

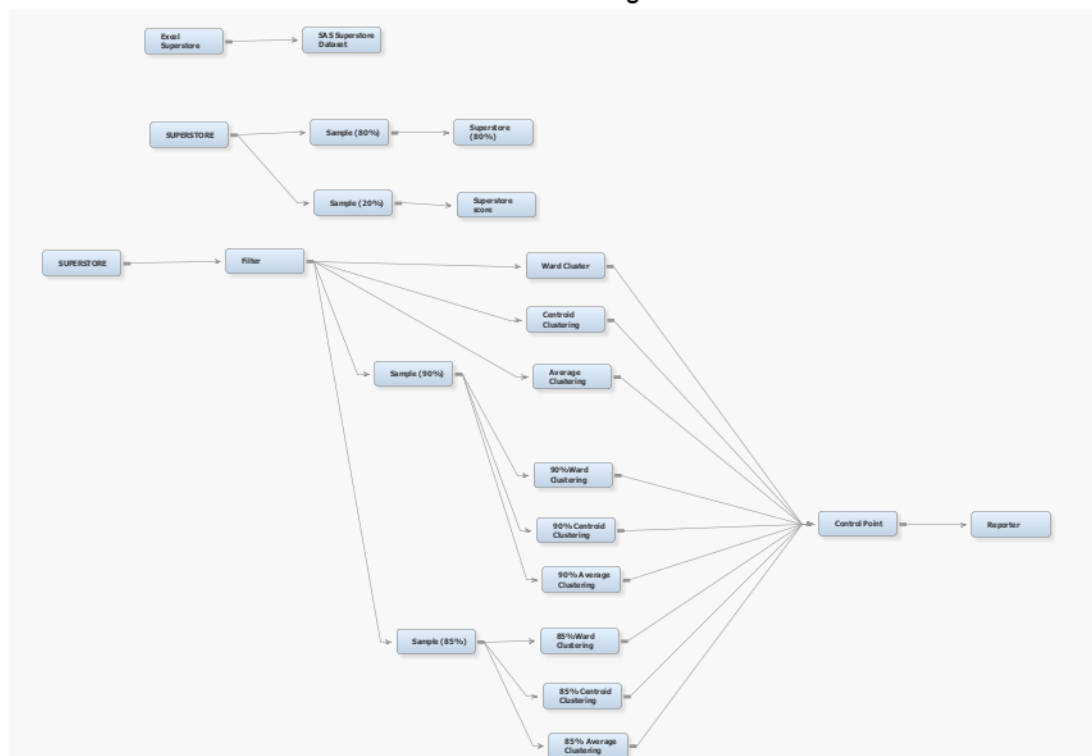
## SAS Enterprise Miner Report

User = tboll4  
 Date = 17:44:28 May 13  
 Project = DatavizSuperstore  
 Diagram = Dataviz.ExploratoryAnalysis

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

Format = PDF  
 Style = LISTING

### SAS Enterprise Miner Report Process Flow Diagram



SAS Enterprise Miner Report

Node=SUPERSTORE  
Summary

Node id = Ids2  
Node label = SUPERSTORE  
Meta path = Ids2  
Notes =

Node=SUPERSTORE  
Properties

Property	Value	Default	Property	Value	Default	Property	Value	Default
Component	DataSource		DsCreatedBy	tboll4		NBytes	3671040	.
ApplyIntervalLevelLowerLimit	Y		DsId	superstore		NCols	21	.
ApplyMaxClassLevels	Y		DsModifiedBy	tboll4		NObs	9994	.
ApplyMaxPercentMissing	Y		DsModifyDate	1998814780.1		NewTable		
CMeta	WORK.M1671EXK		DsSampleName			NewVariableRole	REJECT	
ComputeStatistics	N		DsSampleSize			OutputType	VIEW	
DBPassThrough	Y		DsSampleSizeType			Role	RAW	TRAIN
Data	STDATA.SUPERSTORE_TRAIN		DsScope	LOCAL		Sample	D	
DataSelection	DATASOURCE		IdentifyEmptyColumns	Y		SampleSizeObs	10000	
DataSource	superstore		IntervalLowerLimit	20		SampleSizePercent	20	
DataSourceRole	RAW		Library	STDATA		SampleSizeType	PERCENT	
Description			MaxClassLevels	20		Scope	LOCAL	
DropMapVariables	Y		MaxPercentMissing	50		Segment		
DsCreateDate	1998814779.8		MetaAdvisor	BASIC		Table	SUPERSTORE_TRAIN	

Node=SUPERSTORE  
Data Attributes

Attribute	Value	Attribute	Value	Attribute	Value
Data Name	SUPERSTORE_TRAIN	Date Created	04May2023:10:15:41	Data Size	3671040
Data Type	DATA	Date Modified	04May2023:10:15:41	Role	RAW
Data Label		Number Rows	9994	Segment	
Engine	BASE	Number Columns	21	Data Library	STDATA

Node=SUPERSTORE  
Variables List

Name	Label	Role	Level	Type	Length	Format	Creator
Category	Category	INPUT	NOMINAL	C	15	\$15.	
City	City	REJECTED	NOMINAL	C	17	\$17.	
Country	Country	REJECTED	NOMINAL	C	13	\$13.	
CustomerID	CustomerID	REJECTED	NOMINAL	C	8	\$8.	
CustomerName	CustomerName	REJECTED	NOMINAL	C	22	\$22.	
Discount	Discount	INPUT	INTERVAL	N	8	BEST.	
OrderDate	OrderDate	REJECTED	INTERVAL	N	8	MMDDYY10.0	
OrderID	OrderID	REJECTED	NOMINAL	C	14	\$14.	
PostalCode	PostalCode	REJECTED	INTERVAL	N	8	BEST.	
ProductID	ProductID	ID	NOMINAL	C	15	\$15.	
ProductName	ProductName	REJECTED	NOMINAL	C	127	\$127.	

Name	Label	Role	Level	Type	Length	Format	Creator
Profit	Profit	REJECTED	INTERVAL	N	8	BEST.	
Quantity	Quantity	INPUT	INTERVAL	N	8	BEST.	
Region	Region	INPUT	NOMINAL	C	7	\$7.	
RowID	RowID	REJECTED	INTERVAL	N	8	BEST.	
Sales	Sales	INPUT	INTERVAL	N	8	BEST.	
Segment	Segment	SEGMENT	NOMINAL	C	11	\$11.	
ShipDate	ShipDate	INPUT	INTERVAL	N	8	MMDDYY10.0	
ShipMode	ShipMode	INPUT	NOMINAL	C	14	\$14.	
State	State	REJECTED	NOMINAL	C	20	\$20.	
SubCategory	SubCategory	INPUT	NOMINAL	C	11	\$11.	

SAS Enterprise Miner Report

Node=Filter  
Summary

Node id = Filter  
Node label = Filter  
Meta path = Ids2 => Filter  
Notes =

Node=Filter  
Properties

Property	Value	Default	Property	Value	Default	Property	Value	Default
Component	Filter		KeepMissingInterval	Y		PercentsCutoff	0.5	
ClassFilterMethod	MINPCT		MADSCutoff	9		PublishScoreCode	Y	
CreateDistributionData	Y	N	MaxValues	25		SpacingsCutoff	9	
ExportTable	FILTERED		MinFreq	1		StddevCutoff	3	
IntervalFilterMethod	STDDEV		MinPercent	0.01		TabletoFilter	TRAIN	
KeepMissingClass	Y		NormalizeClassValue	Y		UpdateClassLevel	N	

Node=Filter  
Variable Summary

Role	Level	Frequency Count	Name
SEGMENT	NOMINAL	1	Segment
REJECTED	INTERVAL	4	OrderDate PostalCode Profit RowID
REJECTED	NOMINAL	7	City Country CustomerID CustomerName OrderID ProductName State
INPUT	INTERVAL	4	Discount Quantity Sales ShipDate
INPUT	NOMINAL	4	Category Region ShipMode SubCategory

Node=Filter  
Excluded Class Values

Variable	Role	Level	Train Count	Train Percent	Label	Filter Method
SubCategory	INPUT	COPIERS	68	0.68041	SubCategory	MINPCT

Node=Filter  
Limits for Interval Variables

Variable	Role	Minimum	Maximum	Filter Method	Keep Missing Values	Label
Discount	INPUT	-0.46	0.78	STDDEV	Y	Discount
Quantity	INPUT	-2.89	10.46	STDDEV	Y	Quantity
Sales	INPUT	-1639.88	2099.59	STDDEV	Y	Sales
ShipDate	INPUT	19316.60	21839.33	STDDEV	Y	ShipDate

SAS Enterprise Miner Report

Node=Sample (85%)  
Summary

Node id = Smpl3  
Node label = Sample (85%)  
Meta path = Ids2 => Filter => Smpl3  
Notes =

Node=Sample (85%)  
Properties

Property	Value	Default	Property	Value	Default	Property	Value	Default
Component	Sample		IgnoreSmallStrata	N		OutputType	DATA	
AdjustFreq	N		IntervalDistribution	Y		Pvalue	0.01	
Alpha	0.01		LevelProportion	100		RandomSeed	12345	
ClassDistribution	Y		LevelSampleProportion	50		SizeObs	.	
ClusterMethod	RANDOM		LevelSelection	EVENT		SizePercent	85	10
FreqCount	N		Method	DEFAULT		SizeType	PERCENT	
FreqMiss	N		MinStrataSize	5		StratifyCriterion	PROPORTIONAL	

Node=Sample (85%)  
Variable Summary

Role	Level	Frequency Count	Name
SEGMENT	NOMINAL	1	Segment
REJECTED	INTERVAL	4	OrderDate PostalCode Profit RowID
REJECTED	NOMINAL	7	City Country CustomerID CustomerName OrderID ProductName State
INPUT	INTERVAL	4	Discount Quantity Sales ShipDate
INPUT	NOMINAL	4	Category Region ShipMode SubCategory
ID	NOMINAL	1	ProductID

SAS Enterprise Miner Report

Node=Sample (90%)  
Summary

Node id = Smpl4  
Node label = Sample (90%)  
Meta path = Ids2 => Filter => Smpl4  
Notes =

Node=Sample (90%)  
Properties

Property	Value	Default	Property	Value	Default	Property	Value	Default
Component	Sample		IgnoreSmallStrata	N		OutputType	DATA	
AdjustFreq	N		IntervalDistribution	Y		Pvalue	0.01	
Alpha	0.01		LevelProportion	100		RandomSeed	12345	
ClassDistribution	Y		LevelSampleProportion	50		SizeObs	.	
ClusterMethod	RANDOM		LevelSelection	EVENT		SizePercent	90	10
FreqCount	N		Method	DEFAULT		SizeType	PERCENT	
FreqMiss	N		MinStrataSize	5		StratifyCriterion	PROPORTIONAL	

Node=Sample (90%)  
Variable Summary

Role	Level	Frequency Count	Name
SEGMENT	NOMINAL	1	Segment
REJECTED	INTERVAL	4	OrderDate PostalCode Profit RowID
REJECTED	NOMINAL	7	City Country CustomerID CustomerName OrderID ProductName State
INPUT	INTERVAL	4	Discount Quantity Sales ShipDate
INPUT	NOMINAL	4	Category Region ShipMode SubCategory
ID	NOMINAL	1	ProductID

SAS Enterprise Miner Report

Node=85% Average Clustering  
Summary

Node id = Clus9  
Node label = 85% Average Clustering  
Meta path = Ids2 => Filter => Smpl3 => Clus9  
Notes =

Node=85% Average Clustering  
Properties

Property	Value	Default	Property	Value	Default	Property	Value	Default
Component	Cluster		FinalMaxNum	20		MissingNominal	DEFAULT	
AutomaticMaxNum	50		HideVariable	Y		MissingOrdinal	DEFAULT	
AutomaticMethod	AVERAGE	WARD	ImputationMethod	NONE		NominalEncoding	GLM	
AutomaticMinNum	2		Initial	DEFAULT		NumberClusterMethod	AUTOMATIC	
Bins	100		Learn	.		OrdinalEncoding	RANK	
CCCCutOff	3		LearnFinal	0.02		Radius	0	
ClusterGraphs	Y		LearnInitial	0.5		Stdize	STD	
Clusvar	_SEGMENT_		LearnSteps	1000		Summary	N	
ClusvarLabel	Segment Variable		MaxC	10		TrainDefaults	Y	
ClusvarRole	SEGMENT		MaxIter	10		TreeProfile	Y	
DistancePlot	Y		MaxSteps	1200		XConv	0.0001	
Drift	N		MissingInterval	DEFAULT				

Node=85% Average Clustering  
Variable Summary

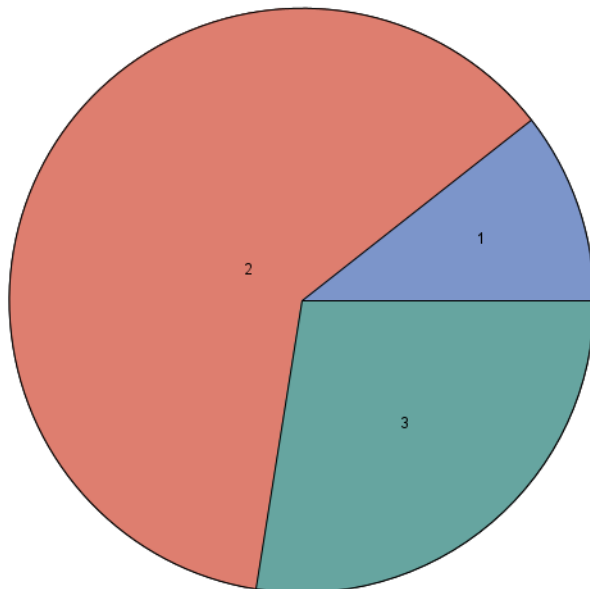
Role	Level	Frequency Count	Name
INPUT	INTERVAL	4	Discount Quantity Sales ShipDate
INPUT	NOMINAL	4	Category Region ShipMode SubCategory
ID	INTERVAL	1	_dataobs_
ID	NOMINAL	1	ProductID

Node=85% Average Clustering  
Mean Statistics

Variable	Segment 1	Segment 2	Segment 3
Clustering Criterion	0.46	0.46	0.46
Maximum Relative Change in Cluster Seeds	0.00	0.00	0.00
Improvement in Clustering Criterion	.	.	.
Frequency of Cluster	840.00	4956.00	2206.00
Root-Mean-Square Standard Deviation	0.54	0.44	0.47
Maximum Distance from Cluster Seed	5.50	4.10	5.14
Nearest Cluster	2.00	3.00	2.00
Distance to Nearest Cluster	3.00	1.77	1.77
Discount	0.14	0.05	0.32
Quantity	5.34	3.55	3.24
Sales	875.86	87.04	109.96
ShipDate	20531.35	20482.34	20814.97

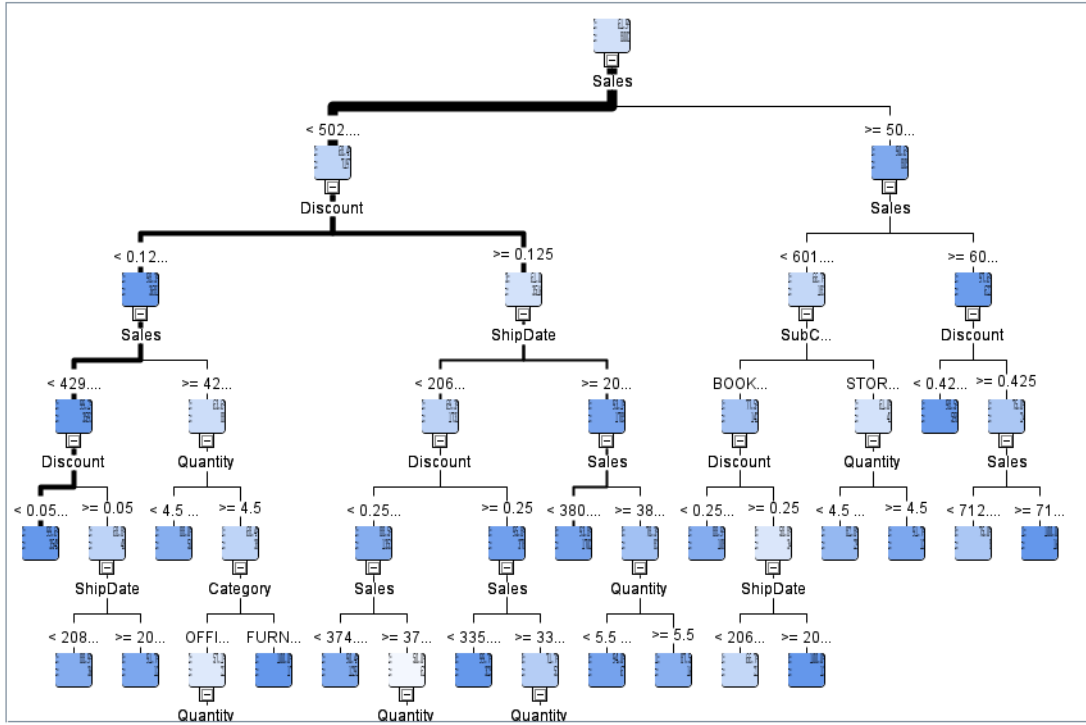
Variable	Segment 1	Segment 2	Segment 3
Category=Furniture	0.48	0.15	0.29
Category=Office Supplies	0.22	0.71	0.51
Category=Technology	0.31	0.15	0.21
Region=Central	0.22	0.18	0.27
Region=East	0.27	0.30	0.29
Region=South	0.16	0.16	0.18
Region=West	0.34	0.36	0.26
ShipMode=First Class	0.15	0.15	0.17
ShipMode=Same Day	0.06	0.05	0.06
ShipMode=Second Class	0.21	0.21	0.17
ShipMode=Standard Class	0.58	0.59	0.60
SubCategory=Accessories	0.09	0.09	0.07
SubCategory=Appliances	0.05	0.05	0.02
SubCategory=Art	0.00	0.11	0.06
SubCategory=Binders	0.05	0.10	0.23
SubCategory=Bookcases	0.07	0.01	0.03
SubCategory=Chairs	0.23	0.02	0.09
SubCategory=Envelopes	0.00	0.04	0.02
SubCategory=Fasteners	-0.00	0.03	0.01
SubCategory=Furnishings	0.05	0.11	0.11
SubCategory=Labels	0.00	0.05	0.02
SubCategory=Machines	0.02	0.00	0.02
SubCategory=Paper	0.00	0.19	0.09
SubCategory=Phones	0.19	0.06	0.13
SubCategory=Storage	0.11	0.10	0.05
SubCategory=Supplies	0.00	0.02	0.01
SubCategory=Tables	0.13	0.00	0.05

