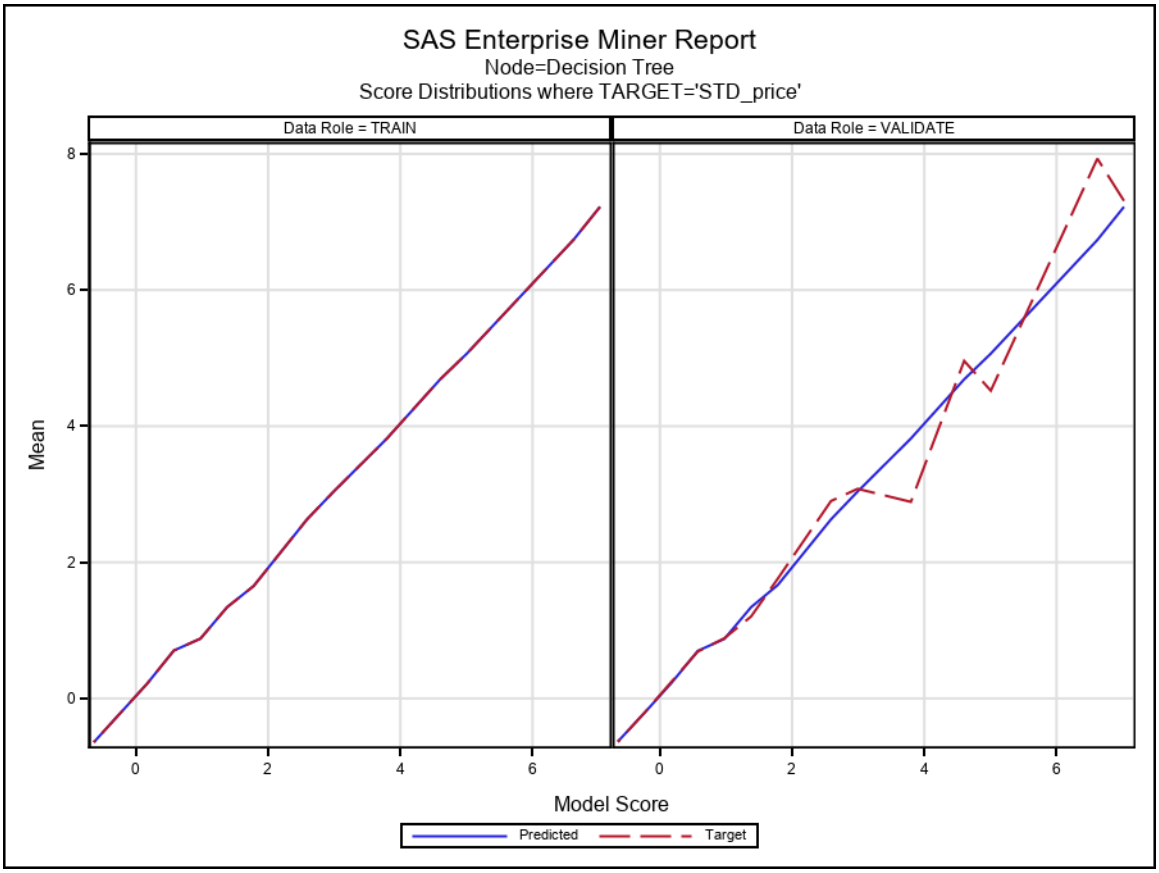


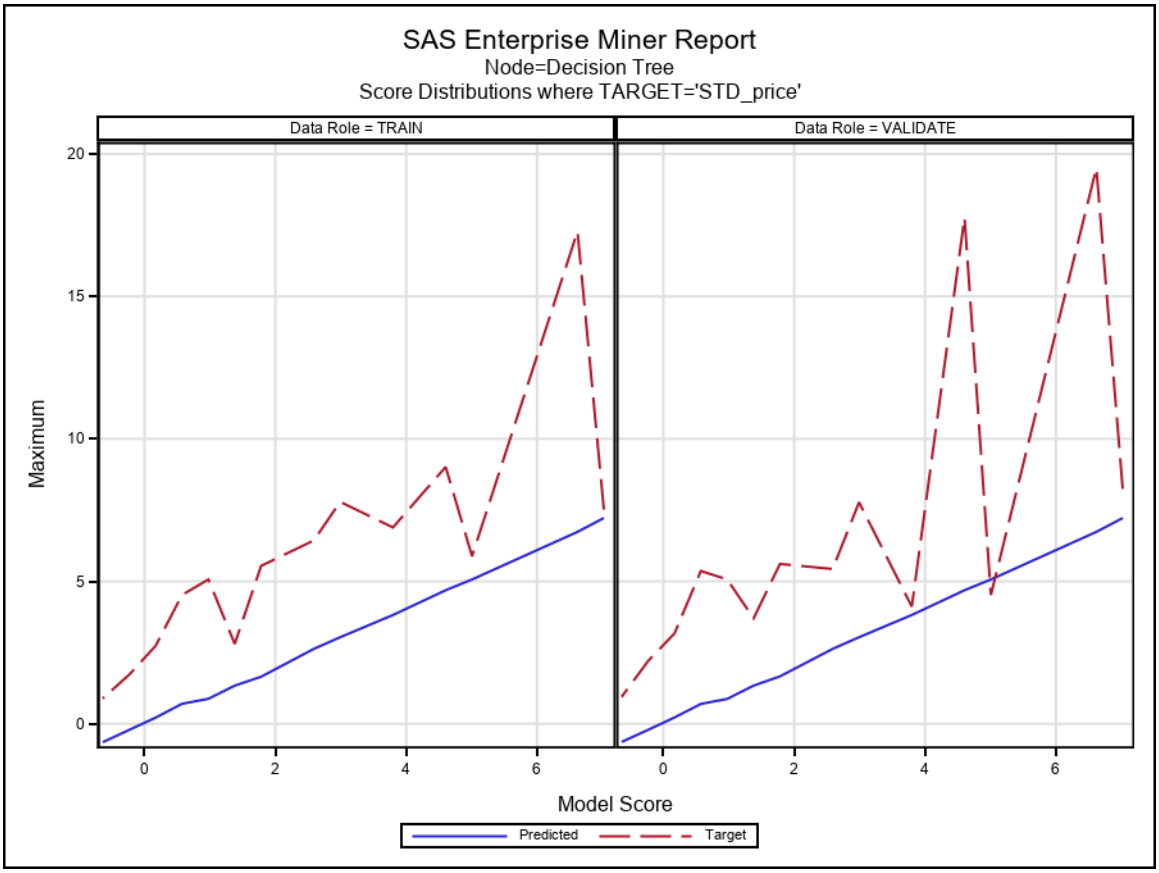
SAS Enterprise Miner Report
Node=Decision Tree
Treemap



SAS Enterprise Miner Report
Node=Decision Tree
Model Iteration Plots







Node=Decision Tree
Score Distributions

Target Variable=STD_price Data Role=TRAIN

Range for Predicted	Mean Predicted	Max Predicted	Min Predicted	Mean Target	Max Target	Min Target
6.820 - 7.223	7.22251	7.22251	7.22251	7.22251	7.5176	6.90472
6.417 - 6.820	6.73570	6.73570	6.73570	6.73570	17.2826	2.58742
4.805 - 5.208	5.06612	5.06612	5.06612	5.06612	5.8833	3.97658
4.402 - 4.805	4.68794	4.68794	4.68794	4.68794	9.0157	0.84415
3.596 - 3.999	3.81887	3.81887	3.81887	3.81887	6.8911	1.25273
2.790 - 3.193	3.03949	3.03952	3.03948	3.03949	7.7900	-0.13643
2.387 - 2.790	2.63041	2.63041	2.63041	2.63041	6.4362	1.10973
1.581 - 1.984	1.65276	1.91213	1.58530	1.65276	5.5428	-0.06834
1.178 - 1.581	1.34092	1.34092	1.34092	1.34092	2.8053	-0.10919
0.775 - 1.178	0.87874	1.09044	0.77852	0.87874	5.0661	-0.52976
0.372 - 0.775	0.70340	0.76847	0.51249	0.70340	4.5214	-0.54501
-0.031 - 0.372	0.21802	0.33803	-0.02836	0.21802	2.7372	-0.84463
-0.434 - -0.031	-0.21167	-0.10503	-0.28967	-0.21167	1.7294	-1.07616
-0.837 - -0.434	-0.64213	-0.43930	-0.83730	-0.64213	0.8959	-1.26683

