

Your temporary usage period for IBM SPSS Statistics will expire in 10 days.

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GET

FILE='C:\Users\Bahador\Desktop\Analysis\Range\Range_Accuracy.sav'.

DATASET NAME DataSet1 WINDOW=FRONT.

GLM Bar_Num_Num_CarBar_Num_Num_MovieBar_Num_Num_CarBar_Num_Num_MovieBar_Ord_Num_Car

Bar_Ord_Num_MovieLine_Num_Num_CarLine_Num_Num_MovieLine_Num_Num_CarLine_Num_Num_Movie

Line_Ord_Num_CarLine_Ord_Num_MoviePie_Num_Num_CarPie_Num_Num_MoviePie_Num_Num_Car

Pie_Num_Num_MoviePie_Ord_Num_CarPie_Ord_Num_MovieScatter_Num_Num_CarScatter_Num_Num_Movie

Scatter_Num_Num_CarScatter_Num_Num_MovieScatter_Ord_Num_CarScatter_Ord_Num_Movie

Table_Num_Num_CarTable_Num_Num_MovieTable_Num_Num_CarTable_Num_Num_MovieTable_Ord_Num_Car

Table_Ord_Num_Movie

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/METHOD=SSTYPE(3)

/EMMEANS=TABLES(OVERALL)

/EMMEANS=TABLES(Visualization) COMPARE ADJ(BONFERRONI)

/EMMEANS=TABLES(DataAttributeTypes\$ COMPARE ADJ(BONFERRONI)

/EMMEANS=TABLES(Visualization*DataAttributeTypes\$

/PRINT=DESCRIPTIVE ETASQ OPOWER HOMOGENEITY

/CRITERIA=ALPHA(.05)

/WSDESIGN=VisualizationDataAttributeTypesDatasets Visualization*DataAttributeTypes

Visualization*Datasets DataAttributeTypes*Datasets Visualization*DataAttributeTypes*Datasets.

General Linear Model

Notes

Output Created		07-SEP-2016 13:07:17
Comments		
Input	Data	C: \Users\Bahador\Desktop\A nalysis\Range\Range_Acc uracy.sav
	Active Dataset	DataSet1
	Filter	<none>
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	N of Rows in Working Data File	18
Missing Value Handling	Definition of Missing	User-defined missing values are treated as missing.
	Cases Used	Statistics are based on all cases with valid data for all variables in the model.

Notes

Syntax

GLM Bar_Nom_Num_Car
 Bar_Nom_Num_Movie
 Bar_Num_Num_Car
 Bar_Num_Num_Movie
 Bar_Ord_Num_Car
 Bar_Ord_Num_Movie
 Line_Nom_Num_Car
 Line_Nom_Num_Movie
 Line_Num_Num_Car
 Line_Num_Num_Movie
 Line_Ord_Num_Car
 Line_Ord_Num_Movie
 Pie_Nom_Num_Car
 Pie_Nom_Num_Movie
 Pie_Num_Num_Car
 Pie_Num_Num_Movie
 Pie_Ord_Num_Car
 Pie_Ord_Num_Movie
 Scatter_Nom_Num_Car
 Scatter_Nom_Num_Movie
 Scatter_Num_Num_Car
 Scatter_Num_Num_Movie
 Scatter_Ord_Num_Car
 Scatter_Ord_Num_Movie
 Table_Nom_Num_Car
 Table_Nom_Num_Movie
 Table_Num_Num_Car
 Table_Num_Num_Movie
 Table_Ord_Num_Car
 Table_Ord_Num_Movie

/WSFACTOR=Visualizatio
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 DataAttributeTypes 3
 Polynomial Datasets 2
 Polynomial
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 ADJ(BONFERRONI)
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 (DataAttributeTypes)
 COMPARE ADJ
 (BONFERRONI)
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 (Visualization*DataAttribut
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 /PRINT=DESCRIPTIVE
 ETASQ OPOWER
 HOMOGENEITY
 /CRITERIA=ALPHA(.05)

/WSDESIGN=Visualizatio
 n DataAttributeTypes
 Datasets
 Visualization*DataAttribute
 Types
 Visualization*Datasets
 DataAttributeTypes*Dat
 aSets

Notes

Resources	Processor Time	00:00:00.02
	Elapsed Time	00:00:00.02

[DataSet1] C:\Users\Bahador\Desktop\Analysis\Range\Range_Accuracy.sav

Warnings

The HOMOGENEITY specification in the PRINT subcommand will be ignored because there are no between-subjects factors.