SAS Enterprise Miner Report  
Node=85% Average Clustering  
Segment Size

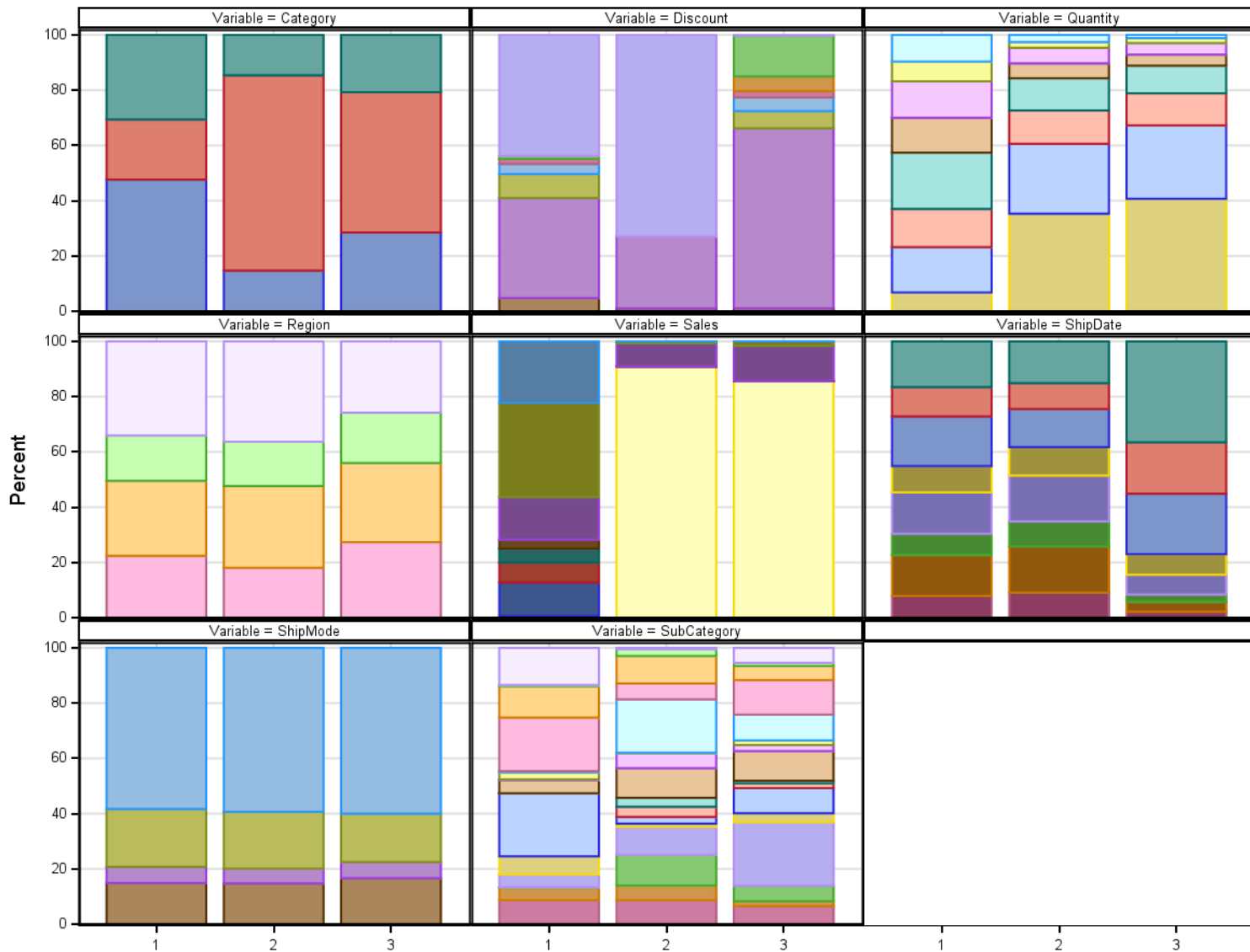




SAS Enterprise Miner Report  
Node=85% Average Clustering  
Tree Diagram



SAS Enterprise Miner Report  
Node=85% Average Clustering  
Segment Plot



Segment Variable

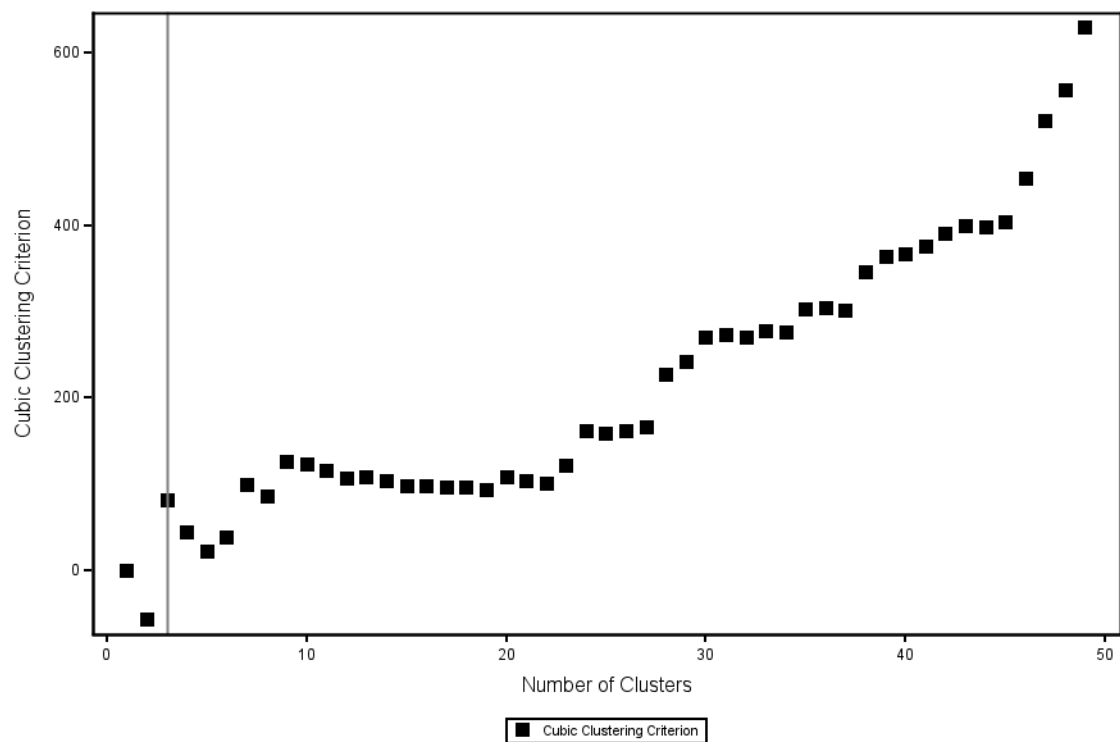
Formatted Value

Furniture	Office Supplies	Technology	0.0875:0.175	0.175:0.2625	0.2625:0.35	0.35:0.4375	0.4375:0.525
0.525:0.6125	0.6125:0.7	0:0.0875	1:2.125	2.125:3.25	3.25:4.375	4.375:5.5	5.5:6.625
6.625:7.75	7.75:8.875	8.875:10	Central	East	South	West	0.99:260.79
1040.2:1300	1300:1559.8	1559.8:1819.6	1819.6:2079.4	2079.4:20642	20642:20825	20825:21007	19731:19913
19913:20096	20096:20278	20278:20460	20460:20642	20642:20825	20825:21007	21007:21189	First Class
Same Day	Second Class	Standard Class	Accessories	Appliances	Art	Binders	Bookcases
Chairs	Envelopes	Fasteners	Furnishings	Labels	Machines	Paper	Phones
Storage	Supplies	Tables					

## SAS Enterprise Miner Report

Node=85% Average Clustering

CCC Plot



## SAS Enterprise Miner Report

### Node=85% Centroid Clustering Summary

Node id = Clus8  
 Node label = 85% Centroid Clustering  
 Meta path = Ids2 => Filter => Smpl3 => Clus8  
 Notes =

### Node=85% Centroid Clustering Properties

Property	Value	Default	Property	Value	Default	Property	Value	Default
Component	Cluster		FinalMaxNum	20		MissingNominal	DEFAULT	
AutomaticMaxNum	50		HideVariable	Y		MissingOrdinal	DEFAULT	
AutomaticMethod	CENTROID	WARD	ImputationMethod	NONE		NominalEncoding	GLM	
AutomaticMinNum	2		Initial	DEFAULT		NumberClusterMethod	AUTOMATIC	
Bins	100		Learn	.		OrdinalEncoding	RANK	
CCCCutOff	3		LearnFinal	0.02		Radius	0	
ClusterGraphs	Y		LearnInitial	0.5		Stdize	STD	
Clusvar	_SEGMENT_		LearnSteps	1000		Summary	N	
ClusvarLabel	Segment Variable		MaxC	10		TrainDefaults	Y	
ClusvarRole	SEGMENT		MaxIter	10		TreeProfile	Y	
DistancePlot	Y		MaxSteps	1200		XConv	0.0001	
Drift	N		MissingInterval	DEFAULT				

### Node=85% Centroid Clustering Variable Summary

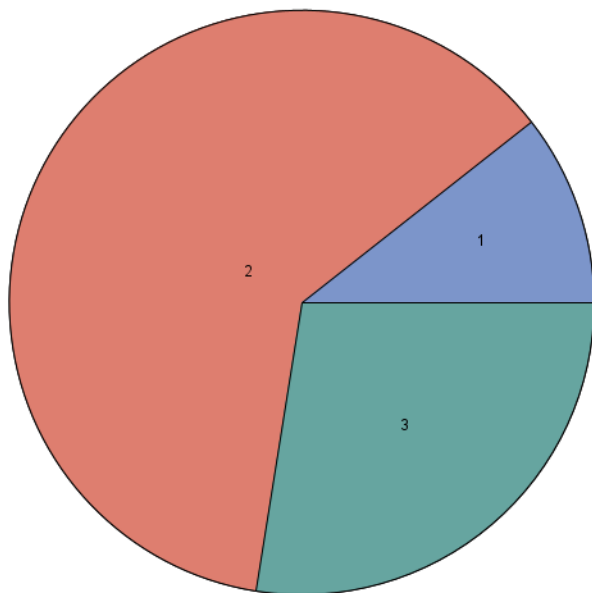
Role	Level	Frequency Count	Name
INPUT	INTERVAL	4	Discount Quantity Sales ShipDate
INPUT	NOMINAL	4	Category Region ShipMode SubCategory
ID	INTERVAL	1	_dataobs_
ID	NOMINAL	1	ProductID

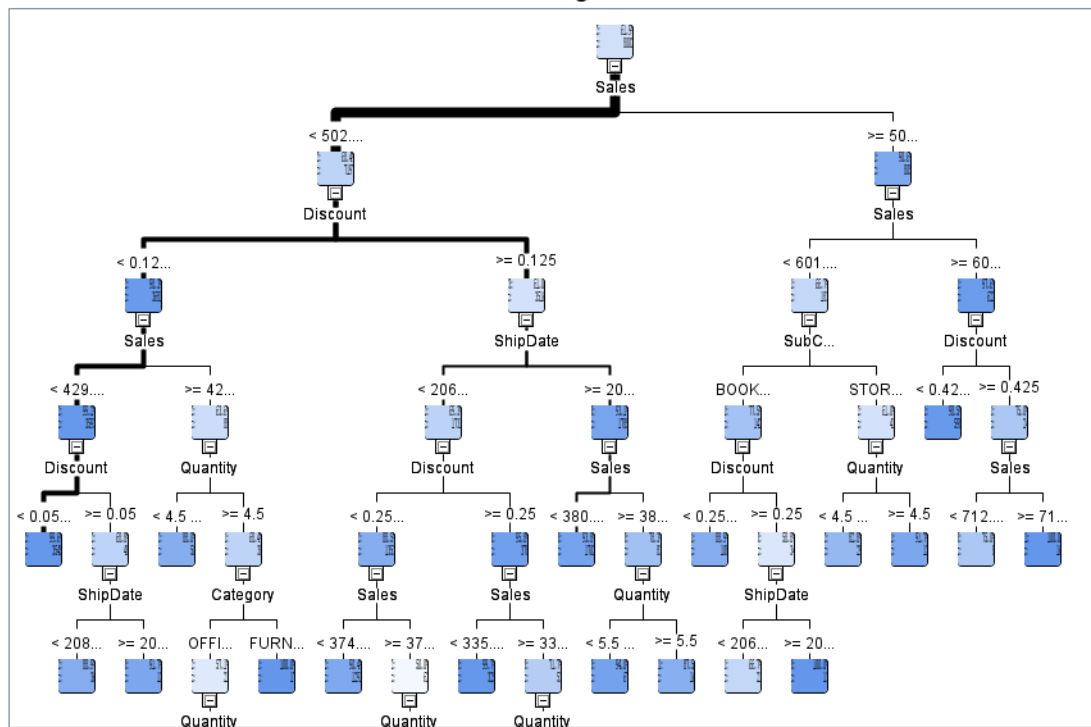
### Node=85% Centroid Clustering Mean Statistics

Variable	Segment 1	Segment 2	Segment 3
Clustering Criterion	0.46	0.46	0.46
Maximum Relative Change in Cluster Seeds	0.00	0.00	0.00
Improvement in Clustering Criterion	.	.	.
Frequency of Cluster	840.00	4956.00	2206.00
Root-Mean-Square Standard Deviation	0.54	0.44	0.47
Maximum Distance from Cluster Seed	5.50	4.10	5.14
Nearest Cluster	2.00	3.00	2.00
Distance to Nearest Cluster	3.00	1.77	1.77
Discount	0.14	0.05	0.32
Quantity	5.34	3.55	3.24
Sales	875.86	87.04	109.96
ShipDate	20531.35	20482.34	20814.97

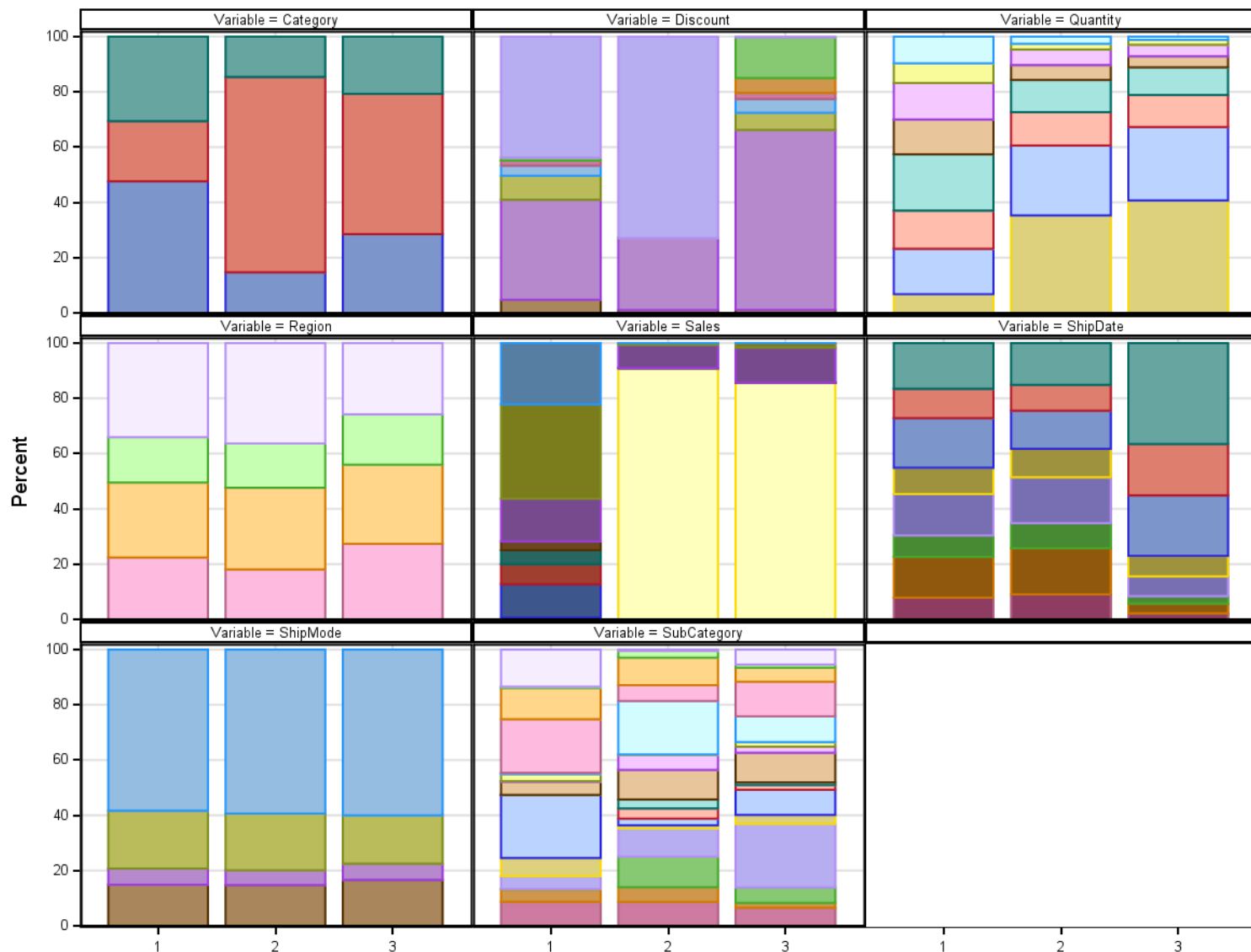
Variable	Segment 1	Segment 2	Segment 3
Category=Furniture	0.48	0.15	0.29
Category=Office Supplies	0.22	0.71	0.51
Category=Technology	0.31	0.15	0.21
Region=Central	0.22	0.18	0.27
Region=East	0.27	0.30	0.29
Region=South	0.16	0.16	0.18
Region=West	0.34	0.36	0.26
ShipMode=First Class	0.15	0.15	0.17
ShipMode=Same Day	0.06	0.05	0.06
ShipMode=Second Class	0.21	0.21	0.17
ShipMode=Standard Class	0.58	0.59	0.60
SubCategory=Accessories	0.09	0.09	0.07
SubCategory=Appliances	0.05	0.05	0.02
SubCategory=Art	0.00	0.11	0.06
SubCategory=Binders	0.05	0.10	0.23
SubCategory=Bookcases	0.07	0.01	0.03
SubCategory=Chairs	0.23	0.02	0.09
SubCategory=Envelopes	0.00	0.04	0.02
SubCategory=Fasteners	-0.00	0.03	0.01
SubCategory=Furnishings	0.05	0.11	0.11
SubCategory=Labels	0.00	0.05	0.02
SubCategory=Machines	0.02	0.00	0.02
SubCategory=Paper	0.00	0.19	0.09
SubCategory=Phones	0.19	0.06	0.13
SubCategory=Storage	0.11	0.10	0.05
SubCategory=Supplies	0.00	0.02	0.01
SubCategory=Tables	0.13	0.00	0.05