Target Variable=STD_price Data Role=VALIDATE

Range for Predicted	Mean Predicted	Max Predicted	Min Predicted	Mean Target	Max Target	Min Target
6.820 - 7.223	7.22251	7.22251	7.22251	7.30990	8.2449	6.01947
6.417 - 6.820	6.73570	6.73570	6.73570	7.93084	19.5025	2.50570
4.805 - 5.208	5.06612	5.06612	5.06612	4.52135	4.5214	4.52135
4.402 - 4.805	4.68794	4.68794	4.68794	4.95891	17.7661	0.75835
3.596 - 3.999	3.81887	3.81887	3.81887	2.88772	4.1128	1.77026
2.790 - 3.193	3.03949	3.03952	3.03948	3.07949	7.7764	0.16319
2.387 - 2.790	2.63041	2.63041	2.63041	2.89997	5.4338	0.65348
1.581 - 1.984	1.66522	1.91213	1.58530	1.75825	5.6109	0.02700
1.178 - 1.581	1.34092	1.34092	1.34092	1.20351	3.7015	-0.43606
0.775 - 1.178	0.87524	1.09044	0.77852	0.88482	5.0661	-0.72213
0.372 - 0.775	0.69875	0.76847	0.51249	0.68866	5.3657	-0.49870
-0.031 - 0.372	0.22265	0.33803	-0.02836	0.23998	3.1730	-0.76292
-0.434 - -0.031	-0.21103	-0.10503	-0.28967	-0.20920	2.2061	-1.25321
-0.837 - -0.434	-0.63310	-0.43930	-0.83730	-0.63605	0.9531	-1.25866

SAS Enterprise Miner Report

Node=Standalone Neural network Summary

Node id = Neural2
Node label = Standalone Neural network
Meta path = Ids => Trans2 => Trans3 => Part => Neural2
Notes =

Node=Standalone Neural network Properties

Property	Value	Default	Property	Value	Default	Property	Value	Default
Component	NeuralNetwork		Hidden	3		Prelim	Y	
AbsConvValue	-1.34078E154	-7.237006E75	HiddenActivation	DEFAULT		PrelimMaxTime	1 HOUR	
AbsFTime	1		HiddenBias	Y		PrelimMaxiter	10	
AbsFValue	0		HiddenCombFunction	DEFAULT		PrelimOutest		
AbsGTime	1		HiddenUnits	N		PreliminaryRuns	5	
AbsGValue	0.00001		InitialDs			RandDist	NORMAL	
AbsXTime	1		InitialSeed	12345		RandLoc	0	
AbsXValue	1E-8		InputStandardization	STD		RandScale	0.1	
Accelerate	1.2		Learn	0.1		Residuals	Y	
AddHidden	Y		MaxLearn	50		Standardizations	N	
CodefileNoRes			MaxMomentum	1.75		SuppressOutput	N	
CodefileRes			Maxiter	50		TargetActivation	DEFAULT	
ConvDefaults	Y		Maxtime	4 HOURS		TargetBias	Y	
Decelerate	0.5		MinLearn	0.00001		TargetCombFunction	DEFAULT	
DirectConnection	N		ModelSelectionCriterion	AVERAGE ERROR	PROFIT/LOSS	TargetError	DEFAULT	
FConvTime	1		Momentum	0		Tilt	0	
FConvValue	0		NetworkArchitecture	MLP		TrainCode		
GConvTime	1		Outest			TrainingTechnique	DEFAULT	
GConvValue	1E-6		Outfit			UseEstimates	N	

Node=Standalone Neural network Variable Summary

Role	Level	Frequency Count	Name
TARGET	INTERVAL	1	STD_price
INPUT	INTERVAL	16	AGE AGE_RNV Bathroom_Rounded STD_lat STD_long STD_sqft_above STD_sqft_basement STD_sqft_living STD_sqft_living15 STD_sqft_lot STD_sqft_lot15 bedrooms condition grade view waterfront
INPUT	NOMINAL	4	OPT_yr_built OPT_yr_renovated Sold_Year floors

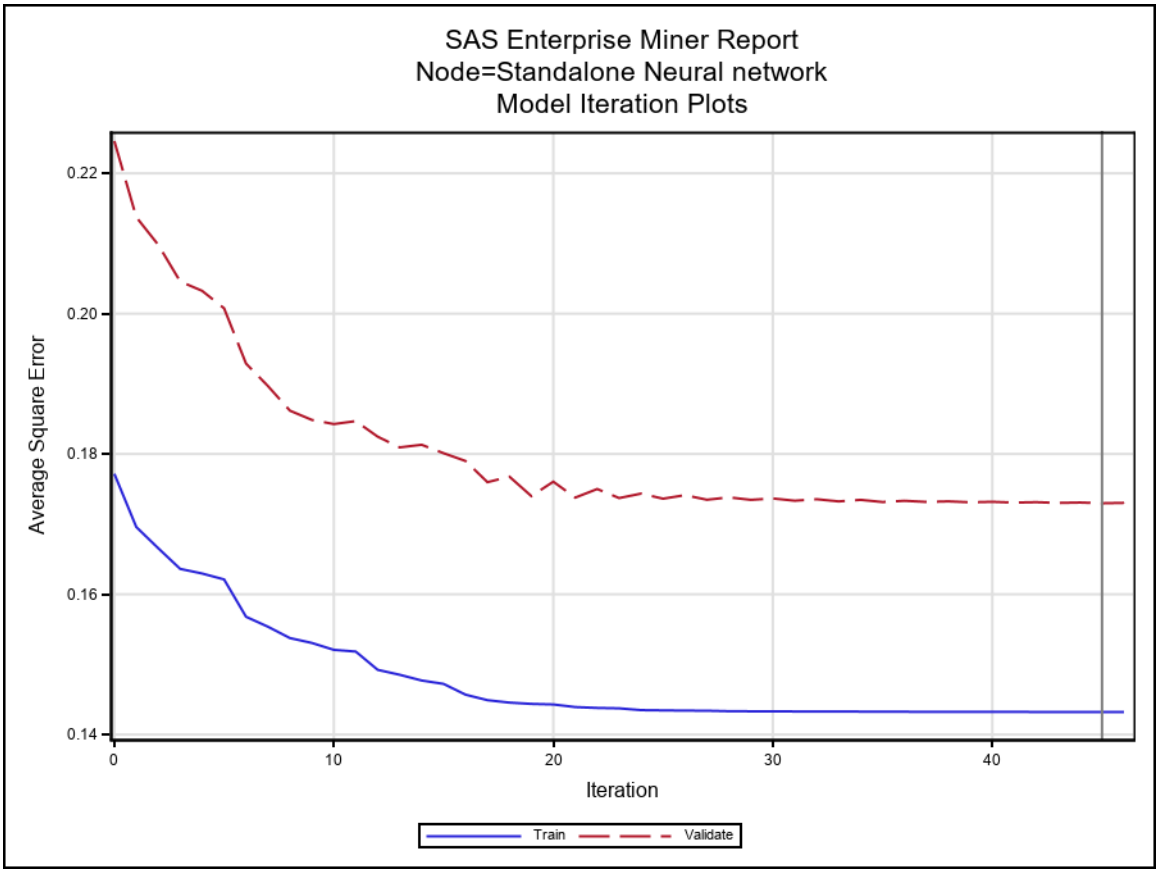
Node=Standalone Neural network Model Fit Statistics

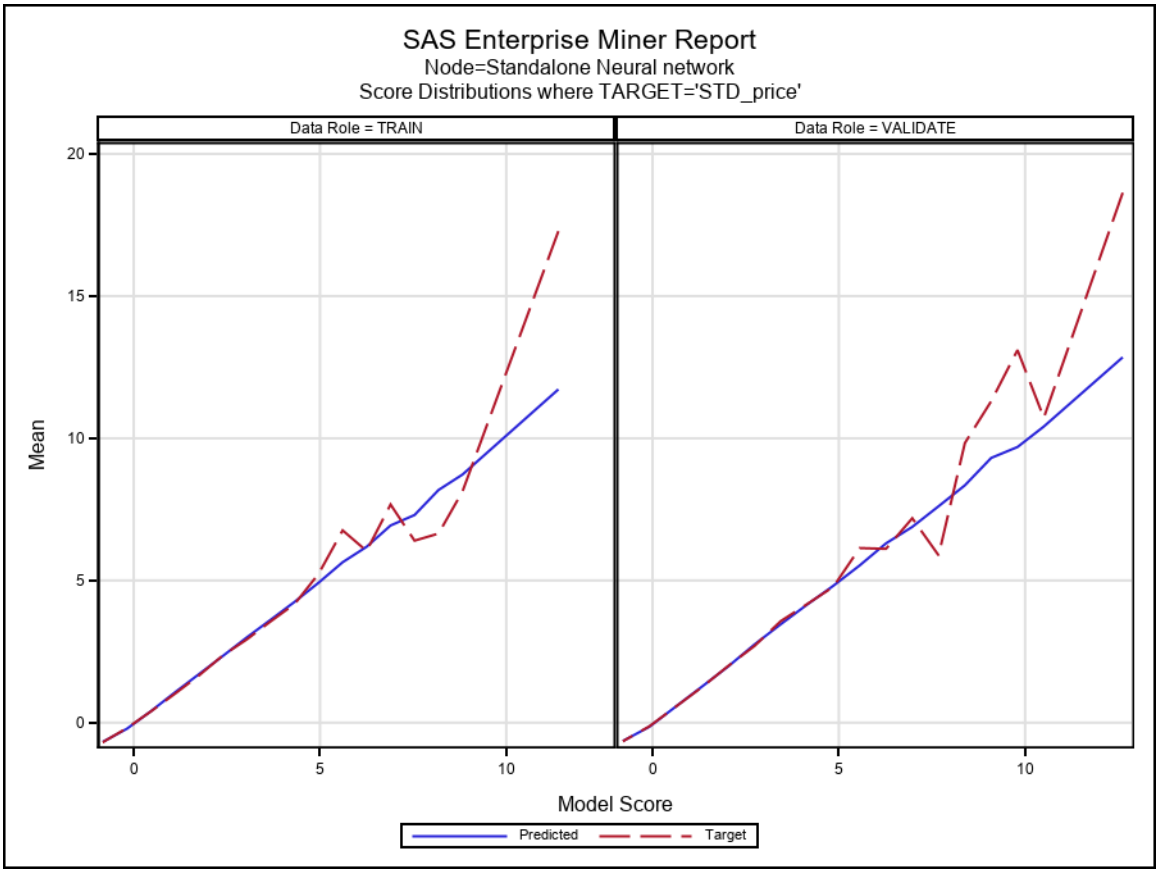
Target=STD_price Target Label=Transformed price