Within-Subjects Factors

Measure: MEASURE_1

Visualization	DataAttributeTypes	Datasets	Dependent Variable
1	1	1	Bar_Nom_Nu m_Car
		2	Bar_Nom_Nu m_Movie
	2	1	Bar_Num_Nu m_Car
		2	Bar_Num_Nu m_Movie
	3	1	Bar_Ord_Nu m_Car
		2	Bar_Ord_Nu m_Movie
2	1	1	Line_Nom_Nu m_Car
		2	Line_Nom_Nu m_Movie
	2	1	Line_Num_Nu m_Car
		2	Line_Num_Nu m_Movie
	3	1	Line_Ord_Nu m_Car
		2	Line_Ord_Nu m_Movie
3	1	1	Pie_Nom_Nu m_Car
		2	Pie_Nom_Nu m_Movie

Within-Subjects Factors

Measure: MEASURE_1

Visualization	DataAttributeTypes	Datasets	Dependent Variable
	2	1	Pie_Num_Nu m_Car
		2	Pie_Num_Nu m_Movie
	3	1	Pie_Ord_Num _Car
		2	Pie_Ord_Num _Movie
4	1	1	Scatter_Nom_ Num_Car
		2	Scatter_Nom_ Num_Movie
	2	1	Scatter_Num_ Num_Car
		2	Scatter_Num_ Num_Movie
	3	1	Scatter_Ord_ Num_Car
		2	Scatter_Ord_ Num_Movie
5	1	1	Table_Nom_ Num_Car
		2	Table_Nom_ Num_Movie
	2	1	Table_Num_ Num_Car
		2	Table_Num_ Num_Movie
	3	1	Table_Ord_N um_Car
		2	Table_Ord_N um_Movie

Descriptive Statistics

	Mean	Std. Deviation	N
Bar_Nom_Num_Car	100.0000	.00000	18
Bar_Nom_Num_Movie	94.4444	23.57023	18
Bar_Num_Num_Car	100.0000	.00000	18
Bar_Num_Num_Movie	88.8889	32.33808	18
Bar_Ord_Num_Car	77.7778	42.77926	18
Bar_Ord_Num_Movie	72.2222	46.08886	18
Line_Nom_Num_Car	100.0000	.00000	18
Line_Nom_Num_Movie	94.4444	23.57023	18
Line_Num_Num_Car	50.0000	51.44958	18
Line_Num_Num_Movie	77.7778	42.77926	18
Line_Ord_Num_Car	94.4444	23.57023	18
Line_Ord_Num_Movie	83.3333	38.34825	18
Pie_Nom_Num_Car	88.8889	32.33808	18
Pie_Nom_Num_Movie	83.3333	38.34825	18
Pie_Num_Num_Car	77.7778	42.77926	18
Pie_Num_Num_Movie	83.3333	38.34825	18
Pie_Ord_Num_Car	100.0000	.00000	18
Pie_Ord_Num_Movie	94.4444	23.57023	18
Scatter_Nom_Num_Car	94.4444	23.57023	18
Scatter_Nom_Num_Movie	77.7778	42.77926	18
Scatter_Num_Num_Car	83.3333	38.34825	18
Scatter_Num_Num_Movie	83.3333	38.34825	18
Scatter_Ord_Num_Car	83.3333	38.34825	18
Scatter_Ord_Num_Movie	94.4444	23.57023	18
Table_Nom_Num_Car	100.0000	.00000	18
Table_Nom_Num_Movie	94.4444	23.57023	18
Table_Num_Num_Car	66.6667	48.50713	18
Table_Num_Num_Movie	55.5556	51.13100	18
Table_Ord_Num_Car	88.8889	32.33808	18
Table_Ord_Num_Movie	94.4444	23.57023	18

Multivariate Tests^a

Effect		Value	F	Hypothesis df	Error df
Visualization	Pillai's Trace	.148	.610 ^b	4.000	14.000
	Wilks' Lambda	.852	.610 ^b	4.000	14.000
	Hotelling's Trace	.174	.610 ^b	4.000	14.000
	Roy's Largest Root	.174	.610 ^b	4.000	14.000
DataAttributeTypes	Pillai's Trace	.473	7.188 ^b	2.000	16.000
	Wilks' Lambda	.527	7.188 ^b	2.000	16.000
	Hotelling's Trace	.898	7.188 ^b	2.000	16.000
	Roy's Largest Root	.898	7.188 ^b	2.000	16.000
Datasets	Pillai's Trace	.077	1.417 ^b	1.000	17.000
	Wilks' Lambda	.923	1.417 ^b	1.000	17.000
	Hotelling's Trace	.083	1.417 ^b	1.000	17.000
	Roy's Largest Root	.083	1.417 ^b	1.000	17.000
Visualization * DataAttributeTypes	Pillai's Trace	.896	10.809 ^b	8.000	10.000
	Wilks' Lambda	.104	10.809 ^b	8.000	10.000
	Hotelling's Trace	8.647	10.809 ^b	8.000	10.000
	Roy's Largest Root	8.647	10.809 ^b	8.000	10.000
Visualization * Datasets	Pillai's Trace	.246	1.142 ^b	4.000	14.000
	Wilks' Lambda	.754	1.142 ^b	4.000	14.000
	Hotelling's Trace	.326	1.142 ^b	4.000	14.000
	Roy's Largest Root	.326	1.142 ^b	4.000	14.000
DataAttributeTypes * Datasets	Pillai's Trace	.140	1.303 ^b	2.000	16.000
	Wilks' Lambda	.860	1.303 ^b	2.000	16.000
	Hotelling's Trace	.163	1.303 ^b	2.000	16.000
	Roy's Largest Root	.163	1.303 ^b	2.000	16.000
Visualization * DataAttributeTypes * Datasets	Pillai's Trace	.722	3.250 ^b	8.000	10.000
	Wilks' Lambda	.278	3.250 ^b	8.000	10.000
	Hotelling's Trace	2.600	3.250 ^b	8.000	10.000
	Roy's Largest Root	2.600	3.250 ^b	8.000	10.000