SAS Enterprise Miner Report  
Node=85% Centroid Clustering  
Segment Size





SAS Enterprise Miner Report  
Node=85% Centroid Clustering  
Segment Plot



Segment Variable

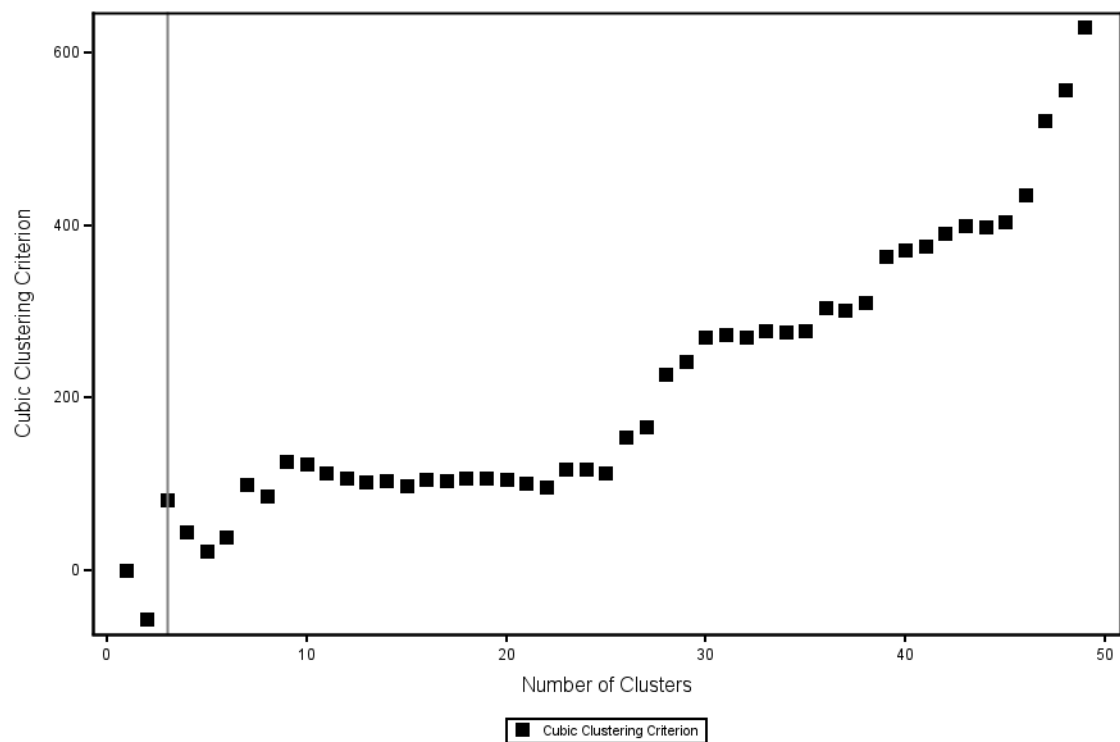
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Furniture	Office Supplies	Technology	0.0875:0.175	0.175:0.2625	0.2625:0.35	0.35:0.4375	0.4375:0.525
0.525:0.6125	0.6125:0.7	0:0.0875	1:2.125	2.125:3.25	3.25:4.375	4.375:5.5	5.5:6.625
6.625:7.75	7.75:8.875	8.875:10	Central	East	South	West	0.99:260.79
1040.2:1300	1300:1559.8	1559.8:1819.6	1819.6:2079.4	2079.4:2064.2	2064.2:20825	20825:21007	19731:19913
19913:20096	20096:20278	20278:20460	20460:20642	Accessories	Appliances	Art	First Class
Same Day	Second Class	Standard Class	Furnishings	Labels	Machines	Binders	Bookcases
Chairs	Envelopes	Fasteners				Paper	Phones
Storage	Supplies	Tables					

## SAS Enterprise Miner Report

Node=85% Centroid Clustering

CCC Plot





## SAS Enterprise Miner Report

### Node=85%Ward Clustering Summary

Node id = Clus5  
 Node label = 85%Ward Clustering  
 Meta path = Ids2 => Filter => Smpl3 => Clus5  
 Notes =

### Node=85%Ward Clustering Properties

Property	Value	Default	Property	Value	Default	Property	Value	Default
Component	Cluster		FinalMaxNum	20		MissingNominal	DEFAULT	
AutomaticMaxNum	50		HideVariable	Y		MissingOrdinal	DEFAULT	
AutomaticMethod	WARD		ImputationMethod	NONE		NominalEncoding	GLM	
AutomaticMinNum	2		Initial	DEFAULT		NumberClusterMethod	AUTOMATIC	
Bins	100		Learn	.		OrdinalEncoding	RANK	
CCCCutOff	3		LearnFinal	0.02		Radius	0	
ClusterGraphs	Y		LearnInitial	0.5		Stdize	STD	
Clusvar	_SEGMENT_		LearnSteps	1000		Summary	N	
ClusvarLabel	Segment Variable		MaxC	10		TrainDefaults	Y	
ClusvarRole	SEGMENT		MaxIter	10		TreeProfile	Y	
DistancePlot	Y		MaxSteps	1200		XConv	0.0001	
Drift	N		MissingInterval	DEFAULT				

### Node=85%Ward Clustering Variable Summary

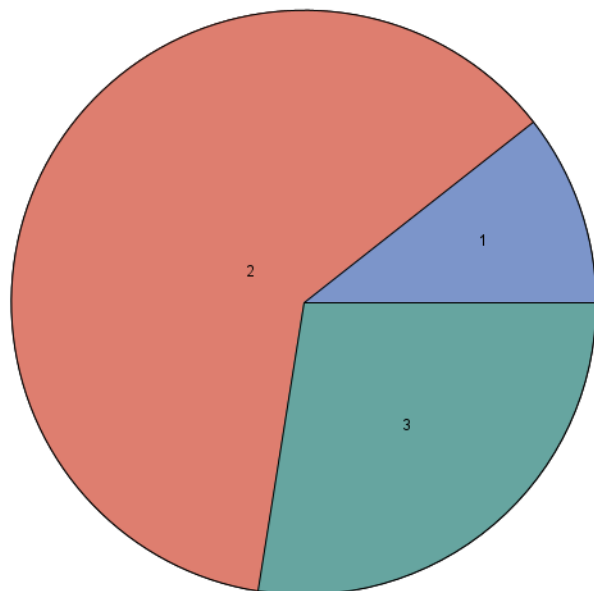
Role	Level	Frequency Count	Name
INPUT	INTERVAL	4	Discount Quantity Sales ShipDate
INPUT	NOMINAL	4	Category Region ShipMode SubCategory
ID	INTERVAL	1	_dataobs_
ID	NOMINAL	1	ProductID

### Node=85%Ward Clustering Mean Statistics

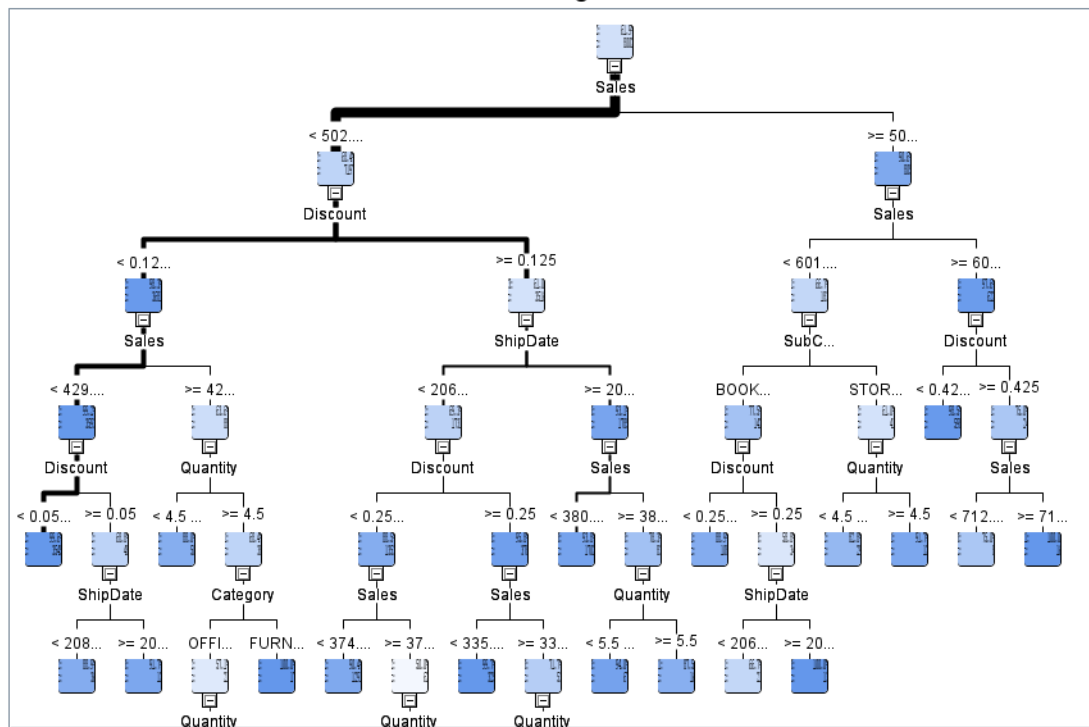
Variable	Segment 1	Segment 2	Segment 3
Clustering Criterion	0.46	0.46	0.46
Maximum Relative Change in Cluster Seeds	0.00	0.00	0.00
Improvement in Clustering Criterion	.	.	.
Frequency of Cluster	840.00	4956.00	2206.00
Root-Mean-Square Standard Deviation	0.54	0.44	0.47
Maximum Distance from Cluster Seed	5.50	4.10	5.14
Nearest Cluster	2.00	3.00	2.00
Distance to Nearest Cluster	3.00	1.77	1.77
Discount	0.14	0.05	0.32
Quantity	5.34	3.55	3.24
Sales	875.86	87.04	109.96
ShipDate	20531.35	20482.34	20814.97

Variable	Segment 1	Segment 2	Segment 3
Category=Furniture	0.48	0.15	0.29
Category=Office Supplies	0.22	0.71	0.51
Category=Technology	0.31	0.15	0.21
Region=Central	0.22	0.18	0.27
Region=East	0.27	0.30	0.29
Region=South	0.16	0.16	0.18
Region=West	0.34	0.36	0.26
ShipMode=First Class	0.15	0.15	0.17
ShipMode=Same Day	0.06	0.05	0.06
ShipMode=Second Class	0.21	0.21	0.17
ShipMode=Standard Class	0.58	0.59	0.60
SubCategory=Accessories	0.09	0.09	0.07
SubCategory=Appliances	0.05	0.05	0.02
SubCategory=Art	0.00	0.11	0.06
SubCategory=Binders	0.05	0.10	0.23
SubCategory=Bookcases	0.07	0.01	0.03
SubCategory=Chairs	0.23	0.02	0.09
SubCategory=Envelopes	0.00	0.04	0.02
SubCategory=Fasteners	-0.00	0.03	0.01
SubCategory=Furnishings	0.05	0.11	0.11
SubCategory=Labels	0.00	0.05	0.02
SubCategory=Machines	0.02	0.00	0.02
SubCategory=Paper	0.00	0.19	0.09
SubCategory=Phones	0.19	0.06	0.13
SubCategory=Storage	0.11	0.10	0.05
SubCategory=Supplies	0.00	0.02	0.01
SubCategory=Tables	0.13	0.00	0.05

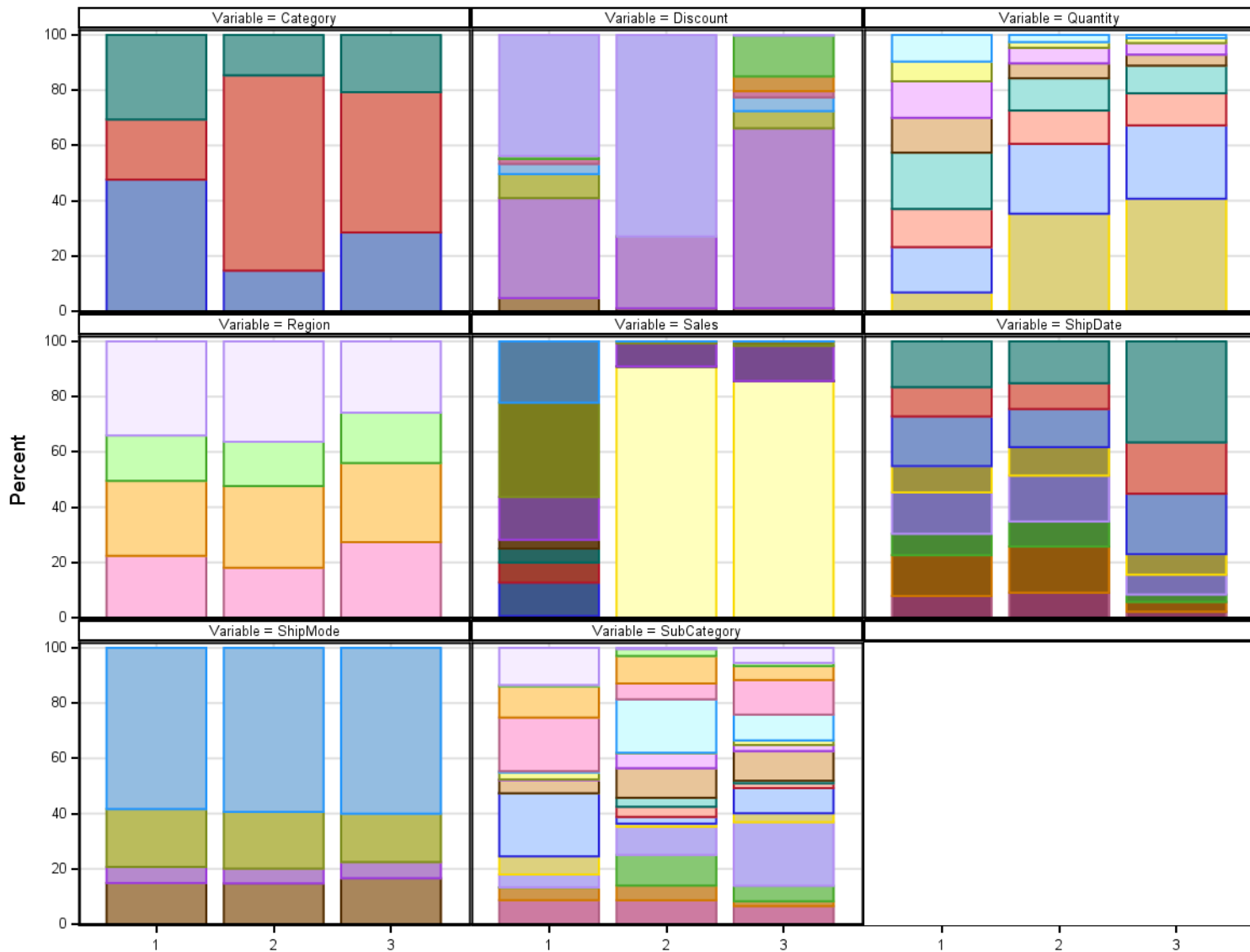
SAS Enterprise Miner Report  
Node=85%Ward Clustering  
Segment Size



SAS Enterprise Miner Report  
Node=85%Ward Clustering  
Tree Diagram



SAS Enterprise Miner Report  
Node=85%Ward Clustering  
Segment Plot



Segment Variable

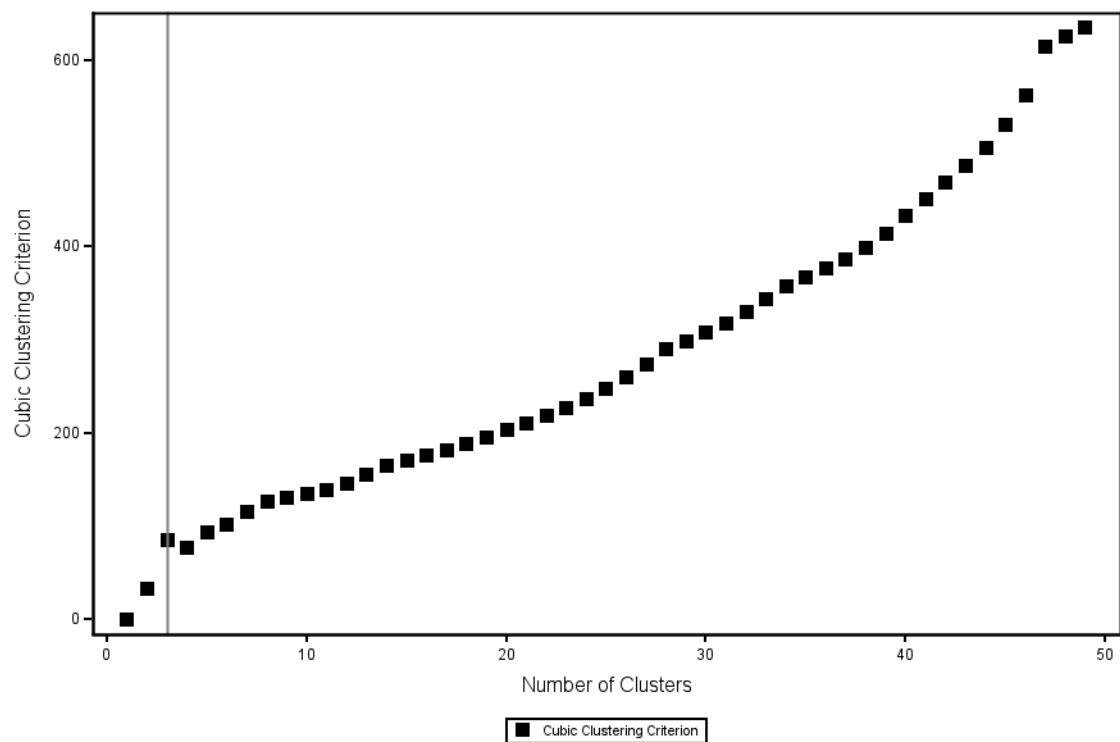
Formatted Value

Furniture	Office Supplies	Technology	0.0875:0.175	0.175:0.2625	0.2625:0.35	0.35:0.4375	0.4375:0.525
0.525:0.6125	0.6125:0.7	0:0.0875	1:2.125	2.125:3.25	3.25:4.375	4.375:5.5	5.5:6.625
6.625:7.75	7.75:8.875	8.875:10	Central	East	South	West	0.99:260.79
1040.2:1300	1300:1559.8	1559.8:1819.6	1819.6:2079.4	2079.4:20825	20825:21007	21007:21189	19731:19913
19913:20096	20096:20278	20278:20460	20460:20642	20642:20825	20825:21007	21007:21189	First Class
Same Day	Second Class	Standard Class	Accessories	Appliances	Art	Binders	Bookcases
Chairs	Envelopes	Fasteners	Furnishings	Labels	Machines	Paper	Phones
Storage	Supplies	Tables					