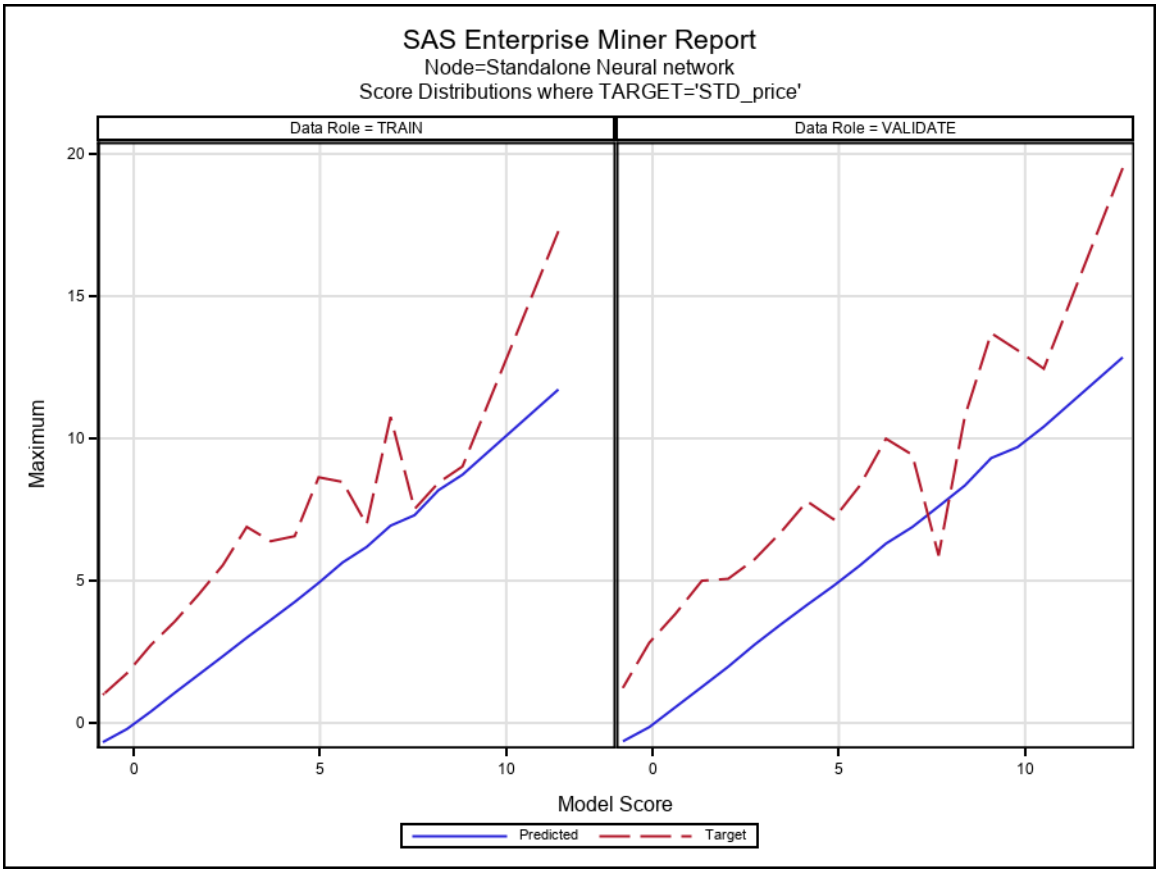
Label of Statistic	Train	Validation	Test
Total Degrees of Freedom	10807.00	.	.
Degrees of Freedom for Error	10722.00	.	.
Model Degrees of Freedom	85.00	.	.
Number of Estimated Weights	85.00	.	.
Akaike's Information Criterion	-20832.35	.	.

Target=STD_price Target Label=Transformed price

Label of Statistic	Train	Validation	Test
Schwarz's Bayesian Criterion	-20212.88	.	.
Average Squared Error	0.14	0.17	.
Maximum Absolute Error	5.56	6.78	.
Divisor for ASE	10807.00	10806.00	.
Sum of Frequencies	10807.00	10806.00	.
Root Average Squared Error	0.38	0.42	.
Sum of Squared Errors	1547.73	1869.15	.
Sum of Case Weights Times Freq	10807.00	10806.00	.
Final Prediction Error	0.15	.	.
Mean Squared Error	0.14	0.17	.
Root Final Prediction Error	0.38	.	.
Root Mean Squared Error	0.38	0.42	.
Average Error Function	0.14	0.17	.
Error Function	1547.73	1869.15	.







Node=Standalone Neural network
Score Distributions

Target Variable=STD_price Data Role=TRAIN

Range for Predicted	Mean Predicted	Max Predicted	Min Predicted	Mean Target	Max Target	Min Target
11.077 - 11.721	11.7208	11.7208	11.7208	17.2826	17.2826	17.2826
8.503 - 9.147	8.7249	8.8043	8.6454	8.1305	9.0157	7.2452
7.860 - 8.503	8.1810	8.3387	7.8811	6.6495	8.4462	5.1070
7.217 - 7.860	7.3019	7.3205	7.2832	6.3994	7.5176	5.2813
6.573 - 7.217	6.9339	7.2131	6.6247	7.6710	10.7562	4.7393
5.930 - 6.573	6.1844	6.3851	6.0202	6.0385	6.9728	4.7937
5.286 - 5.930	5.6412	5.8403	5.3105	6.7617	8.4709	4.6031
4.643 - 5.286	4.9227	5.2837	4.6577	5.2374	8.6344	2.2249
3.999 - 4.643	4.2509	4.5852	4.0022	4.1752	6.5642	2.4104
3.356 - 3.999	3.6196	3.9980	3.3697	3.5620	6.3872	1.1438
2.712 - 3.356	2.9964	3.3142	2.7126	2.9245	6.8911	1.1710
2.069 - 2.712	2.3421	2.7041	2.0704	2.3603	5.5428	-0.1364
1.425 - 2.069	1.7017	2.0653	1.4279	1.6531	4.5214	0.1496
0.782 - 1.425	1.0613	1.4253	0.7836	1.0131	3.5680	-0.5298
0.138 - 0.782	0.4011	0.7805	0.1387	0.3934	2.7372	-0.6485
-0.505 - 0.138	-0.2154	0.1381	-0.5050	-0.1936	1.7430	-1.1170
-1.149 - -0.505	-0.6745	-0.5051	-1.1485	-0.6853	0.9872	-1.2668