## SAS Enterprise Miner Report

Node=85%Ward Clustering

CCC Plot



## SAS Enterprise Miner Report

### Node=90% Average Clustering Summary

Node id = Clus4  
 Node label = 90% Average Clustering  
 Meta path = Ids2 => Filter => Smpl4 => Clus4  
 Notes =

### Node=90% Average Clustering Properties

Property	Value	Default	Property	Value	Default	Property	Value	Default
Component	Cluster		FinalMaxNum	20		MissingNominal	DEFAULT	
AutomaticMaxNum	50		HideVariable	Y		MissingOrdinal	DEFAULT	
AutomaticMethod	AVERAGE	WARD	ImputationMethod	NONE		NominalEncoding	GLM	
AutomaticMinNum	2		Initial	DEFAULT		NumberClusterMethod	AUTOMATIC	
Bins	100		Learn	.		OrdinalEncoding	RANK	
CCCCutOff	3		LearnFinal	0.02		Radius	0	
ClusterGraphs	Y		LearnInitial	0.5		Stdize	STD	
Clusvar	_SEGMENT_		LearnSteps	1000		Summary	N	
ClusvarLabel	Segment Variable		MaxC	10		TrainDefaults	Y	
ClusvarRole	SEGMENT		MaxIter	10		TreeProfile	Y	
DistancePlot	Y		MaxSteps	1200		XConv	0.0001	
Drift	N		MissingInterval	DEFAULT				

### Node=90% Average Clustering Variable Summary

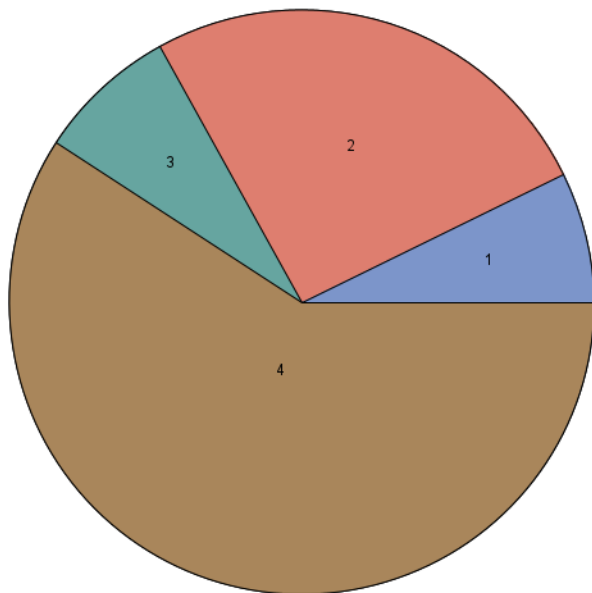
Role	Level	Frequency Count	Name
INPUT	INTERVAL	4	Discount Quantity Sales ShipDate
INPUT	NOMINAL	4	Category Region ShipMode SubCategory
ID	INTERVAL	1	_dataobs_
ID	NOMINAL	1	ProductID

### Node=90% Average Clustering Mean Statistics

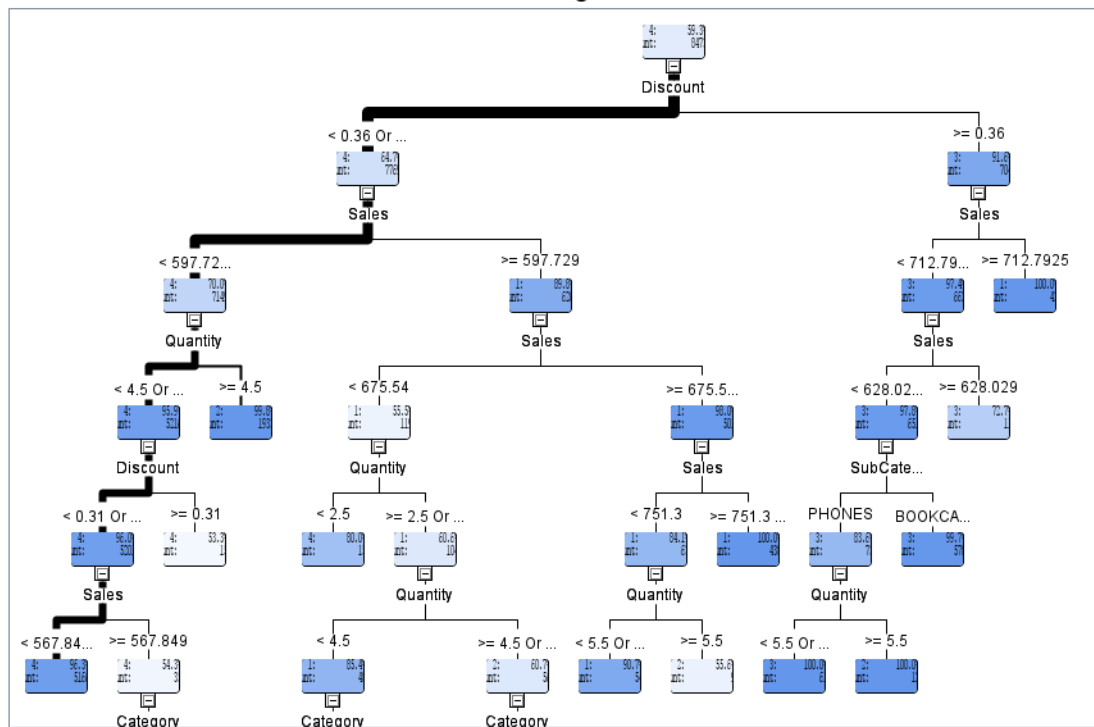
Variable	Segment 1	Segment 2	Segment 3	Segment 4
Clustering Criterion	0.44	0.44	0.44	0.44
Maximum Relative Change in Cluster Seeds	0.04	0.04	0.04	0.04
Improvement in Clustering Criterion	.	.	.	.
Frequency of Cluster	620.00	2176.00	653.00	5024.00
Root-Mean-Square Standard Deviation	0.53	0.44	0.46	0.43
Maximum Distance from Cluster Seed	5.03	4.24	4.51	4.58
Nearest Cluster	2.00	4.00	4.00	2.00
Distance to Nearest Cluster	3.15	1.80	3.06	1.80
Discount	0.14	0.09	0.61	0.09
Quantity	5.02	6.07	3.57	2.47
Sales	1045.71	158.05	103.41	88.18
ShipDate	20547.16	20592.60	20578.89	20576.22

Variable	Segment 1	Segment 2	Segment 3	Segment 4
Category=Furniture	0.49	0.17	0.37	0.19
Category=Office Supplies	0.23	0.64	0.50	0.64
Category=Technology	0.29	0.19	0.14	0.17
Region=Central	0.22	0.21	0.24	0.20
Region=East	0.28	0.26	0.42	0.29
Region=South	0.16	0.17	0.20	0.16
Region=West	0.33	0.36	0.15	0.34
ShipMode=First Class	0.15	0.14	0.16	0.16
ShipMode=Same Day	0.07	0.05	0.05	0.06
ShipMode=Second Class	0.21	0.19	0.17	0.20
ShipMode=Standard Class	0.57	0.62	0.63	0.58
SubCategory=Accessories	0.07	0.11	0.00	0.08
SubCategory=Appliances	0.04	0.04	0.00	0.05
SubCategory=Art	0.00	0.10	-0.00	0.10
SubCategory=Binders	0.06	0.11	0.50	0.10
SubCategory=Bookcases	0.06	0.01	0.06	0.02
SubCategory=Chairs	0.25	0.05	-0.00	0.05
SubCategory=Envelopes	-0.00	0.03	-0.00	0.03
SubCategory=Fasteners	0.00	0.03	0.00	0.02
SubCategory=Furnishings	0.02	0.09	0.19	0.10
SubCategory=Labels	0.00	0.05	-0.00	0.05
SubCategory=Machines	0.02	0.00	0.04	0.00
SubCategory=Paper	0.00	0.17	0.00	0.17
SubCategory=Phones	0.20	0.08	0.09	0.08
SubCategory=Storage	0.12	0.09	-0.00	0.10
SubCategory=Supplies	0.01	0.02	0.00	0.02
SubCategory=Tables	0.16	0.01	0.12	0.02

SAS Enterprise Miner Report  
Node=90% Average Clustering  
Segment Size

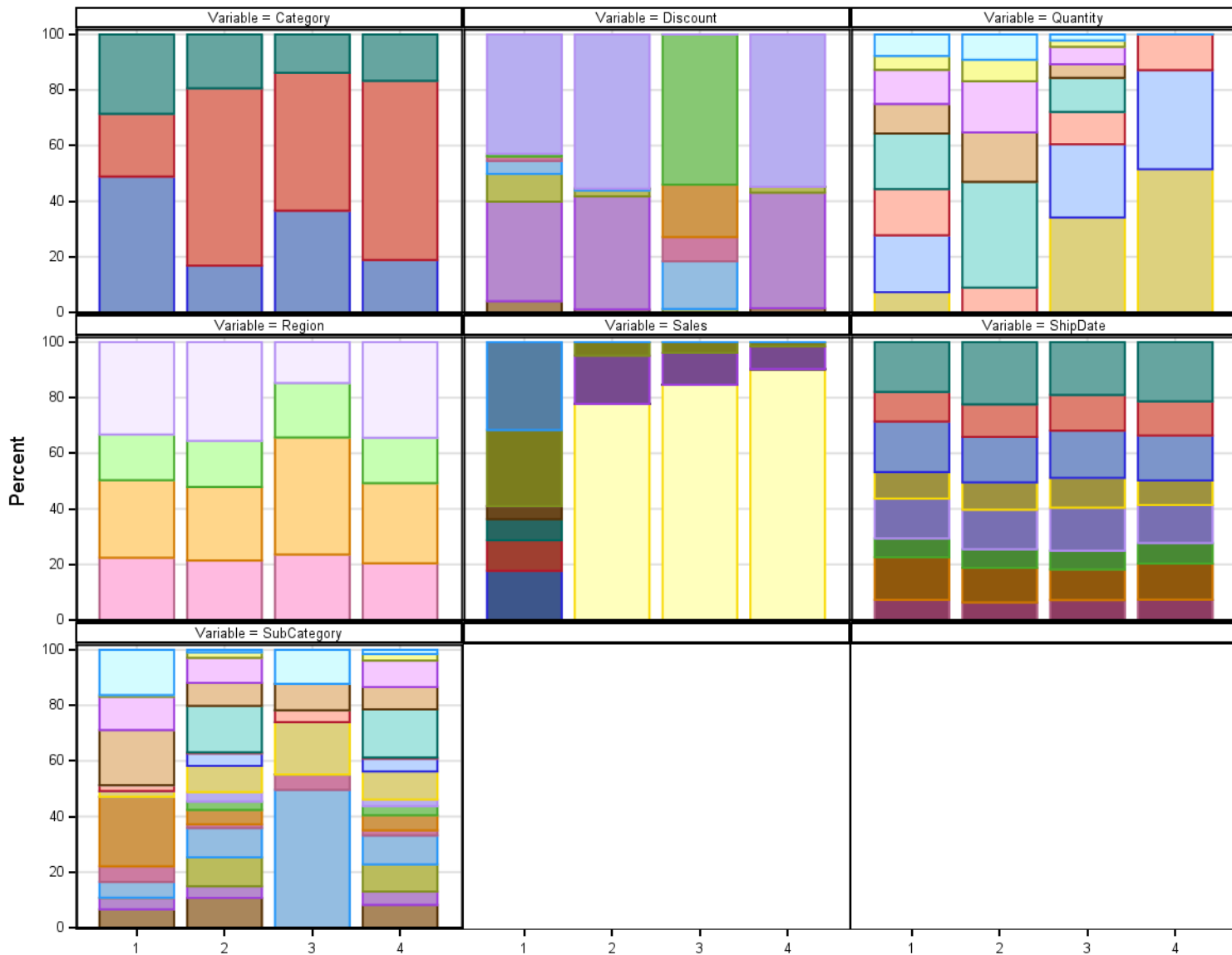


SAS Enterprise Miner Report  
Node=90% Average Clustering  
Tree Diagram





SAS Enterprise Miner Report  
Node=90% Average Clustering  
Segment Plot



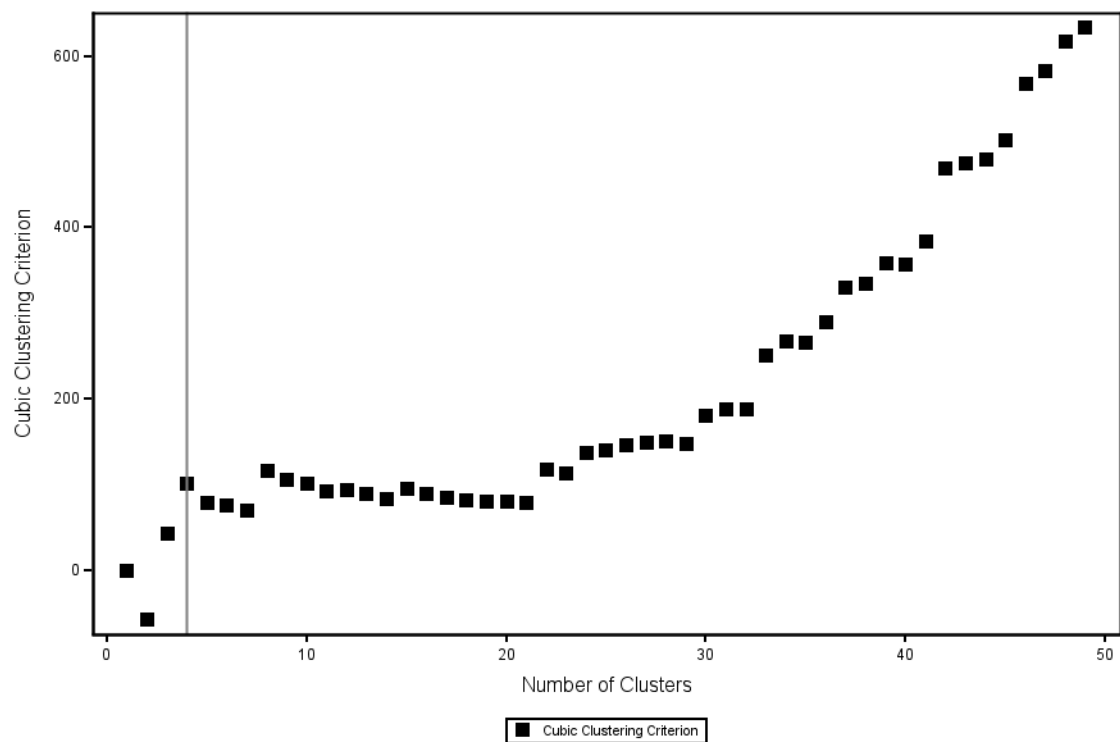
Segment Variable

Formatted Value											
<div><div></div><div>Furniture</div></div>	<div><div></div><div>0.525:0.6125</div></div>	<div><div></div><div>Office Supplies</div></div>	<div><div></div><div>0.6125:0.7</div></div>	<div><div></div><div>Technology</div></div>	<div><div></div><div>0.0875:0.175</div></div>	<div><div></div><div>0.175:0.2625</div></div>	<div><div></div><div>0.2625:0.35</div></div>	<div><div></div><div>0.35:0.4375</div></div>	<div><div></div><div>0.4375:0.525</div></div>	<div><div></div><div>0.525:0.6125</div></div>	<div><div></div><div>0.6125:0.7</div></div>
<div><div></div><div>6.625:7.75</div></div>	<div><div></div><div>7.75:8.875</div></div>	<div><div></div><div>8.875:10</div></div>	<div><div></div><div>10.0:11.125</div></div>	<div><div></div><div>11.125:12.25</div></div>	<div><div></div><div>12.25:13.375</div></div>	<div><div></div><div>13.375:14.5</div></div>	<div><div></div><div>14.5:15.625</div></div>	<div><div></div><div>15.625:16.75</div></div>	<div><div></div><div>16.75:17.875</div></div>	<div><div></div><div>17.875:19.0</div></div>	<div><div></div><div>19.0:20.125</div></div>
<div><div></div><div>10.0:12.1300</div></div>	<div><div></div><div>12.1300:14.2600</div></div>	<div><div></div><div>14.2600:16.3900</div></div>	<div><div></div><div>16.3900:18.5200</div></div>	<div><div></div><div>18.5200:20.6500</div></div>	<div><div></div><div>20.6500:22.7800</div></div>	<div><div></div><div>22.7800:24.9100</div></div>	<div><div></div><div>24.9100:27.0400</div></div>	<div><div></div><div>27.0400:29.1700</div></div>	<div><div></div><div>29.1700:31.3000</div></div>	<div><div></div><div>31.3000:33.4300</div></div>	<div><div></div><div>33.4300:35.5600</div></div>
<div><div></div><div>19913:20096</div></div>	<div><div></div><div>20096:20298</div></div>	<div><div></div><div>20298:20500</div></div>	<div><div></div><div>20500:20702</div></div>	<div><div></div><div>20702:20904</div></div>	<div><div></div><div>20904:21106</div></div>	<div><div></div><div>21106:21308</div></div>	<div><div></div><div>21308:21510</div></div>	<div><div></div><div>21510:21712</div></div>	<div><div></div><div>21712:21914</div></div>	<div><div></div><div>21914:22116</div></div>	<div><div></div><div>22116:22318</div></div>
<div><div></div><div>Appliances</div></div>	<div><div></div><div>Art</div></div>	<div><div></div><div>Binders</div></div>	<div><div></div><div>Bookcases</div></div>	<div><div></div><div>Chairs</div></div>	<div><div></div><div>Envelopes</div></div>	<div><div></div><div>Supplies</div></div>	<div><div></div><div>Fasteners</div></div>	<div><div></div><div>Tables</div></div>	<div><div></div><div>Accessories</div></div>	<div><div></div><div>Furnishings</div></div>	<div><div></div><div>Labels</div></div>
<div><div></div><div>Machines</div></div>	<div><div></div><div>Paper</div></div>	<div><div></div><div>Phones</div></div>	<div><div></div><div>Storage</div></div>	<div><div></div><div>Tables</div></div>	<div><div></div><div>Accessories</div></div>	<div><div></div><div>Furnishings</div></div>	<div><div></div><div>Labels</div></div>	<div><div></div><div>Machines</div></div>	<div><div></div><div>Paper</div></div>	<div><div></div><div>Phones</div></div>	<div><div></div><div>Storage</div></div>

## SAS Enterprise Miner Report

Node=90% Average Clustering

CCC Plot



## SAS Enterprise Miner Report

### Node=90% Centroid Clustering Summary

Node id = Clus3  
Node label = 90% Centroid Clustering  
Meta path = Ids2 => Filter => Smpl4 => Clus3  
Notes =

### Node=90% Centroid Clustering Properties

Property	Value	Default	Property	Value	Default	Property	Value	Default
Component	Cluster		FinalMaxNum	20		MissingNominal	DEFAULT	
AutomaticMaxNum	50		HideVariable	Y		MissingOrdinal	DEFAULT	
AutomaticMethod	CENTROID	WARD	ImputationMethod	NONE		NominalEncoding	GLM	
AutomaticMinNum	2		Initial	DEFAULT		NumberClusterMethod	AUTOMATIC	
Bins	100		Learn	.		OrdinalEncoding	RANK	
CCCCutOff	3		LearnFinal	0.02		Radius	0	
ClusterGraphs	Y		LearnInitial	0.5		Stdize	STD	
Clusvar	_SEGMENT_		LearnSteps	1000		Summary	N	
ClusvarLabel	Segment Variable		MaxC	10		TrainDefaults	Y	
ClusvarRole	SEGMENT		MaxIter	10		TreeProfile	Y	
DistancePlot	Y		MaxSteps	1200		XConv	0.0001	
Drift	N		MissingInterval	DEFAULT				

### Node=90% Centroid Clustering Variable Summary

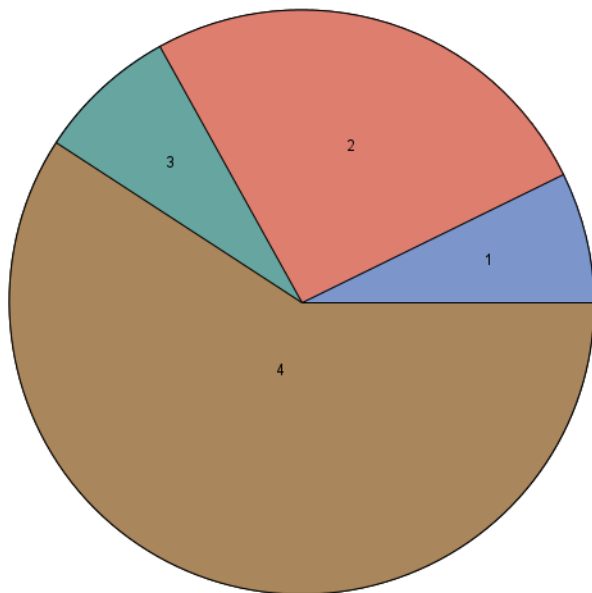
Role	Level	Frequency Count	Name
INPUT	INTERVAL	4	Discount Quantity Sales ShipDate
INPUT	NOMINAL	4	Category Region ShipMode SubCategory
ID	INTERVAL	1	_dataobs_
ID	NOMINAL	1	ProductID

### Node=90% Centroid Clustering Mean Statistics

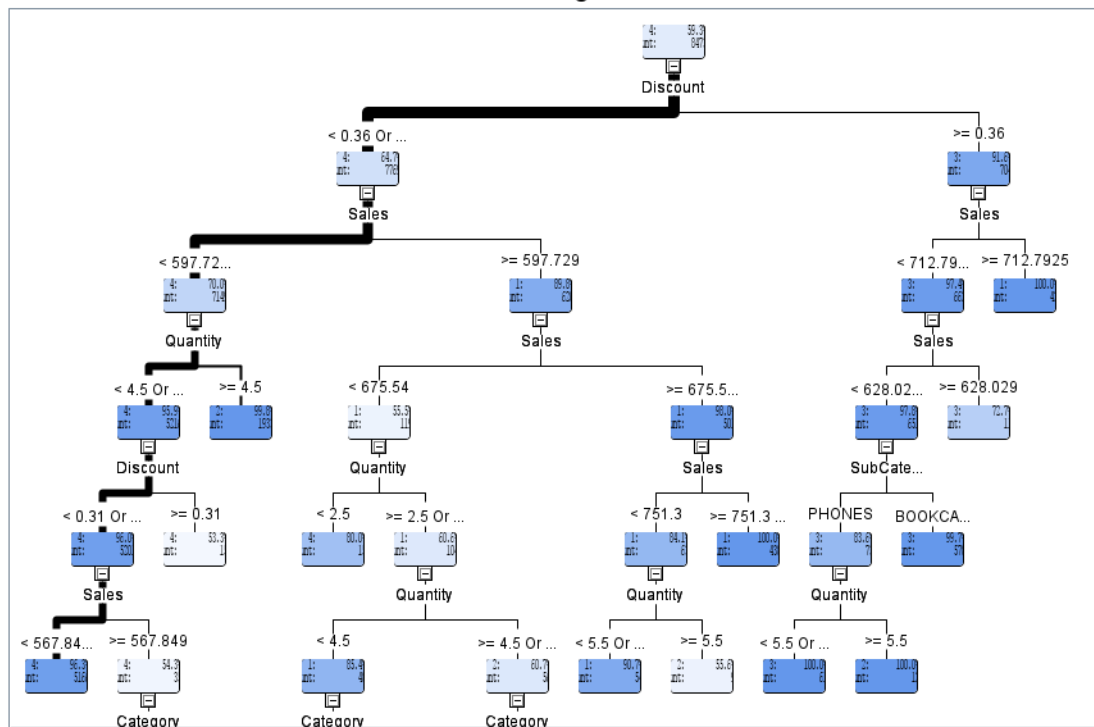
Variable	Segment 1	Segment 2	Segment 3	Segment 4
Clustering Criterion	0.44	0.44	0.44	0.44
Maximum Relative Change in Cluster Seeds	0.04	0.04	0.04	0.04
Improvement in Clustering Criterion	.	.	.	.
Frequency of Cluster	620.00	2176.00	653.00	5024.00
Root-Mean-Square Standard Deviation	0.53	0.44	0.46	0.43
Maximum Distance from Cluster Seed	5.03	4.24	4.51	4.58
Nearest Cluster	2.00	4.00	4.00	2.00
Distance to Nearest Cluster	3.15	1.80	3.06	1.80
Discount	0.14	0.09	0.61	0.09
Quantity	5.02	6.07	3.57	2.47
Sales	1045.71	158.05	103.41	88.18
ShipDate	20547.16	20592.60	20578.89	20576.22

Variable	Segment 1	Segment 2	Segment 3	Segment 4
Category=Furniture	0.49	0.17	0.37	0.19
Category=Office Supplies	0.23	0.64	0.50	0.64
Category=Technology	0.29	0.19	0.14	0.17
Region=Central	0.22	0.21	0.24	0.20
Region=East	0.28	0.26	0.42	0.29
Region=South	0.16	0.17	0.20	0.16
Region=West	0.33	0.36	0.15	0.34
ShipMode=First Class	0.15	0.14	0.16	0.16
ShipMode=Same Day	0.07	0.05	0.05	0.06
ShipMode=Second Class	0.21	0.19	0.17	0.20
ShipMode=Standard Class	0.57	0.62	0.63	0.58
SubCategory=Accessories	0.07	0.11	0.00	0.08
SubCategory=Appliances	0.04	0.04	0.00	0.05
SubCategory=Art	0.00	0.10	-0.00	0.10
SubCategory=Binders	0.06	0.11	0.50	0.10
SubCategory=Bookcases	0.06	0.01	0.06	0.02
SubCategory=Chairs	0.25	0.05	-0.00	0.05
SubCategory=Envelopes	-0.00	0.03	-0.00	0.03
SubCategory=Fasteners	0.00	0.03	0.00	0.02
SubCategory=Furnishings	0.02	0.09	0.19	0.10
SubCategory=Labels	0.00	0.05	-0.00	0.05
SubCategory=Machines	0.02	0.00	0.04	0.00
SubCategory=Paper	0.00	0.17	0.00	0.17
SubCategory=Phones	0.20	0.08	0.09	0.08
SubCategory=Storage	0.12	0.09	-0.00	0.10
SubCategory=Supplies	0.01	0.02	0.00	0.02
SubCategory=Tables	0.16	0.01	0.12	0.02

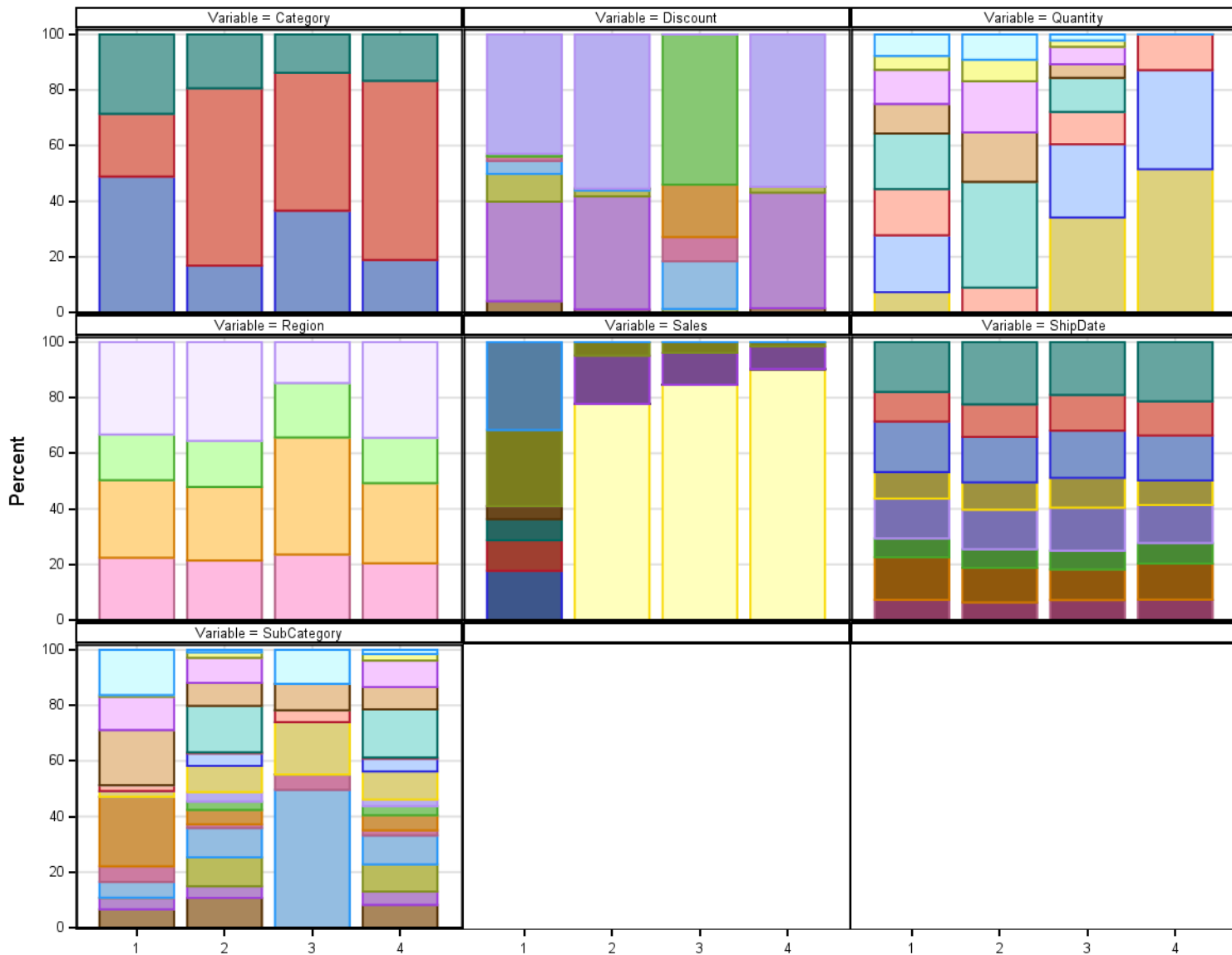
SAS Enterprise Miner Report  
Node=90% Centroid Clustering  
Segment Size



SAS Enterprise Miner Report  
Node=90% Centroid Clustering  
Tree Diagram



SAS Enterprise Miner Report  
Node=90% Centroid Clustering  
Segment Plot



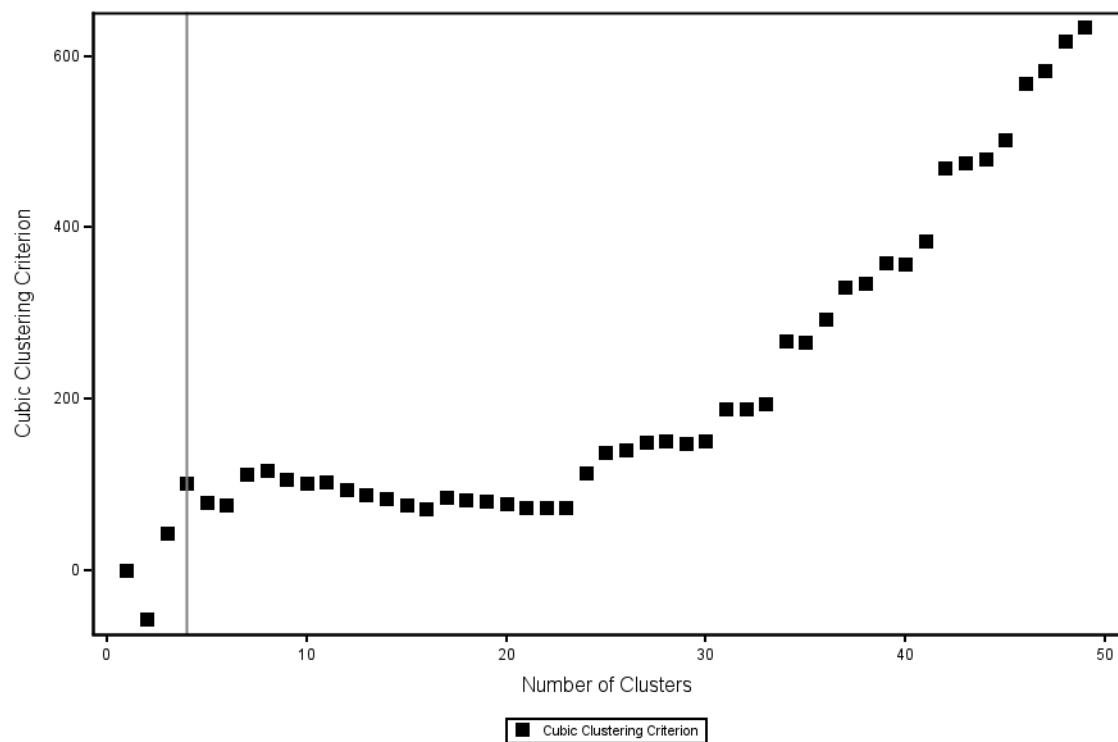
Segment Variable

Formatted Value									
Furniture	Office Supplies	Technology	0.0875:0.175	0.175:0.2625	0.2625:0.35	0.35:0.4375	0.4375:0.525		
0.525:0.6125	0.6125:0.7	0:0.0875	1:2.125	2.125:3.25	3.25:4.375	4.375:5.5	5.5:6.625		
6.625:7.75	7.75:8.875	8.875:10	Central	East	South	West	0.99:260.79		
1040.2:1300	1300:1559.8	1559.8:1819.6	1819.6:2079.4	2079.4:260.79	260.79:520.59	520.59:780.39	780.39:1040.2	19731:19913	
19913:20096	20096:20278	20278:20460	20460:20642	20642:20825	20825:21007	21007:21189	21189:21899	Accessories	
Appliances	Art	Binders	Bookcases	Chairs	Envelopes	Fasteners	Furnishings		
Labels	Machines	Paper	Phones	Storage	Supplies	Tables			

## SAS Enterprise Miner Report

Node=90% Centroid Clustering

CCC Plot



## SAS Enterprise Miner Report

### Node=90%Ward Clustering Summary

Node id = Clus11  
 Node label = 90%Ward Clustering  
 Meta path = Ids2 => Filter => Smpl4 => Clus11  
 Notes =

### Node=90%Ward Clustering Properties

Property	Value	Default	Property	Value	Default	Property	Value	Default
Component	Cluster		FinalMaxNum	20		MissingNominal	DEFAULT	
AutomaticMaxNum	50		HideVariable	Y		MissingOrdinal	DEFAULT	
AutomaticMethod	WARD		ImputationMethod	NONE		NominalEncoding	GLM	
AutomaticMinNum	2		Initial	DEFAULT		NumberClusterMethod	AUTOMATIC	
Bins	100		Learn	.		OrdinalEncoding	RANK	
CCCCutOff	3		LearnFinal	0.02		Radius	0	
ClusterGraphs	Y		LearnInitial	0.5		Stdize	STD	
Clusvar	_SEGMENT_		LearnSteps	1000		Summary	N	
ClusvarLabel	Segment Variable		MaxC	10		TrainDefaults	Y	
ClusvarRole	SEGMENT		MaxIter	10		TreeProfile	Y	
DistancePlot	Y		MaxSteps	1200		XConv	0.0001	
Drift	N		MissingInterval	DEFAULT				

### Node=90%Ward Clustering Variable Summary

Role	Level	Frequency Count	Name
INPUT	INTERVAL	4	Discount Quantity Sales ShipDate
INPUT	NOMINAL	4	Category Region ShipMode SubCategory
ID	INTERVAL	1	_dataobs_
ID	NOMINAL	1	ProductID