Target Variable=STD_price Data Role=VALIDATE

Range for Predicted	Mean Predicted	Max Predicted	Min Predicted	Mean Target	Max Target	Min Target
12.266 - 12.972	12.8484	12.9724	12.7244	18.6343	19.5025	17.7661
10.149 - 10.855	10.4127	10.5764	10.2100	10.7216	12.4499	8.4709
9.443 - 10.149	9.6927	9.6927	9.6927	13.1015	13.1015	13.1015
8.737 - 9.443	9.3092	9.4230	9.1842	11.3037	13.7007	7.2452
8.031 - 8.737	8.3459	8.4923	8.1995	9.8329	10.7862	8.8795
7.325 - 8.031	7.6100	7.6100	7.6100	5.8833	5.8833	5.8833
6.619 - 7.325	6.8844	7.2525	6.6195	7.1883	9.4243	5.5401
5.913 - 6.619	6.3043	6.6014	6.0416	6.1121	9.9908	0.9803
5.207 - 5.913	5.5293	5.8925	5.2720	6.1394	8.3347	2.8326
4.501 - 5.207	4.8152	5.1964	4.5355	4.7776	7.1601	3.0913
3.795 - 4.501	4.1500	4.5003	3.8326	4.1679	7.7900	1.2500
3.089 - 3.795	3.4613	3.7483	3.0907	3.5718	6.7004	1.3344
2.383 - 3.089	2.7486	3.0828	2.4030	2.6951	5.7471	0.7761
1.677 - 2.383	1.9760	2.3793	1.6771	1.9939	5.0661	-0.1664
0.971 - 1.677	1.2650	1.6757	0.9716	1.2458	4.9980	-0.6948
0.265 - 0.971	0.5591	0.9706	0.2651	0.5559	3.8404	-0.6676
-0.441 - 0.265	-0.1468	0.2649	-0.4409	-0.1310	2.8189	-1.1306
-1.147 - -0.441	-0.6447	-0.4418	-1.1470	-0.6528	1.2391	-1.2587

SAS Enterprise Miner Report

Node=Model Comparison Summary

Node id = MdlComp
Node label = Model Comparison
Meta path = Ids => Trans2 => Trans3 => Part => Reg => Neural => MdlComp
Notes =

Node=Model Comparison Properties

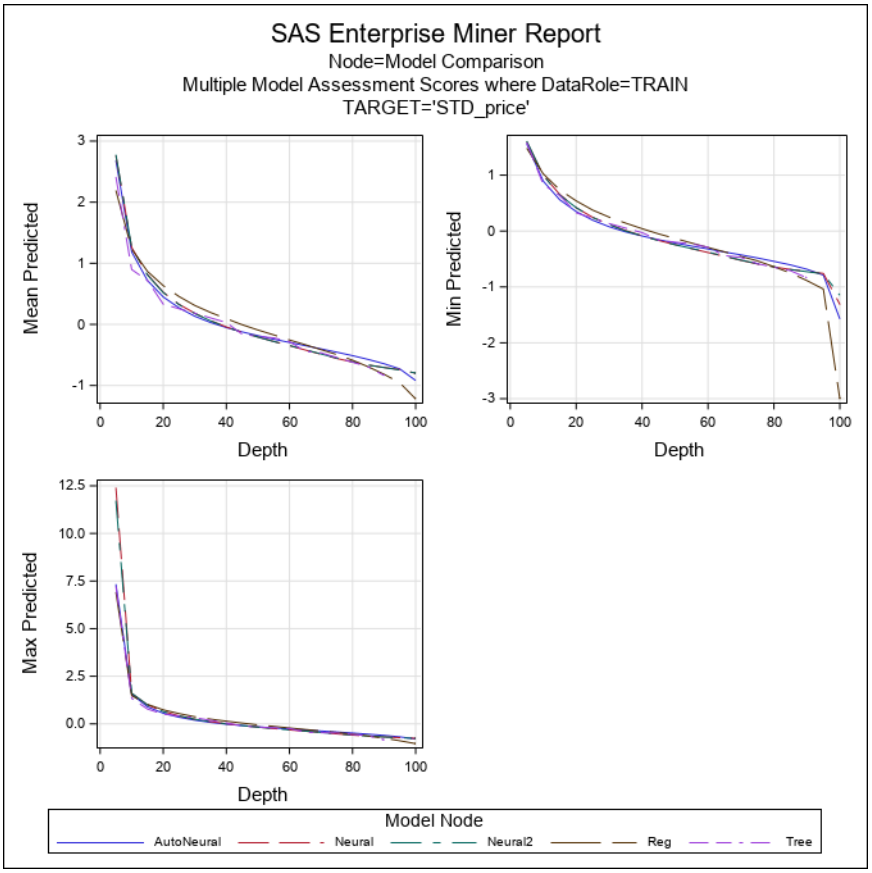
Property	Value	Default	Property	Value	Default	Property	Value	Default
Component	ModelCompare		NumberOfReportedLevels	1E-6		SelectionData	DEFAULT	
AssessAllTargetLevels	N		NumberofBins	20		SelectionDepth	10	
DecileBin	20		ProfitEpsilon	1E-6		SelectionTable	TRAIN	TABLE
HPCriteria	DEFAULT		RecomputeAssess	N		StatisticUsed	_VASE_	
LiftEpsilon	1E-6		RocChart	Y		TargetLabel	Transformed price	
ModelCriteria	Valid: Average Squared Error		RocEpsilon	0.01		TargetName	STD_price	
ModelDescription	Neural Network		RoiEpsilon	1E-6		classViyaCriteria	DEFAULT	
ModelId	Neural		ScoreDistBin	20		intervalViyaCriteria	DEFAULT	
NormalizeReportingVariables	Y		SelectionCriteria	DEFAULT				

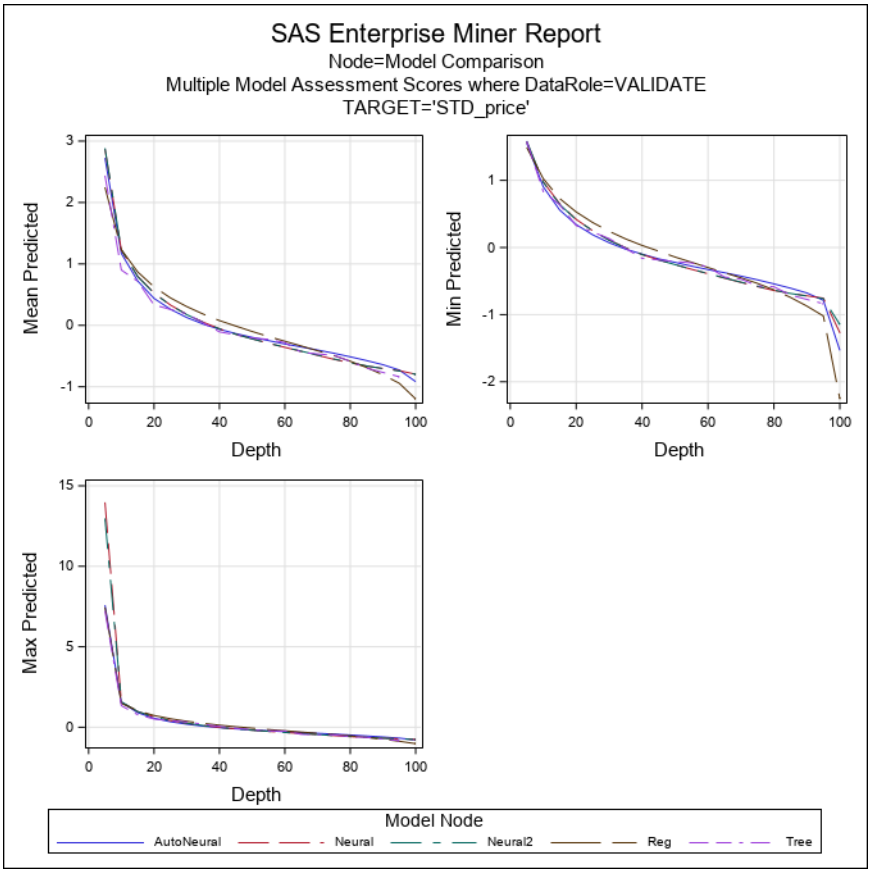
Node=Model Comparison Variable Summary

Role	Level	Frequency Count	Name
TARGET	INTERVAL	1	STD_price

Node=Model Comparison Fit Statistics Table

Selected Model	Predecessor Node	Model Node	Model Description	Target	Target Label	Selection Criterion: Valid: Average Squared Error	Train: Average Squared Error
Y	Neural	Neural	Neural Network	STD_price	Transformed price	0.17063	0.14447
	Neural2	Neural2	Standalone Neural network	STD_price	Transformed price	0.17297	0.14322
	AutoNeural	AutoNeural	AutoNeural	STD_price	Transformed price	0.26266	0.22191
	Tree	Tree	Decision Tree	STD_price	Transformed price	0.28458	0.19656
	Reg	Reg	Regression	STD_price	Transformed price	0.32862	0.27475


SAS Enterprise Miner Report
Node=Model Comparison
Multiple Model Assessment Scores where DataRole=TRAIN
TARGET='STD_price'
Mean Predicted
Min Predicted
Max Predicted
Depth
Model Node
AutoNeural
Neural
Neural2
Reg
Tree


SAS Enterprise Miner Report
Node=Model Comparison
Multiple Model Assessment Scores where DataRole=VALIDATE
TARGET='STD_price'
Mean Predicted
Min Predicted
Max Predicted
Depth
Model Node
AutoNeural
Neural
Neural2
Reg
Tree