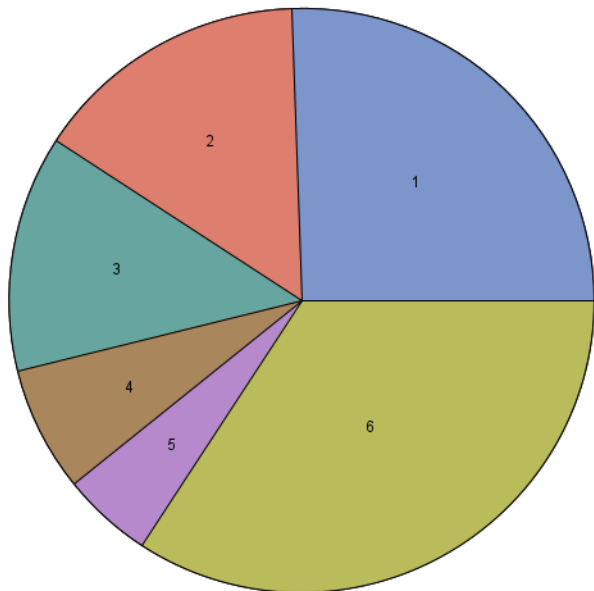
### Node=90%Ward Clustering Mean Statistics

Variable	Segment 1	Segment 2	Segment 3	Segment 4	Segment 5	Segment 6
Clustering Criterion	0.41	0.41	0.41	0.41	0.41	0.41
Maximum Relative Change in Cluster Seeds	0.05	0.05	0.05	0.05	0.05	0.05
Improvement in Clustering Criterion	.	.	.	.	.	.
Frequency of Cluster	2168.00	1284.00	1121.00	593.00	422.00	2885.00
Root-Mean-Square Standard Deviation	0.38	0.40	0.47	0.45	0.52	0.39
Maximum Distance from Cluster Seed	3.70	4.17	3.91	4.61	4.76	3.75
Nearest Cluster	6.00	6.00	6.00	6.00	3.00	1.00
Distance to Nearest Cluster	1.84	2.12	2.13	3.28	3.16	1.84
Discount	0.08	0.12	0.12	0.63	0.13	0.09
Quantity	2.95	3.12	6.31	3.60	5.33	3.19
Sales	71.69	181.48	295.37	91.28	1209.55	75.80
ShipDate	20144.94	20596.24	20514.38	20588.14	20582.61	20918.76

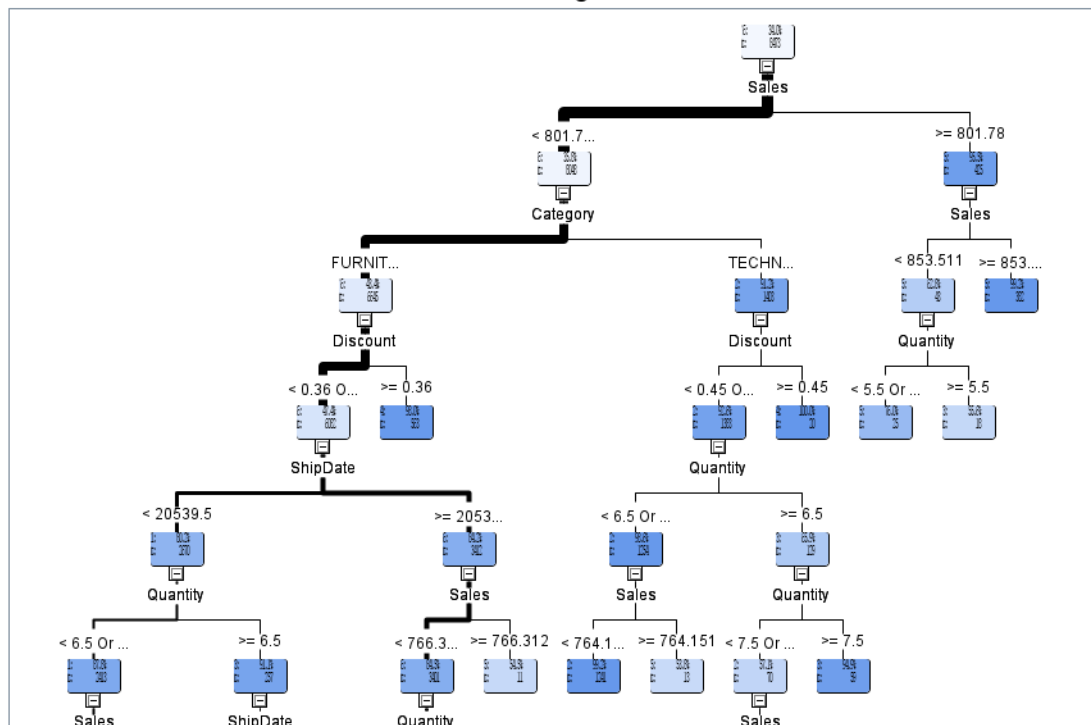


Variable	Segment 1	Segment 2	Segment 3	Segment 4	Segment 5	Segment 6
Category=Furniture	0.16	-0.00	0.53	0.42	0.42	0.17
Category=Office Supplies	0.84	0.00	0.39	0.55	0.28	0.83
Category=Technology	0.00	1.00	0.09	0.03	0.30	0.00
Region=Central	0.19	0.24	0.22	0.25	0.21	0.21
Region=East	0.29	0.28	0.26	0.37	0.29	0.29
Region=South	0.18	0.16	0.15	0.21	0.18	0.15
Region=West	0.34	0.32	0.36	0.17	0.32	0.35
ShipMode=First Class	0.14	0.17	0.14	0.16	0.15	0.16
ShipMode=Same Day	0.05	0.05	0.05	0.05	0.07	0.06
ShipMode=Second Class	0.21	0.19	0.19	0.16	0.20	0.20
ShipMode=Standard Class	0.61	0.59	0.62	0.63	0.58	0.58
SubCategory=Accessories	-0.00	0.48	0.04	0.00	0.07	-0.00
SubCategory=Appliances	0.06	0.00	0.02	0.00	0.05	0.06
SubCategory=Art	0.13	-0.00	0.05	-0.00	0.00	0.13
SubCategory=Binders	0.13	0.00	0.07	0.55	0.08	0.14
SubCategory=Bookcases	0.02	0.00	0.05	0.06	0.05	0.02
SubCategory=Chairs	0.04	-0.00	0.21	0.02	0.20	0.04
SubCategory=Envelopes	0.05	0.00	0.02	-0.00	-0.00	0.04
SubCategory=Fasteners	0.04	0.00	0.01	0.00	-0.00	0.03
SubCategory=Furnishings	0.10	0.00	0.20	0.21	0.01	0.10
SubCategory=Labels	0.06	-0.00	0.03	-0.00	-0.00	0.06
SubCategory=Machines	-0.00	0.03	0.00	0.03	0.03	-0.00
SubCategory=Paper	0.22	0.00	0.10	0.00	0.00	0.22
SubCategory=Phones	-0.00	0.50	0.04	-0.00	0.20	-0.00
SubCategory=Storage	0.12	-0.00	0.07	-0.00	0.14	0.12
SubCategory=Supplies	0.03	0.00	0.01	0.00	0.01	0.03
SubCategory=Tables	0.01	-0.00	0.06	0.14	0.15	0.01

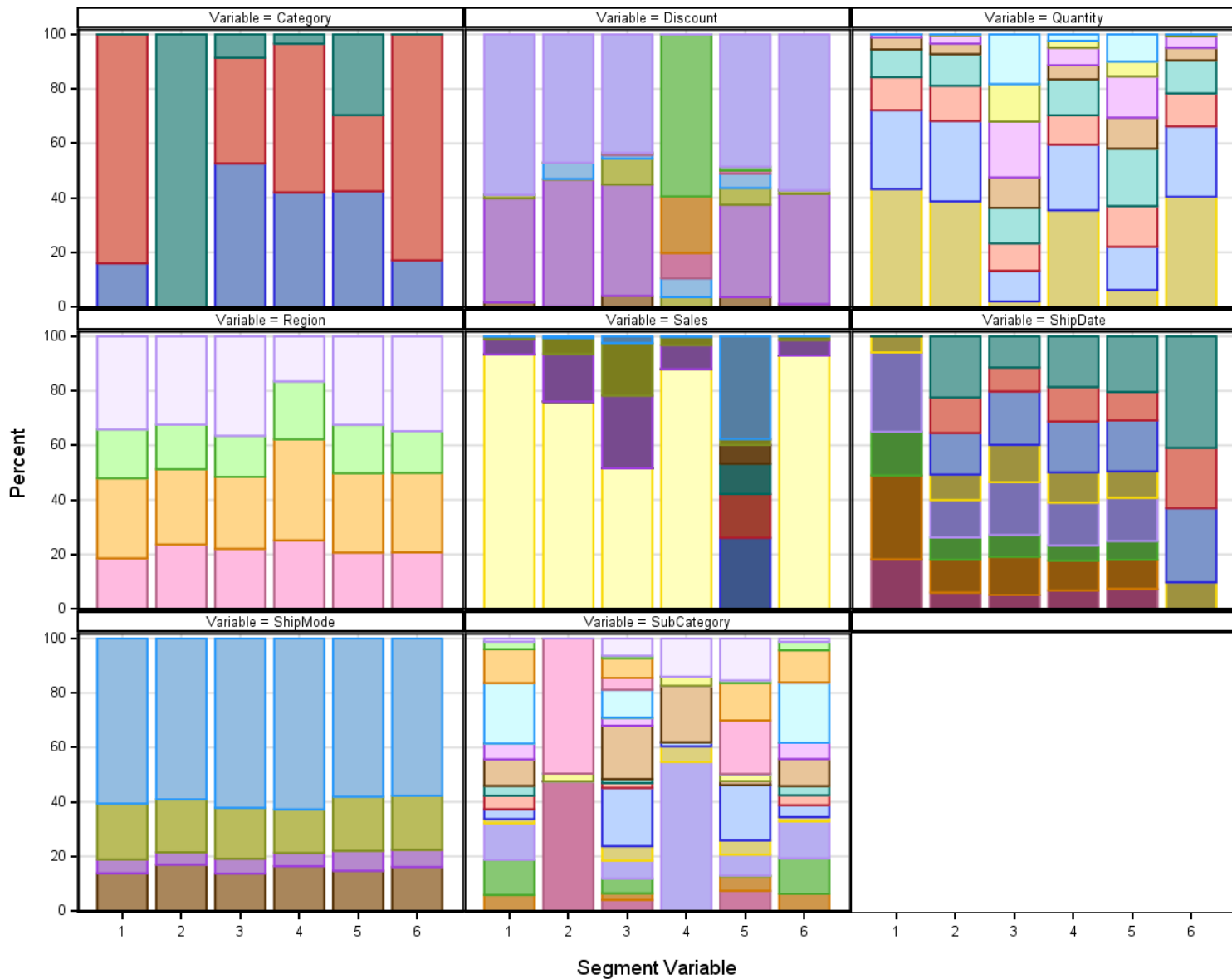
SAS Enterprise Miner Report  
Node=90%Ward Clustering  
Segment Size



SAS Enterprise Miner Report  
Node=90%Ward Clustering  
Tree Diagram



SAS Enterprise Miner Report  
Node=90%Ward Clustering  
Segment Plot

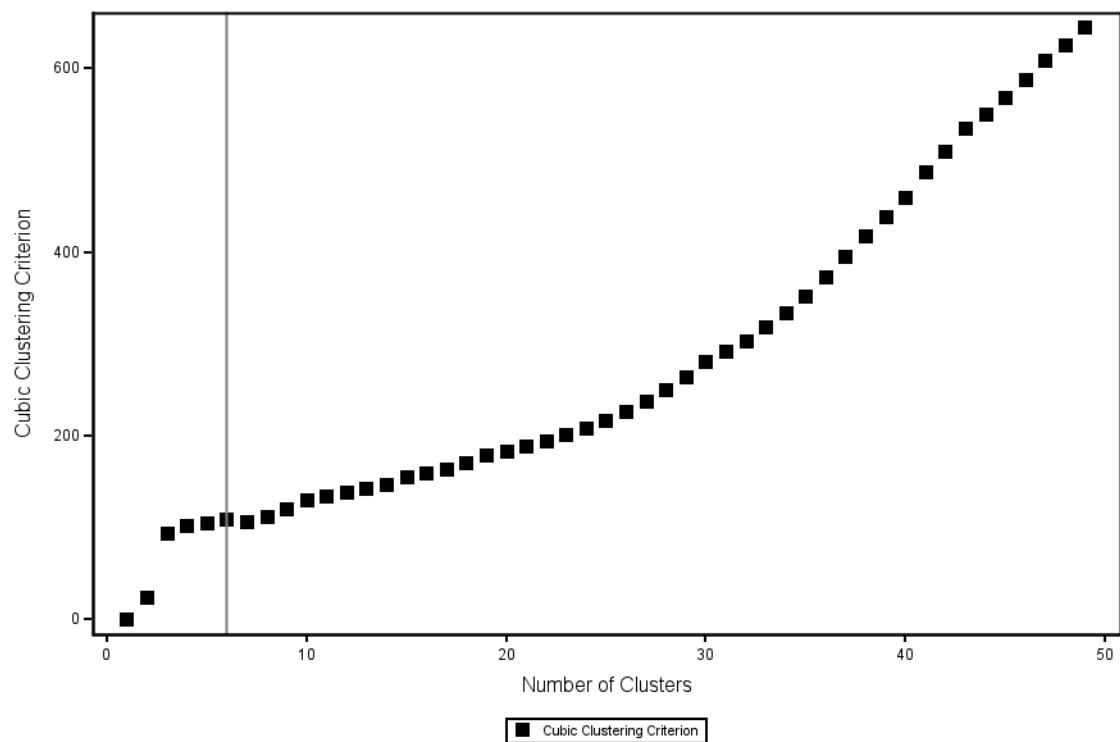


Formatted Value											
Furniture	Office Supplies	Technology	0.0875:0.175	0.175:0.2625	0.2625:0.35	0.35:0.4375	0.4375:0.525	0.525:0.6125	0.6125:0.7	0.7:0.7875	0.7875:0.875
0.525:0.6125	0.6125:0.7	0.7:0.7875	1:2.125	2.125:3.25	3.25:4.375	4.375:5.5	5.5:6.625	6.625:7.75	7.75:8.875	8.875:10	1040.2:1300
1040.2:1300	1300:1559.8	1559.8:1819.6	1819.6:2079.4	2079.4:2340.2	2340.2:2600.9	2600.9:2861.7	2861.7:3122.5	3122.5:3383.3	3383.3:3644.1	3644.1:3904.9	19913:20096
19913:20096	20096:20278	20278:20460	20460:20642	20642:20825	20825:21007	21007:21189	21189:21371	21371:21553	21553:21735	21735:21917	Same Day
Same Day	Second Class	Standard Class	Accessories	Appliances	Art	Binders	Bookcases	Chairs	Envelopes	Fasteners	Tables
Chairs	Envelopes	Fasteners	Furnishings	Labels	Machines	Paper	Phones	Storage	Supplies	Tables	

## SAS Enterprise Miner Report

Node=90%Ward Clustering

CCC Plot



## SAS Enterprise Miner Report

### Node=Average Clustering Summary

Node id = Clus7  
Node label = Average Clustering  
Meta path = Ids2 => Filter => Clus7  
Notes =

### Node=Average Clustering Properties

Property	Value	Default	Property	Value	Default	Property	Value	Default
Component	Cluster		FinalMaxNum	20		MissingNominal	DEFAULT	
AutomaticMaxNum	50		HideVariable	Y		MissingOrdinal	DEFAULT	
AutomaticMethod	AVERAGE	WARD	ImputationMethod	NONE		NominalEncoding	GLM	
AutomaticMinNum	2		Initial	DEFAULT		NumberClusterMethod	AUTOMATIC	
Bins	100		Learn	.		OrdinalEncoding	RANK	
CCCCutOff	3		LearnFinal	0.02		Radius	0	
ClusterGraphs	Y		LearnInitial	0.5		Stdize	STD	
Clusvar	_SEGMENT_		LearnSteps	1000		Summary	N	
ClusvarLabel	Segment Variable		MaxC	10		TrainDefaults	Y	
ClusvarRole	SEGMENT		MaxIter	10		TreeProfile	Y	
DistancePlot	Y		MaxSteps	1200		XConv	0.0001	
Drift	N		MissingInterval	DEFAULT				

### Node=Average Clustering Variable Summary

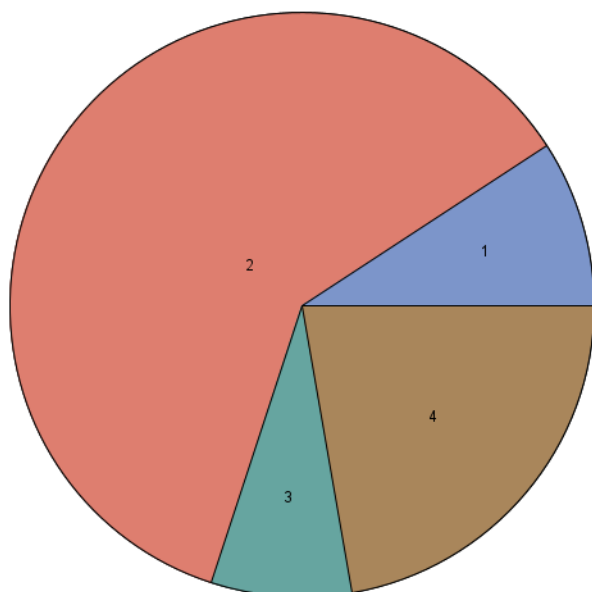
Role	Level	Frequency Count	Name
INPUT	INTERVAL	4	Discount Quantity Sales ShipDate
INPUT	NOMINAL	4	Category Region ShipMode SubCategory
ID	NOMINAL	1	ProductID