SAS Enterprise Miner Report

Node=Neural Network
Summary

Node id = Neural
Node label = Neural Network
Meta path = Ids => Trans2 => Trans3 => Part => Reg => Neural
Notes =

Node=Neural Network
Properties

Property	Value	Default	Property	Value	Default	Property	Value	Default
Component	NeuralNetwork		Hidden	3		Prelim	Y	
AbsConvValue	-1.34078E154	-7.237006E75	HiddenActivation	DEFAULT		PrelimMaxTime	1 HOUR	
AbsFTime	1		HiddenBias	Y		PrelimMaxiter	10	
AbsFValue	0		HiddenCombFunction	DEFAULT		PrelimOutest		
AbsGTime	1		HiddenUnits	N		PreliminaryRuns	5	
AbsGValue	0.00001		InitialDs			RandDist	NORMAL	
AbsXTime	1		InitialSeed	12345		RandLoc	0	
AbsXValue	1E-8		InputStandardization	STD		RandScale	0.1	
Accelerate	1.2		Learn	0.1		Residuals	Y	
AddHidden	Y		MaxLearn	50		Standardizations	N	
CodefileNoRes			MaxMomentum	1.75		SuppressOutput	N	
CodefileRes			Maxiter	50		TargetActivation	DEFAULT	
ConvDefaults	Y		Maxtime	4 HOURS		TargetBias	Y	
Decelerate	0.5		MinLearn	0.00001		TargetCombFunction	DEFAULT	
DirectConnection	N		ModelSelectionCriterion	AVERAGE ERROR	PROFIT/LOSS	TargetError	DEFAULT	
FConvTime	1		Momentum	0		Tilt	0	
FConvValue	0		NetworkArchitecture	MLP		TrainCode		
GConvTime	1		Outest			TrainingTechnique	DEFAULT	
GConvValue	1E-6		Outfit			UseEstimates	N	

Node=Neural Network
Variable Summary

Role	Level	Frequency Count	Name
TARGET	INTERVAL	1	STD_price
INPUT	INTERVAL	13	AGE AGE_RNV STD_lat STD_long STD_sqft_basement STD_sqft_living STD_sqft_living15 STD_sqft_lot15 bedrooms condition grade view waterfront
INPUT	NOMINAL	4	OPT_yr_built OPT_yr_renovated Sold_Year floors

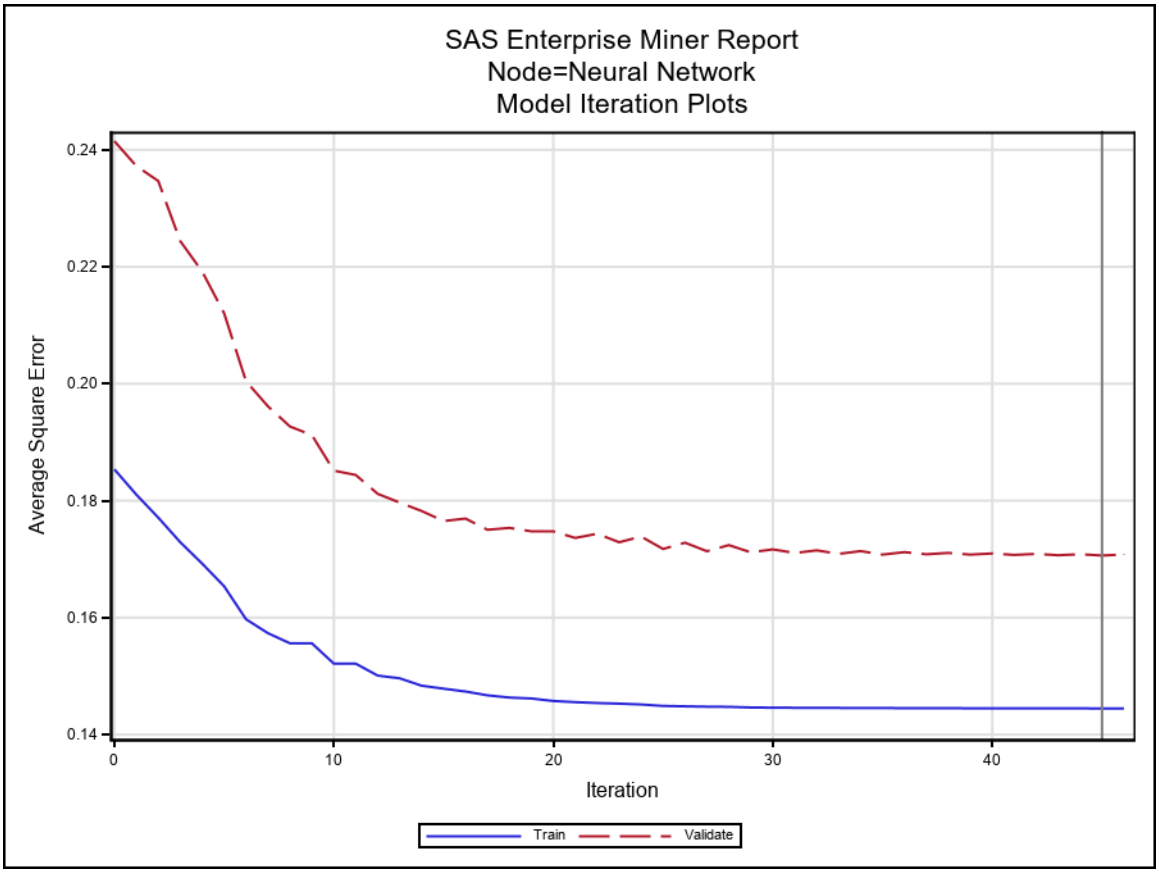
Node=Neural Network
Model Fit Statistics

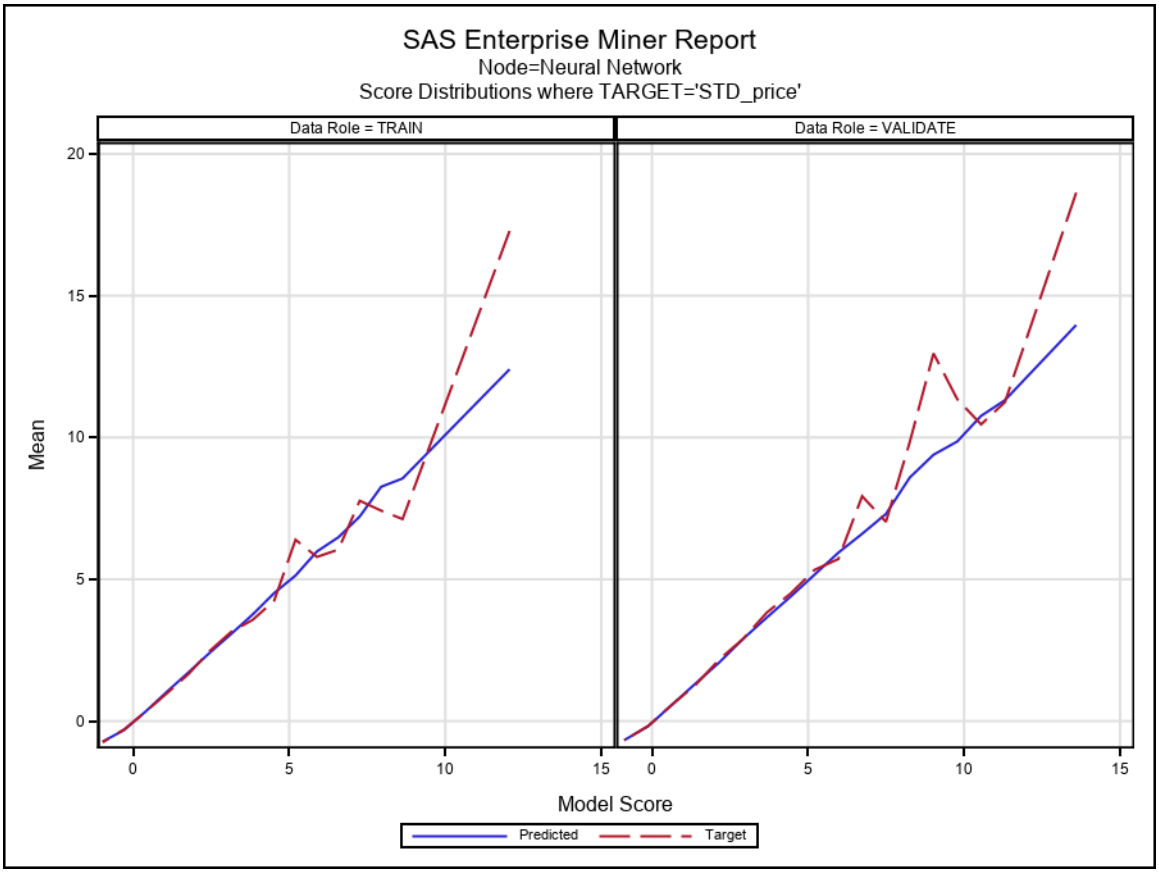
Target=STD_price Target Label=Transformed price

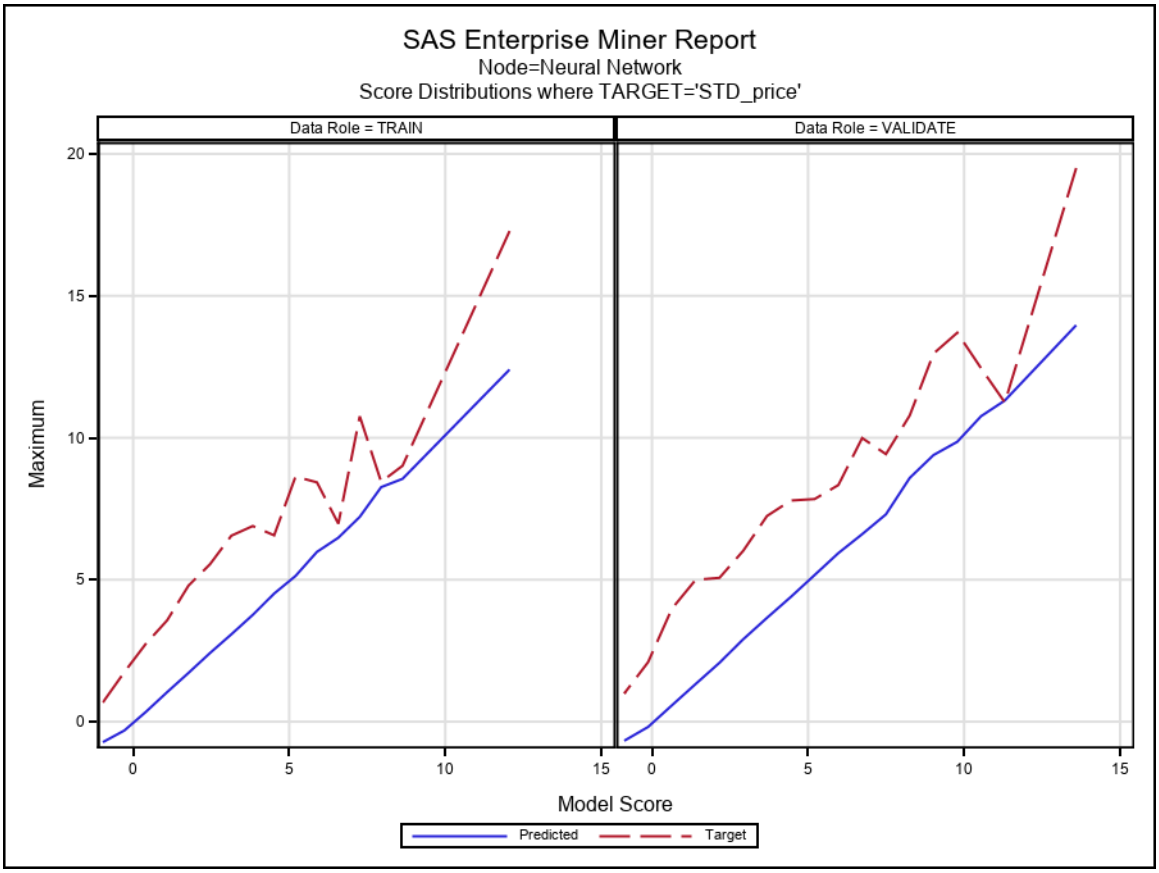
Label of Statistic	Train	Validation	Test
Total Degrees of Freedom	10807.00	.	.
Degrees of Freedom for Error	10731.00	.	.
Model Degrees of Freedom	76.00	.	.
Number of Estimated Weights	76.00	.	.
Akaike's Information Criterion	-20755.97	.	.

Target=STD_price Target Label=Transformed price

Label of Statistic	Train	Validation	Test
Schwarz's Bayesian Criterion	-20202.09	.	.
Average Squared Error	0.14	0.17	.
Maximum Absolute Error	4.88	5.54	.
Divisor for ASE	10807.00	10806.00	.
Sum of Frequencies	10807.00	10806.00	.
Root Average Squared Error	0.38	0.41	.
Sum of Squared Errors	1561.31	1843.78	.
Sum of Case Weights Times Freq	10807.00	10806.00	.
Final Prediction Error	0.15	.	.
Mean Squared Error	0.15	0.17	.
Root Final Prediction Error	0.38	.	.
Root Mean Squared Error	0.38	0.41	.
Average Error Function	0.14	0.17	.
Error Function	1561.31	1843.78	.







Node=Neural Network
Score Distributions

Target Variable=STD_price Data Role=TRAIN

Range for Predicted	Mean Predicted	Max Predicted	Min Predicted	Mean Target	Max Target	Min Target
11.719 - 12.404	12.4045	12.4045	12.4045	17.2826	17.2826	17.2826
8.290 - 8.975	8.5545	8.6720	8.3317	7.1226	9.0157	5.1070
7.604 - 8.290	8.2614	8.2879	8.2350	7.4208	8.4462	6.3954
6.918 - 7.604	7.2142	7.3265	7.1334	7.7682	10.7562	5.2813
6.232 - 6.918	6.4802	6.8436	6.2558	6.0467	6.9728	4.7393
5.546 - 6.232	5.9806	6.2281	5.5834	5.7879	8.4301	4.3171
4.860 - 5.546	5.1330	5.4581	4.8641	6.3948	8.6344	3.3229
4.175 - 4.860	4.5124	4.8572	4.1877	4.2429	6.5642	2.2249
3.489 - 4.175	3.7608	4.1641	3.4956	3.5697	6.8911	1.7430
2.803 - 3.489	3.0762	3.4731	2.8034	3.1511	6.5506	1.1438
2.117 - 2.803	2.4153	2.7940	2.1185	2.4790	5.5428	-0.1364
1.431 - 2.117	1.7185	2.1167	1.4319	1.6593	4.7937	-0.5298
0.746 - 1.431	1.0398	1.4310	0.7458	0.9863	3.5680	-0.2454
0.060 - 0.746	0.3398	0.7447	0.0601	0.3328	2.7372	-0.7902
-0.626 - 0.060	-0.3122	0.0593	-0.6261	-0.2894	1.7430	-1.2260
-1.312 - -0.626	-0.7212	-0.6262	-1.3119	-0.7433	0.6807	-1.2668

Target Variable=STD_price Data Role=VALIDATE

Range for Predicted	Mean Predicted	Max Predicted	Min Predicted	Mean Target	Max Target	Min Target
13.211 - 13.973	13.9661	13.9733	13.9590	18.6343	19.5025	17.7661
10.925 - 11.687	11.3138	11.3138	11.3138	11.2438	11.2438	11.2438
10.163 - 10.925	10.7606	10.8727	10.6485	10.4604	12.4499	8.4709
9.401 - 10.163	9.8595	10.0627	9.6053	11.3491	13.7007	7.2452
8.639 - 9.401	9.3909	9.3909	9.3909	12.9653	12.9653	12.9653
7.876 - 8.639	8.5858	8.6248	8.5468	9.8329	10.7862	8.8795
7.114 - 7.876	7.3028	7.6220	7.1481	7.0246	9.4243	5.5401
6.352 - 7.114	6.6041	6.9373	6.4267	7.9305	9.9908	6.5642
5.590 - 6.352	5.9374	6.3443	5.6373	5.7137	8.3347	0.9803
4.828 - 5.590	5.1640	5.4879	4.8615	5.3333	7.8412	3.1050
4.066 - 4.828	4.3932	4.7794	4.0727	4.5030	7.7900	2.0890
3.304 - 4.066	3.6582	4.0108	3.3103	3.8324	7.2452	1.5248
2.542 - 3.304	2.9022	3.2962	2.5443	2.9024	6.0195	0.7761
1.780 - 2.542	2.0729	2.5261	1.7813	2.1779	5.0661	0.3675
1.018 - 1.780	1.3269	1.7789	1.0201	1.2795	4.9980	-0.2045
0.255 - 1.018	0.5738	1.0176	0.2559	0.5709	3.9766	-0.6948
-0.507 - 0.255	-0.1860	0.2552	-0.5064	-0.1728	2.0958	-1.1306
-1.269 - -0.507	-0.6721	-0.5066	-1.2687	-0.6803	0.9940	-1.2587

SAS Enterprise Miner Report

Node=AutoNeural
Summary

Node id = AutoNeural
Node label = AutoNeural
Meta path = Ids => Trans2 => Trans3 => Part => AutoNeural
Notes =