### Node=Average Clustering Mean Statistics

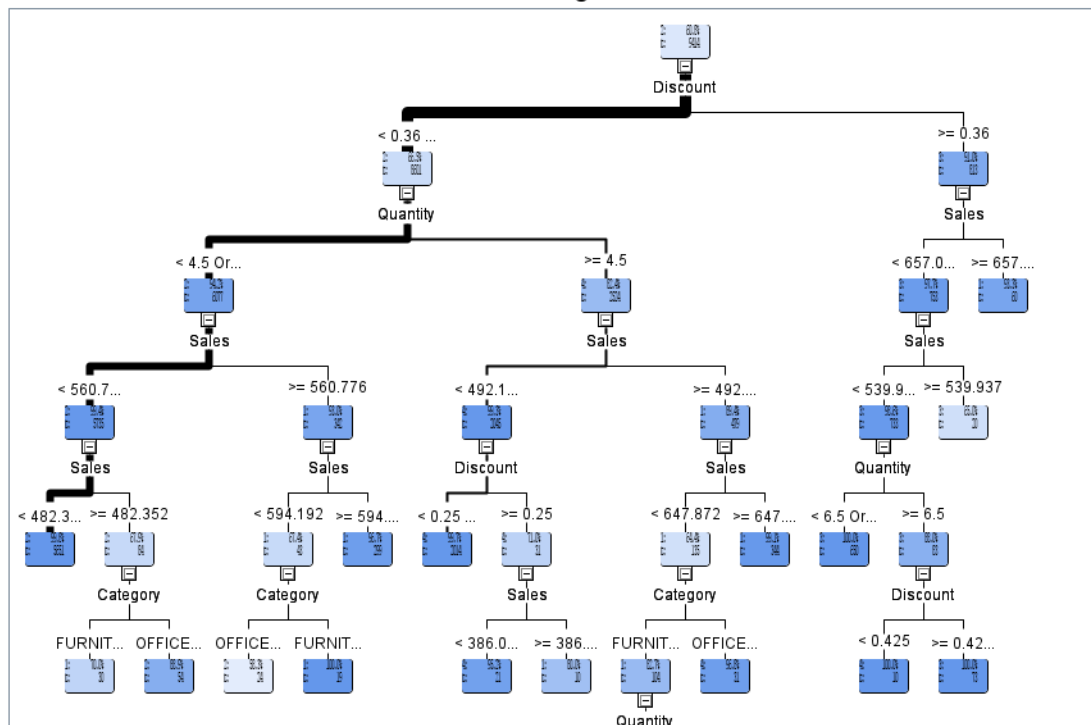
Variable	Segment 1	Segment 2	Segment 3	Segment 4
Clustering Criterion	0.44	0.44	0.44	0.44
Maximum Relative Change in Cluster Seeds	0.01	0.01	0.01	0.01
Improvement in Clustering Criterion	.	.	.	.
Frequency of Cluster	855.00	5722.00	746.00	2091.00
Root-Mean-Square Standard Deviation	0.53	0.43	0.46	0.43
Maximum Distance from Cluster Seed	5.62	4.17	4.42	4.30
Nearest Cluster	4.00	4.00	2.00	2.00
Distance to Nearest Cluster	3.02	1.88	3.02	1.88
Discount	0.14	0.09	0.61	0.09
Quantity	4.98	2.52	3.55	6.28
Sales	951.19	91.11	102.16	126.59
ShipDate	20540.86	20576.47	20582.93	20602.43
Category=Furniture	0.50	0.19	0.35	0.13

Variable	Segment 1	Segment 2	Segment 3	Segment 4
Category=Office Supplies	0.21	0.63	0.50	0.72
Category=Technology	0.30	0.18	0.15	0.15
Region=Central	0.23	0.21	0.22	0.21
Region=East	0.27	0.29	0.43	0.28
Region=South	0.17	0.16	0.20	0.16
Region=West	0.33	0.34	0.15	0.36
ShipMode=First Class	0.15	0.16	0.17	0.14
ShipMode=Same Day	0.06	0.06	0.05	0.05
ShipMode=Second Class	0.20	0.20	0.17	0.20
ShipMode=Standard Class	0.58	0.59	0.61	0.60
SubCategory=Accessories	0.07	0.09	0.00	0.09
SubCategory=Appliances	0.04	0.05	-0.00	0.04
SubCategory=Art	0.00	0.10	-0.00	0.12
SubCategory=Binders	0.05	0.10	0.50	0.13
SubCategory=Bookcases	0.06	0.02	0.05	0.01
SubCategory=Chairs	0.26	0.06	-0.00	0.03
SubCategory=Envelopes	-0.00	0.03	-0.00	0.03
SubCategory=Fasteners	0.00	0.02	0.00	0.04
SubCategory=Furnishings	0.03	0.10	0.18	0.09
SubCategory=Labels	0.00	0.04	0.00	0.05
SubCategory=Machines	0.03	0.00	0.05	0.00
SubCategory=Paper	0.00	0.17	0.00	0.19
SubCategory=Phones	0.20	0.09	0.11	0.06
SubCategory=Storage	0.11	0.10	0.00	0.09
SubCategory=Supplies	0.01	0.02	0.00	0.02
SubCategory=Tables	0.15	0.01	0.12	0.00

SAS Enterprise Miner Report  
Node=Average Clustering  
Segment Size



SAS Enterprise Miner Report  
Node=Average Clustering  
Tree Diagram



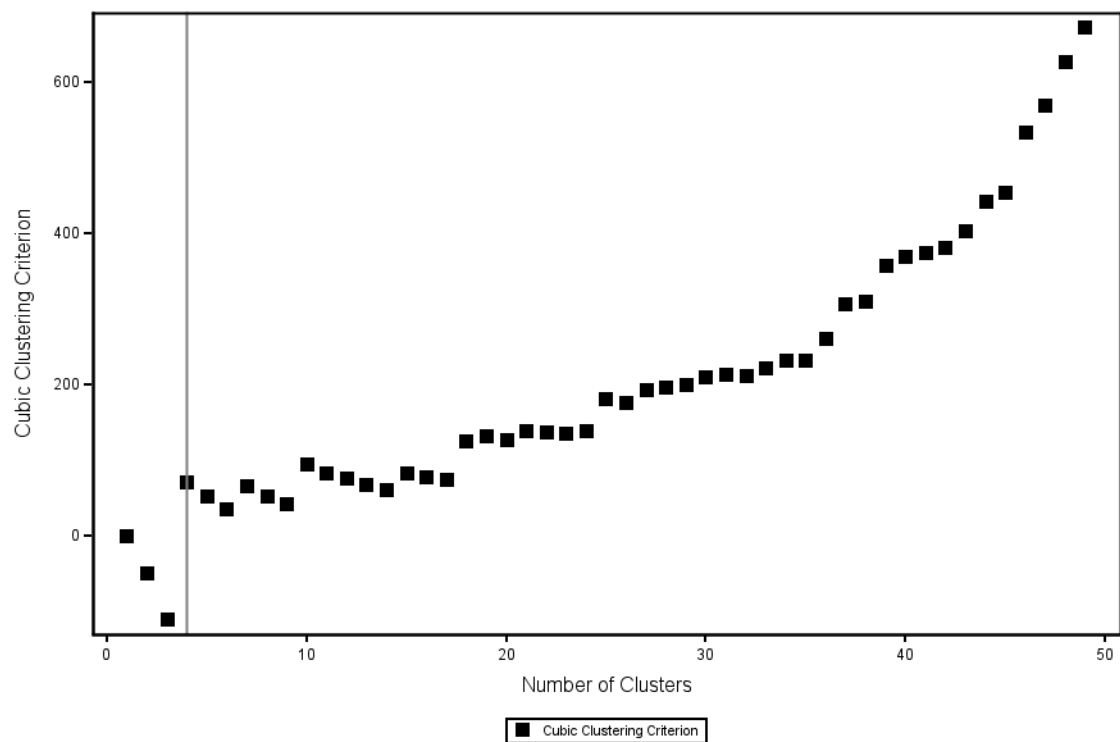




## SAS Enterprise Miner Report

Node=Average Clustering

CCC Plot



## SAS Enterprise Miner Report

### Node=Centroid Clustering Summary

Node id = Clus6  
Node label = Centroid Clustering  
Meta path = Ids2 => Filter => Clus6  
Notes =

### Node=Centroid Clustering Properties

Property	Value	Default	Property	Value	Default	Property	Value	Default
Component	Cluster		FinalMaxNum	20		MissingNominal	DEFAULT	
AutomaticMaxNum	50		HideVariable	Y		MissingOrdinal	DEFAULT	
AutomaticMethod	CENTROID	WARD	ImputationMethod	NONE		NominalEncoding	GLM	
AutomaticMinNum	2		Initial	DEFAULT		NumberClusterMethod	AUTOMATIC	
Bins	100		Learn	.		OrdinalEncoding	RANK	
CCCCutOff	3		LearnFinal	0.02		Radius	0	
ClusterGraphs	Y		LearnInitial	0.5		Stdize	STD	
Clusvar	_SEGMENT_		LearnSteps	1000		Summary	N	
ClusvarLabel	Segment Variable		MaxC	10		TrainDefaults	Y	
ClusvarRole	SEGMENT		MaxIter	10		TreeProfile	Y	
DistancePlot	Y		MaxSteps	1200		XConv	0.0001	
Drift	N		MissingInterval	DEFAULT				

### Node=Centroid Clustering Variable Summary

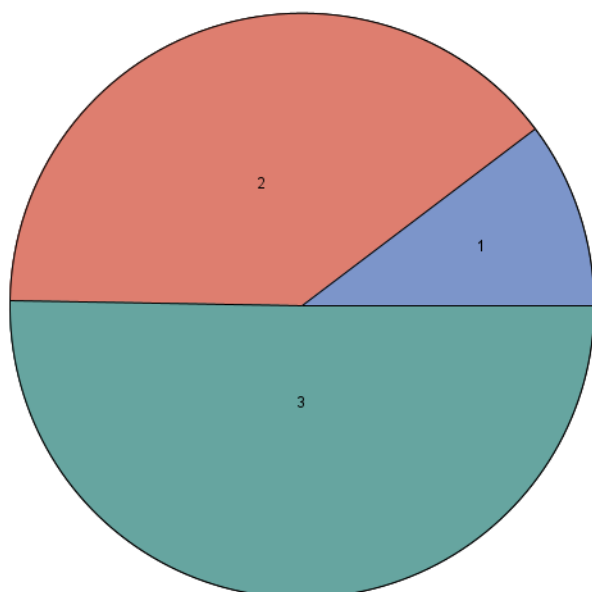
Role	Level	Frequency Count	Name
INPUT	INTERVAL	4	Discount Quantity Sales ShipDate
INPUT	NOMINAL	4	Category Region ShipMode SubCategory
ID	NOMINAL	1	ProductID

### Node=Centroid Clustering Mean Statistics

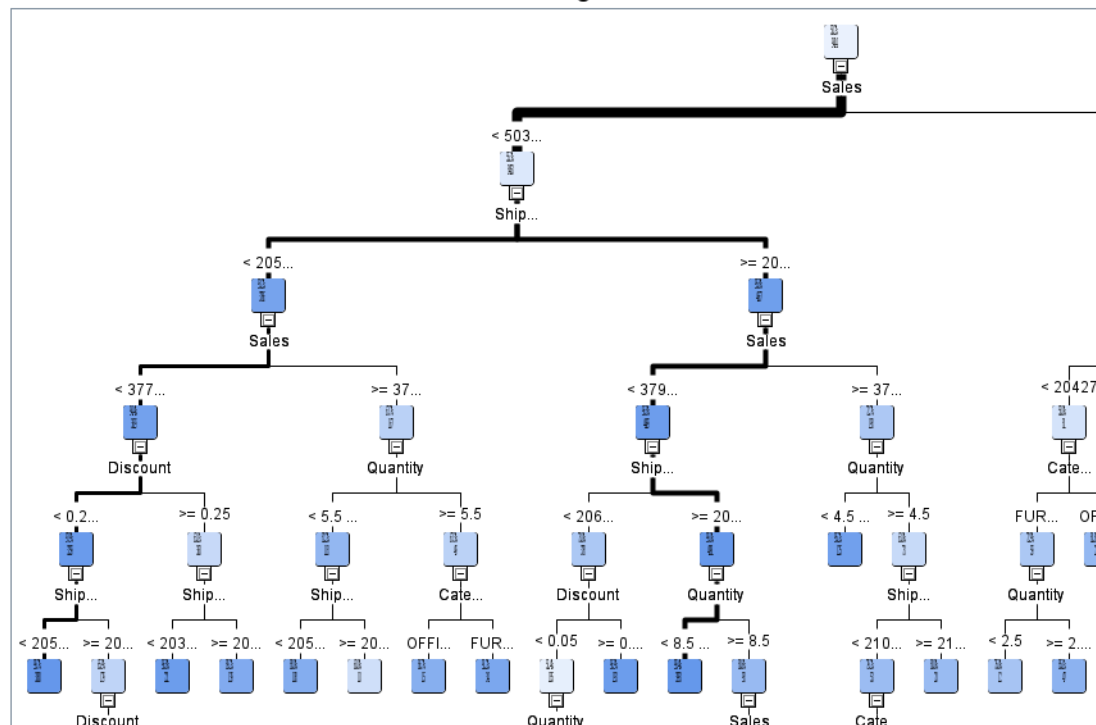
Variable	Segment 1	Segment 2	Segment 3
Clustering Criterion	0.46	0.46	0.46
Maximum Relative Change in Cluster Seeds	0.01	0.01	0.01
Improvement in Clustering Criterion	.	.	.
Frequency of Cluster	980.00	3710.00	4724.00
Root-Mean-Square Standard Deviation	0.54	0.44	0.45
Maximum Distance from Cluster Seed	5.75	5.24	5.02
Nearest Cluster	3.00	3.00	2.00
Distance to Nearest Cluster	3.06	1.76	1.76
Discount	0.15	0.11	0.15
Quantity	5.36	3.54	3.40
Sales	888.29	96.61	94.53
ShipDate	20555.98	20174.16	20902.75
Category=Furniture	0.49	0.18	0.20

Variable	Segment 1	Segment 2	Segment 3
Category=Office Supplies	0.22	0.66	0.63
Category=Technology	0.30	0.16	0.17
Region=Central	0.23	0.19	0.22
Region=East	0.29	0.30	0.29
Region=South	0.15	0.18	0.16
Region=West	0.34	0.33	0.33
ShipMode=First Class	0.15	0.14	0.17
ShipMode=Same Day	0.06	0.05	0.06
ShipMode=Second Class	0.20	0.20	0.19
ShipMode=Standard Class	0.59	0.61	0.58
SubCategory=Accessories	0.08	0.08	0.08
SubCategory=Appliances	0.04	0.04	0.04
SubCategory=Art	0.00	0.10	0.09
SubCategory=Binders	0.05	0.12	0.16
SubCategory=Bookcases	0.07	0.02	0.02
SubCategory=Chairs	0.24	0.04	0.05
SubCategory=Envelopes	0.00	0.04	0.02
SubCategory=Fasteners	-0.00	0.03	0.02
SubCategory=Furnishings	0.04	0.11	0.11
SubCategory=Labels	0.00	0.05	0.04
SubCategory=Machines	0.03	0.00	0.01
SubCategory=Paper	0.01	0.17	0.15
SubCategory=Phones	0.19	0.08	0.08
SubCategory=Storage	0.11	0.09	0.08
SubCategory=Supplies	0.01	0.02	0.02
SubCategory=Tables	0.14	0.02	0.02

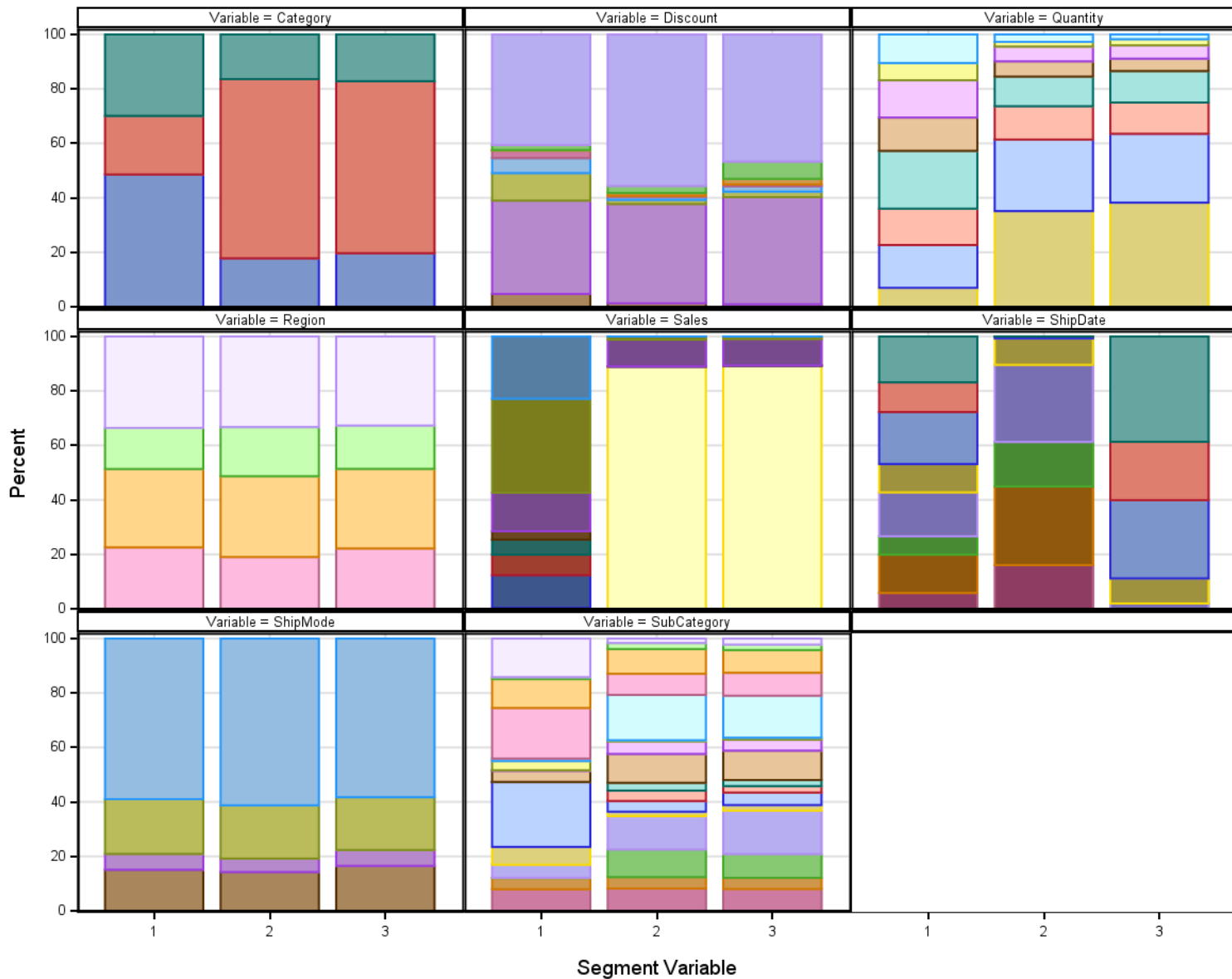
SAS Enterprise Miner Report  
Node=Centroid Clustering  
Segment Size