Node=AutoNeural
Properties

Property	Value	Default	Property	Value	Default	Property	Value	Default
Component	AutoNeural		HistoryDs			Tanh	Y	
AdjustIterations	Y		Identity	N		TargetError	DEFAULT	
Architecture	SINGLE LAYER		Logistic	N		Termination	OVERFITTING	
Bestds			MaxIter	8		Tolerance	LOW	MEDIUM
Direct	N	Y	Normal	N	Y	TotalHidden	5	30
Exponential	N		Reciprocal	N		TotalTime	1 HOUR	1 Hour
FinalIter	5		Residuals	Y		TrainAction	SEARCH	
FinalTrain	Y		Sine	Y		estds		
Freeze	N		Softmax	N		outfit		
Hidden	2		Square	N		weights		
HiddenUnits	N		Standardizations	N				

Node=AutoNeural
Variable Summary

Role	Level	Frequency Count	Name
TARGET	INTERVAL	1	STD_price
INPUT	INTERVAL	16	AGE AGE_RNV Bathroom_Rounded STD_lat STD_long STD_sqft_above STD_sqft_basement STD_sqft_living STD_sqft_living15 STD_sqft_lot STD_sqft_lot15 bedrooms condition grade view waterfront
INPUT	NOMINAL	4	OPT_yr_built OPT_yr_renovated Sold_Year floors

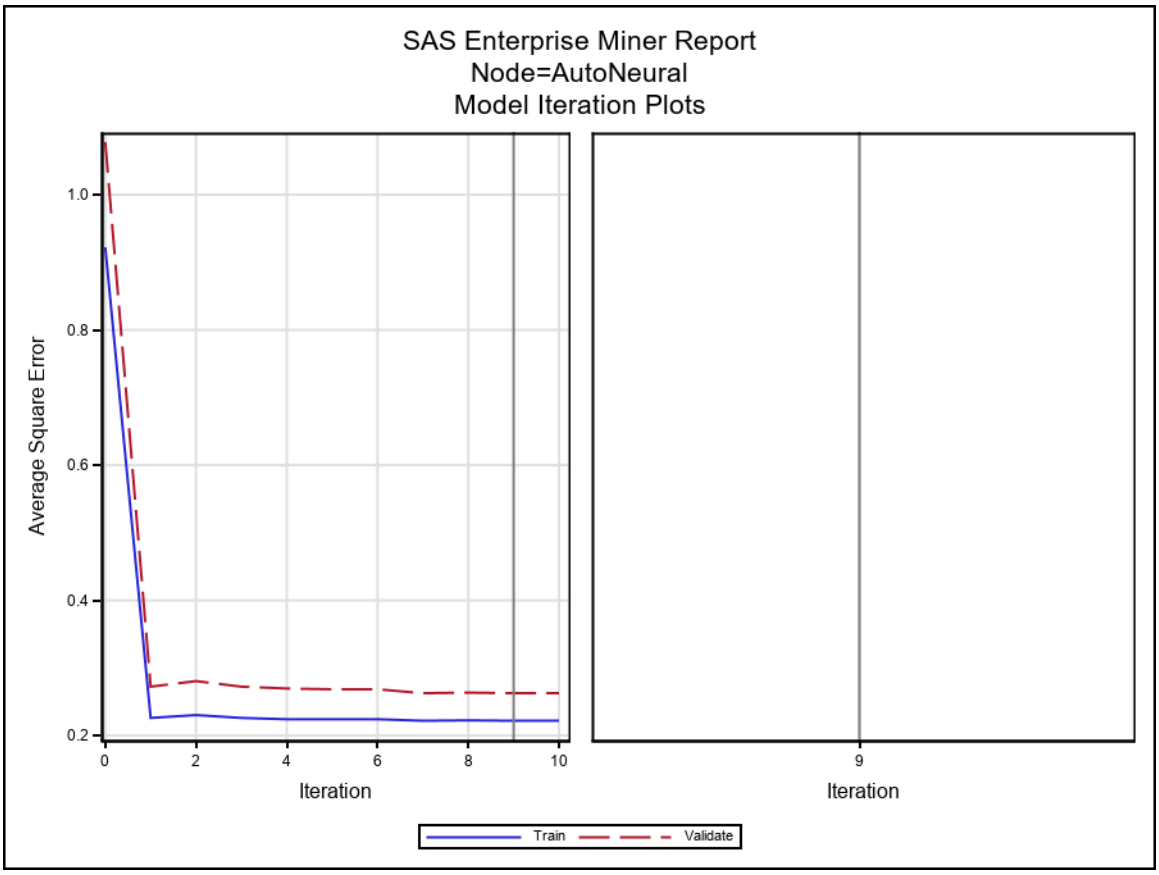
Node=AutoNeural
Model Fit Statistics

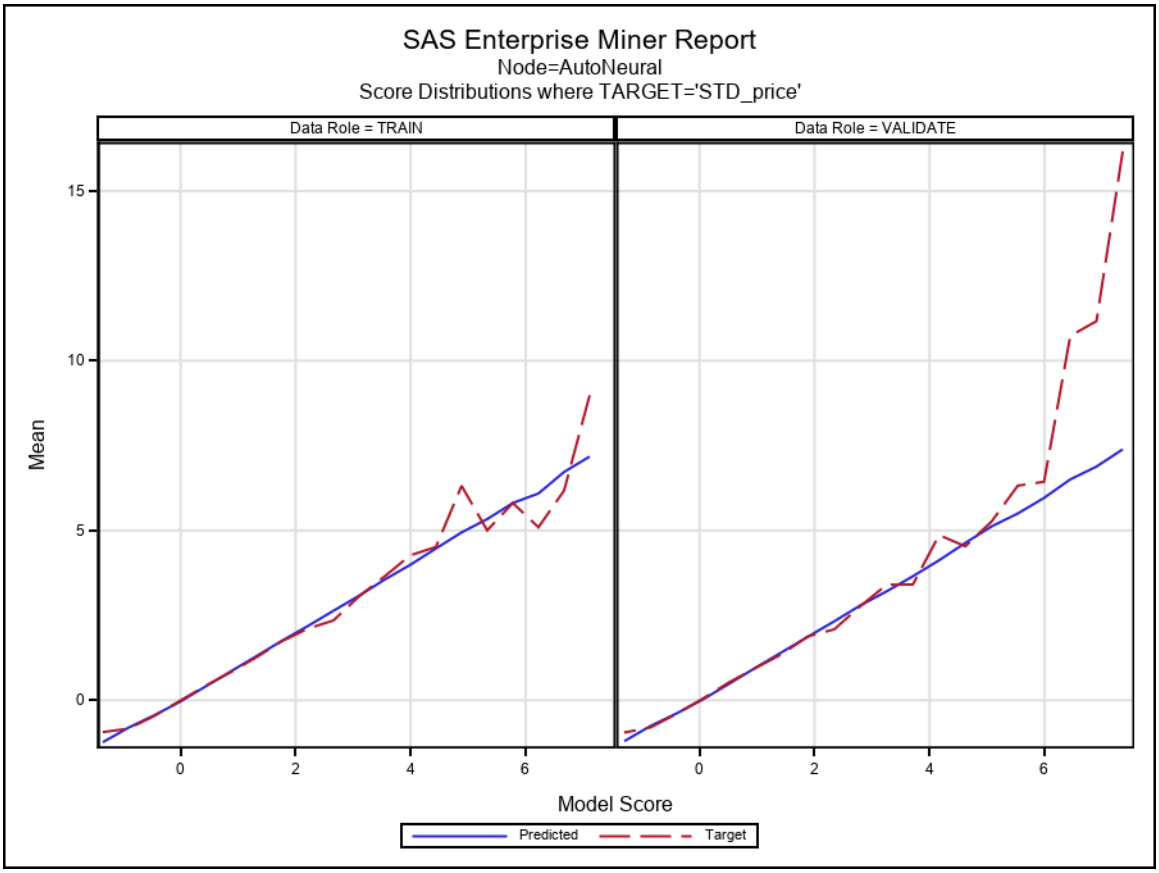
Target=STD_price Target Label=Transformed price