SAS Enterprise Miner Report  
Node=Centroid Clustering  
Tree Diagram



**SAS Enterprise Miner Report**  
**Node=Centroid Clustering**  
**Segment Plot**



Segment Variable

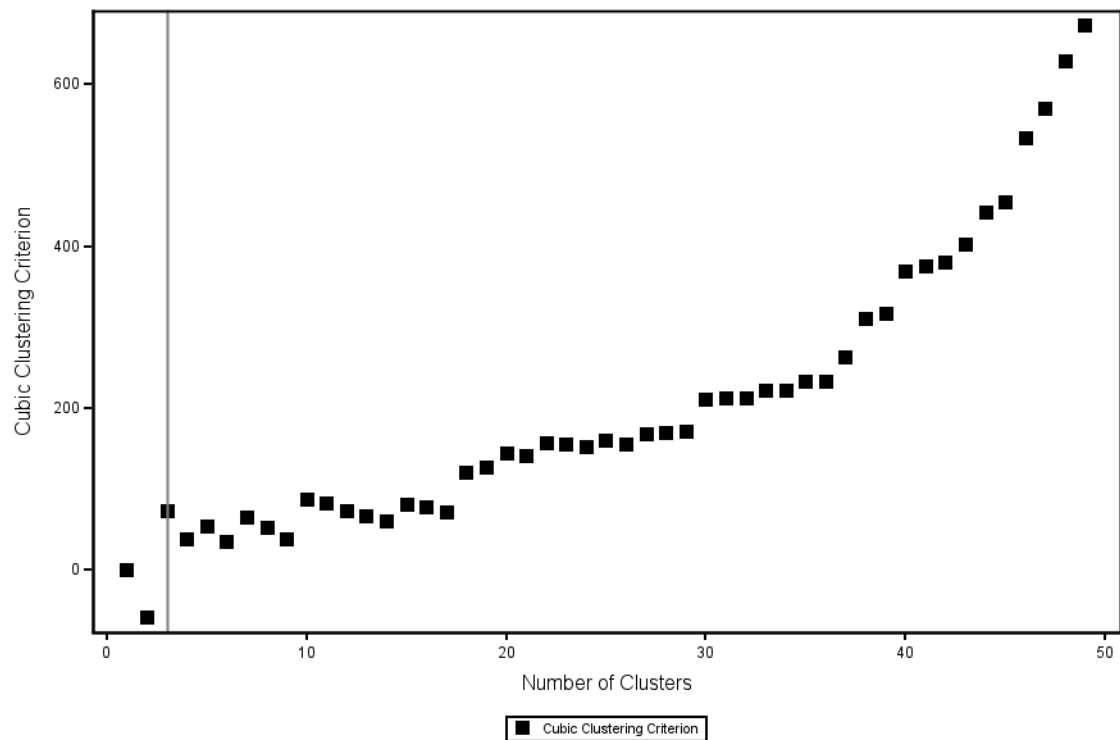
Formatted Value

Furniture	Office Supplies	Technology	0.0875:0.175	0.175:0.2625	0.2625:0.35	0.35:0.4375	0.4375:0.525
0.525:0.6125	0.6125:0.7	0:0.0875	1:2.125	2.125:3.25	3.25:4.375	4.375:5.5	5.5:6.625
6.625:7.75	7.75:8.875	8.875:10	Central	East	South	West	0.852:260.67
1040.1:1299.9	1299.9:1559.8	1559.8:1819.6	1819.6:2079.4	2079.4:20642	20642:20824	20824:21007	19730:19912
19912:20095	20095:20277	20277:20460	20460:20642	20642:20824	20824:21007	21007:21189	First Class
Same Day	Second Class	Standard Class	Accessories	Appliances	Art	Binders	Bookcases
Chairs	Envelopes	Fasteners	Furnishings	Labels	Machines	Paper	Phones
Storage	Supplies	Tables					

## SAS Enterprise Miner Report

Node=Centroid Clustering

CCC Plot



## SAS Enterprise Miner Report

### Node=Ward Cluster Summary

Node id = Clus  
Node label = Ward Cluster  
Meta path = Ids2 => Filter => Clus  
Notes =

### Node=Ward Cluster Properties

Property	Value	Default	Property	Value	Default	Property	Value	Default
Component	Cluster		FinalMaxNum	20		MissingNominal	DEFAULT	
AutomaticMaxNum	50		HideVariable	Y		MissingOrdinal	DEFAULT	
AutomaticMethod	WARD		ImputationMethod	NONE		NominalEncoding	GLM	
AutomaticMinNum	2		Initial	DEFAULT		NumberClusterMethod	AUTOMATIC	
Bins	100		Learn	.		OrdinalEncoding	RANK	
CCCCutOff	3		LearnFinal	0.02		Radius	0	
ClusterGraphs	Y		LearnInitial	0.5		Stdize	STD	
Clusvar	_SEGMENT_		LearnSteps	1000		Summary	N	
ClusvarLabel	Segment Variable		MaxC	10		TrainDefaults	Y	
ClusvarRole	SEGMENT		MaxIter	10		TreeProfile	Y	
DistancePlot	Y		MaxSteps	1200		XConv	0.0001	
Drift	N		MissingInterval	DEFAULT				

### Node=Ward Cluster Variable Summary

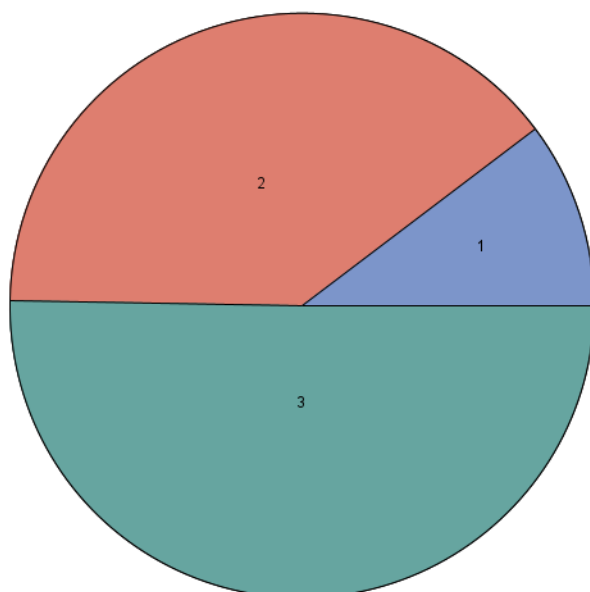
Role	Level	Frequency Count	Name
INPUT	INTERVAL	4	Discount Quantity Sales ShipDate
INPUT	NOMINAL	4	Category Region ShipMode SubCategory
ID	NOMINAL	1	ProductID

### Node=Ward Cluster Mean Statistics

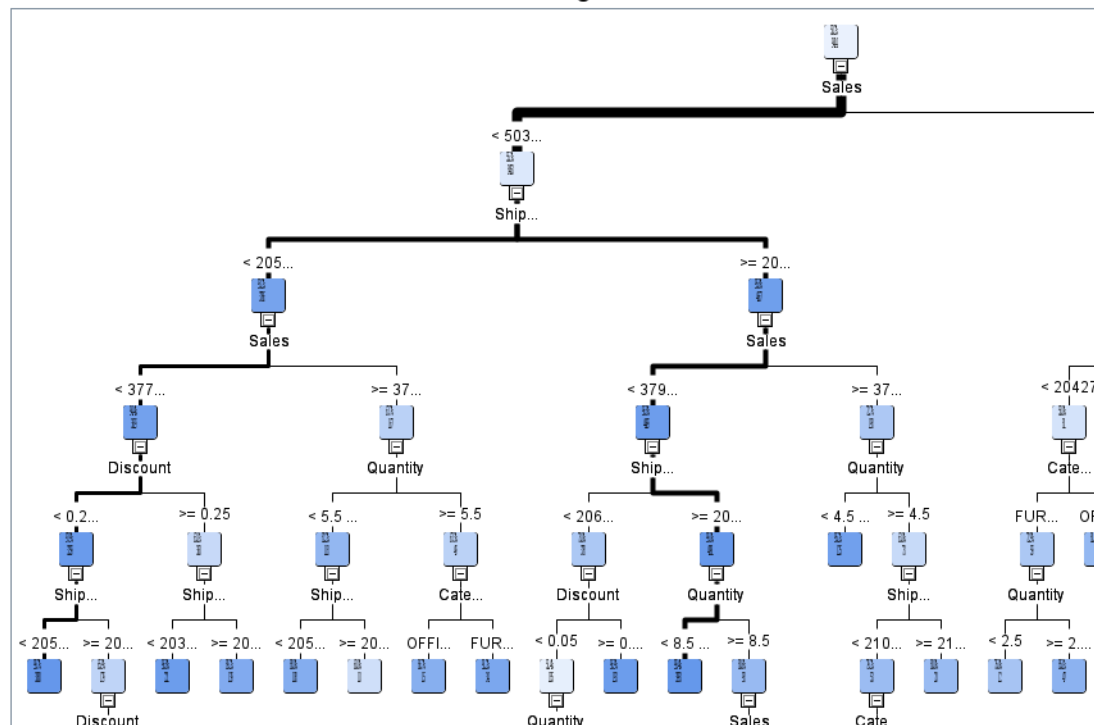
Variable	Segment 1	Segment 2	Segment 3
Clustering Criterion	0.46	0.46	0.46
Maximum Relative Change in Cluster Seeds	0.01	0.01	0.01
Improvement in Clustering Criterion	.	.	.
Frequency of Cluster	980.00	3710.00	4724.00
Root-Mean-Square Standard Deviation	0.54	0.44	0.45
Maximum Distance from Cluster Seed	5.75	5.24	5.02
Nearest Cluster	3.00	3.00	2.00
Distance to Nearest Cluster	3.06	1.76	1.76
Discount	0.15	0.11	0.15
Quantity	5.36	3.54	3.40
Sales	888.29	96.61	94.53
ShipDate	20555.98	20174.16	20902.75
Category=Furniture	0.49	0.18	0.20

Variable	Segment 1	Segment 2	Segment 3
Category=Office Supplies	0.22	0.66	0.63
Category=Technology	0.30	0.16	0.17
Region=Central	0.23	0.19	0.22
Region=East	0.29	0.30	0.29
Region=South	0.15	0.18	0.16
Region=West	0.34	0.33	0.33
ShipMode=First Class	0.15	0.14	0.17
ShipMode=Same Day	0.06	0.05	0.06
ShipMode=Second Class	0.20	0.20	0.19
ShipMode=Standard Class	0.59	0.61	0.58
SubCategory=Accessories	0.08	0.08	0.08
SubCategory=Appliances	0.04	0.04	0.04
SubCategory=Art	0.00	0.10	0.09
SubCategory=Binders	0.05	0.12	0.16
SubCategory=Bookcases	0.07	0.02	0.02
SubCategory=Chairs	0.24	0.04	0.05
SubCategory=Envelopes	0.00	0.04	0.02
SubCategory=Fasteners	-0.00	0.03	0.02
SubCategory=Furnishings	0.04	0.11	0.11
SubCategory=Labels	0.00	0.05	0.04
SubCategory=Machines	0.03	0.00	0.01
SubCategory=Paper	0.01	0.17	0.15
SubCategory=Phones	0.19	0.08	0.08
SubCategory=Storage	0.11	0.09	0.08
SubCategory=Supplies	0.01	0.02	0.02
SubCategory=Tables	0.14	0.02	0.02

SAS Enterprise Miner Report  
Node=Ward Cluster  
Segment Size



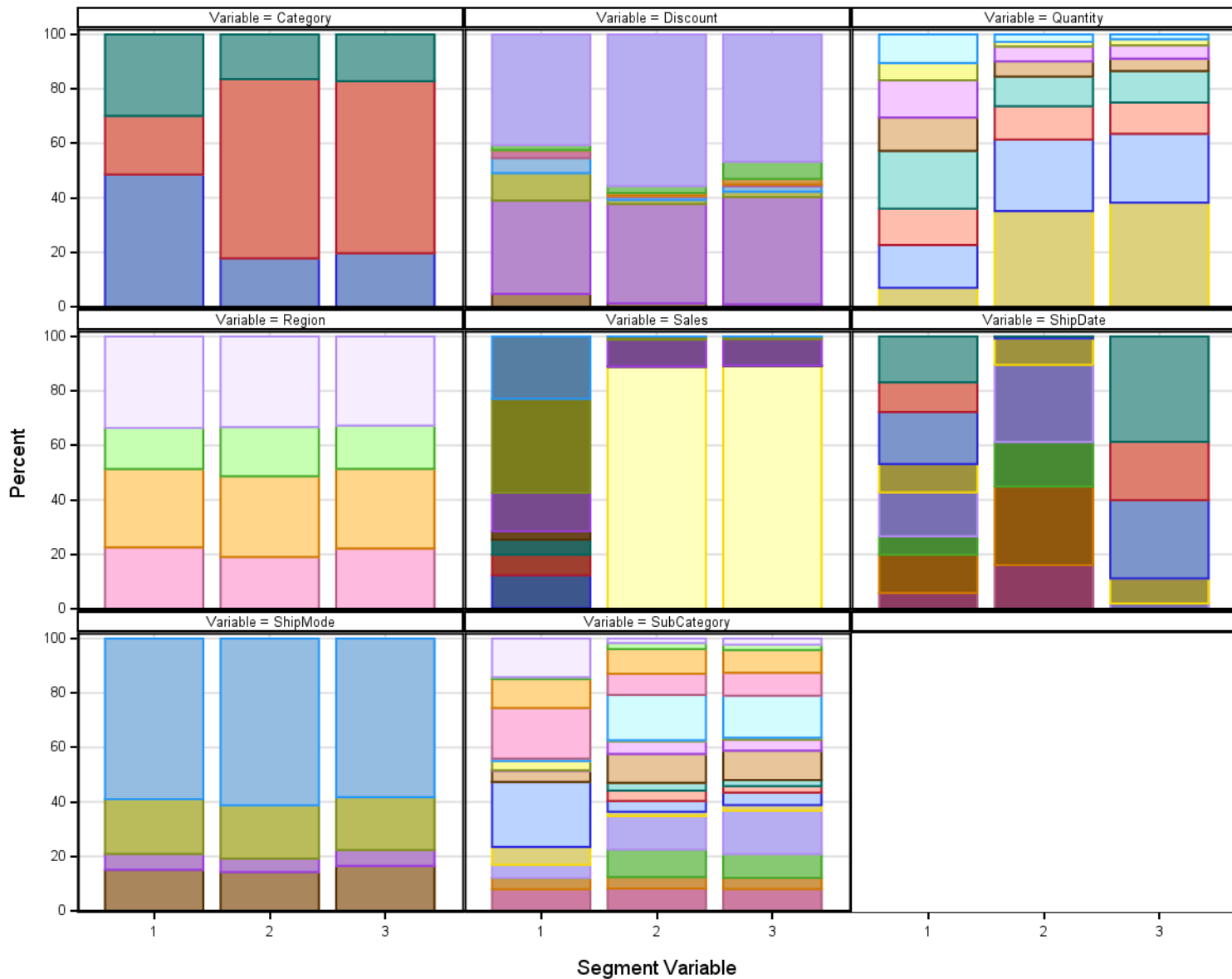




# SAS Enterprise Miner Report

## Node=Ward Cluster

### Segment Plot



Segment Variable

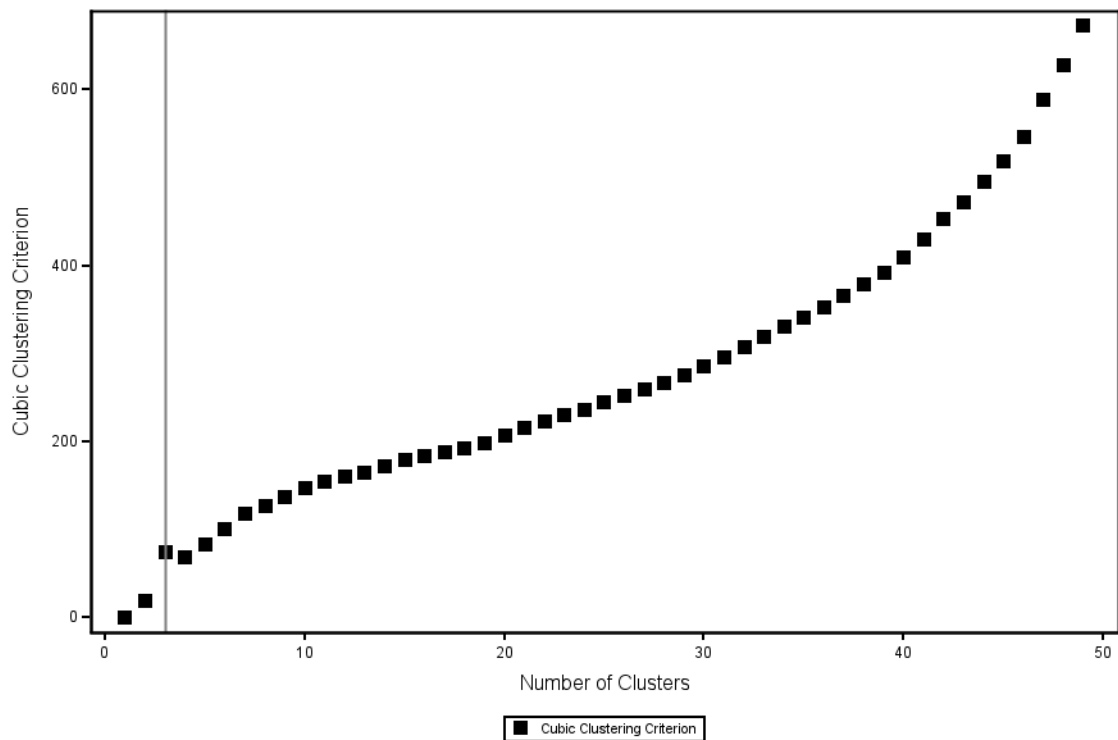
Formatted Value

Furniture	Office Supplies	Technology	0.0875:0.175	0.175:0.2625	0.2625:0.35	0.35:0.4375	0.4375:0.525
0.525:0.6125	0.6125:0.7	0:0.0875	1:2.125	2.125:3.25	3.25:4.375	4.375:5.5	5.5:6.625
6.625:7.75	7.75:8.875	8.875:10	Central	East	South	West	0.852:260.67
1040.1:1299.9	1299.9:1559.8	1559.8:1819.6	1819.6:2079.4	2079.4:20642	20642:20824	20824:21007	19730:19912
19912:20095	20095:20277	20277:20460	20460:20642	20642:20824	20824:21007	21007:21189	First Class
Same Day	Second Class	Standard Class	Accessories	Appliances	Art	Binders	Bookcases
Chairs	Envelopes	Fasteners	Furnishings	Labels	Machines	Paper	Phones
Storage	Supplies	Tables					

## SAS Enterprise Miner Report

Node=Ward Cluster

CCC Plot



End of Report