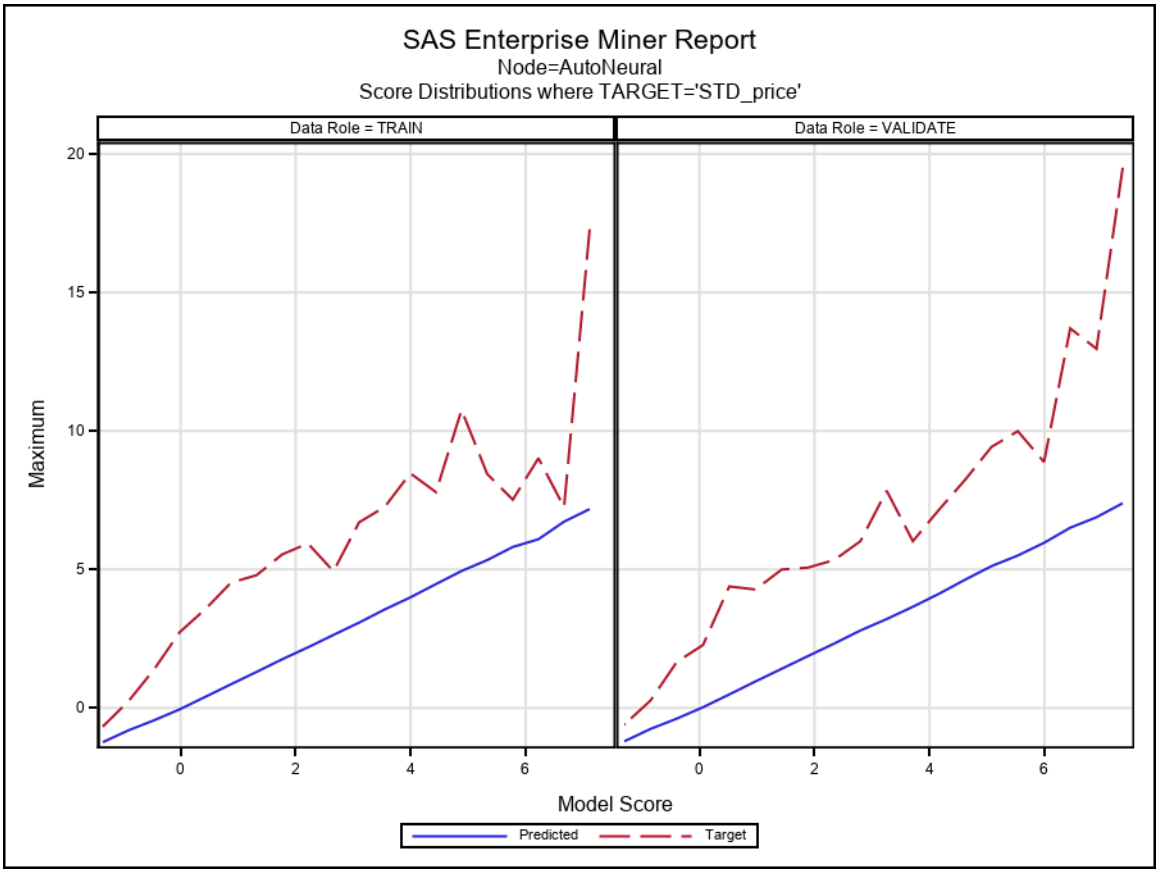
Label of Statistic	Train	Validation	Test
Total Degrees of Freedom	10807.00	.	.
Degrees of Freedom for Error	10638.00	.	.
Model Degrees of Freedom	169.00	.	.
Number of Estimated Weights	169.00	.	.
Akaike's Information Criterion	-15931.61	.	.
Schwarz's Bayesian Criterion	-14699.95	.	.
Average Squared Error	0.22	0.26	.
Maximum Absolute Error	10.12	11.92	.
Divisor for ASE	10807.00	10806.00	.
Sum of Frequencies	10807.00	10806.00	.
Root Average Squared Error	0.47	0.51	.
Sum of Squared Errors	2398.21	2838.30	.
Sum of Case Weights Times Freq	10807.00	10806.00	.

Target=STD_price Target Label=Transformed price

Label of Statistic	Train	Validation	Test
Final Prediction Error	0.23	.	.
Mean Squared Error	0.23	0.26	.
Root Final Prediction Error	0.48	.	.
Root Mean Squared Error	0.47	0.51	.
Average Error Function	0.22	0.26	.
Error Function	2398.21	2838.30	.







Node=AutoNeural
Score Distributions

Target Variable=STD_price Data Role=TRAIN

Range for Predicted	Mean Predicted	Max Predicted	Min Predicted	Mean Target	Max Target	Min Target
6.890 - 7.335	7.17948	7.33533	7.02685	8.98370	17.2826	4.73926
6.444 - 6.890	6.72417	6.81864	6.62969	6.17609	7.2452	5.10698
5.999 - 6.444	6.09061	6.18538	6.00888	5.09554	9.0157	3.10495
5.554 - 5.999	5.81074	5.93065	5.72046	5.80974	7.5176	3.81315
5.108 - 5.554	5.33663	5.52118	5.14766	5.00421	8.4462	2.68275
4.663 - 5.108	4.94373	5.09531	4.73474	6.31705	10.7562	3.32286
4.217 - 4.663	4.47092	4.65739	4.23225	4.51677	7.7900	0.70796
3.772 - 4.217	3.99050	4.19760	3.77888	4.26943	8.4709	2.20608
3.327 - 3.772	3.55567	3.76801	3.34780	3.65222	7.2561	1.23911
2.881 - 3.327	3.07972	3.32449	2.88373	3.06122	6.7004	0.54453
2.436 - 2.881	2.63666	2.88014	2.43967	2.35130	4.9353	-0.13643
1.990 - 2.436	2.18608	2.42949	1.99446	2.10749	5.9378	-0.00024
1.545 - 1.990	1.75817	1.99008	1.54865	1.74553	5.5428	-0.10102
1.099 - 1.545	1.30201	1.54392	1.10073	1.26916	4.7937	-0.52976
0.654 - 1.099	0.85434	1.09944	0.65443	0.83218	4.5214	-0.48236
0.209 - 0.654	0.40205	0.65390	0.20941	0.42134	3.5680	-0.77109
-0.237 - 0.209	-0.04916	0.20862	-0.23648	-0.01907	2.7372	-1.03530
-0.682 - -0.237	-0.44483	-0.23685	-0.68212	-0.46630	1.3944	-1.24504
-1.128 - -0.682	-0.80736	-0.68222	-1.12669	-0.83560	0.2449	-1.26683
-1.573 - -1.128	-1.23432	-1.12914	-1.57303	-0.93856	-0.6676	-1.13064

Target Variable=STD_price Data Role=VALIDATE

Range for Predicted	Mean Predicted	Max Predicted	Min Predicted	Mean Target	Max Target	Min Target
7.131 - 7.587	7.39108	7.58744	7.27729	16.1708	19.5025	11.2438
6.675 - 7.131	6.88397	7.03406	6.79178	11.1681	12.9653	8.4709
6.219 - 6.675	6.50599	6.65710	6.37744	10.7317	13.7007	7.2452
5.763 - 6.219	5.96046	6.19076	5.79153	6.4349	8.8795	2.8326
5.307 - 5.763	5.50220	5.69553	5.31785	6.3218	9.9908	2.9892
4.851 - 5.307	5.12043	5.28421	4.90726	5.2653	9.4243	0.9803
4.395 - 4.851	4.63428	4.81338	4.43908	4.5354	8.2449	2.1380
3.939 - 4.395	4.12391	4.33580	3.94153	4.8661	7.1601	3.0913
3.483 - 3.939	3.65281	3.93518	3.51322	3.4098	6.0195	1.3889
3.027 - 3.483	3.20816	3.48121	3.02850	3.4031	7.8412	0.7216
2.571 - 3.027	2.79624	3.02662	2.57134	2.7729	6.0195	0.6262
2.115 - 2.571	2.32382	2.54917	2.12712	2.0876	5.3385	0.1632
1.659 - 2.115	1.87250	2.11339	1.65967	1.8827	5.0661	-0.4361
1.203 - 1.659	1.41382	1.65798	1.20367	1.3573	4.9980	-0.6948
0.747 - 1.203	0.95784	1.20295	0.74773	0.9496	4.2762	-0.7221
0.291 - 0.747	0.48692	0.74700	0.29180	0.5314	4.3852	-0.6812
-0.165 - 0.291	0.02705	0.29096	-0.16455	0.0517	2.2742	-0.8583
-0.621 - -0.165	-0.38508	-0.16487	-0.62078	-0.3967	1.6613	-1.2532
-1.077 - -0.621	-0.75689	-0.62089	-1.07441	-0.7999	0.2721	-1.2587
-1.533 - -1.077	-1.20432	-1.07927	-1.53283	-0.9518	-0.5995	-1.2355

SAS Enterprise Miner Report

Node=Reporter
Summary

Node id = Report
Node label = Reporter
Meta path =
Notes =

Node=Reporter
Properties

Property	Value	Default	Property	Value	Default	Property	Value	Default
Component	Reporter		LiftChart	Y		basicoutput	Y	
Classification	Y		Nodes	ALL	PATH	headersize	8	
CompareMdl	Y		ShowAll	N		textfont	Arial	
CrossTabs	Y		Style	LISTING	DEFAULT	textsize	6	
FitStat	Y		Summarization	Y		titlesize	10	
Format	PDF		VarRanking	Y				

End of Report