Multivariate Tests^a

Effect		Sig.	Partial Eta Squared	Noncent. Parameter
Visualization	Pillai's Trace	.662	.148	2.441
	Wilks' Lambda	.662	.148	2.441
	Hotelling's Trace	.662	.148	2.441
	Roy's Largest Root	.662	.148	2.441
DataAttributeTypes	Pillai's Trace	.006	.473	14.376
	Wilks' Lambda	.006	.473	14.376
	Hotelling's Trace	.006	.473	14.376
	Roy's Largest Root	.006	.473	14.376
Datasets	Pillai's Trace	.250	.077	1.417
	Wilks' Lambda	.250	.077	1.417
	Hotelling's Trace	.250	.077	1.417
	Roy's Largest Root	.250	.077	1.417
Visualization * DataAttributeTypes	Pillai's Trace	.001	.896	86.469
	Wilks' Lambda	.001	.896	86.469
	Hotelling's Trace	.001	.896	86.469
	Roy's Largest Root	.001	.896	86.469
Visualization * Datasets	Pillai's Trace	.377	.246	4.568
	Wilks' Lambda	.377	.246	4.568
	Hotelling's Trace	.377	.246	4.568
	Roy's Largest Root	.377	.246	4.568
DataAttributeTypes * Datasets	Pillai's Trace	.299	.140	2.605
	Wilks' Lambda	.299	.140	2.605
	Hotelling's Trace	.299	.140	2.605
	Roy's Largest Root	.299	.140	2.605
Visualization * DataAttributeTypes * Datasets	Pillai's Trace	.042	.722	26.002
	Wilks' Lambda	.042	.722	26.002
	Hotelling's Trace	.042	.722	26.002
	Roy's Largest Root	.042	.722	26.002

Multivariate Tests^a

Effect		Observed Power ^c
Visualization	Pillai's Trace	.157
	Wilks' Lambda	.157
	Hotelling's Trace	.157
	Roy's Largest Root	.157
DataAttributeTypes	Pillai's Trace	.878
	Wilks' Lambda	.878
	Hotelling's Trace	.878
	Roy's Largest Root	.878
Datasets	Pillai's Trace	.203
	Wilks' Lambda	.203
	Hotelling's Trace	.203
	Roy's Largest Root	.203
Visualization * DataAttributeTypes	Pillai's Trace	.999
	Wilks' Lambda	.999
	Hotelling's Trace	.999
	Roy's Largest Root	.999
Visualization * Datasets	Pillai's Trace	.269
	Wilks' Lambda	.269
	Hotelling's Trace	.269
	Roy's Largest Root	.269
DataAttributeTypes * Datasets	Pillai's Trace	.241
	Wilks' Lambda	.241
	Hotelling's Trace	.241
	Roy's Largest Root	.241
Visualization * DataAttributeTypes * Datasets	Pillai's Trace	.741
	Wilks' Lambda	.741
	Hotelling's Trace	.741
	Roy's Largest Root	.741

a. Design: Intercept

Within Subjects Design: Visualization + DataAttributeTypes + Datasets + Visualization *

DataAttributeTypes + Visualization * Datasets + DataAttributeTypes * Datasets + Visualization * ...

b. Exact statistic

c.

c. Computed using alpha = .05

Mauchly's Test of Sphericity^a

Measure: MEASURE_1

Within Subjects Effect	Mauchly's W	Approx. Chi-Square	df	Sig.	Epsilon ^b Greenhouse-Geisser
Visualization	.584	8.284	9	.508	.819
DataAttributeTypes	.890	1.857	2	.395	.901
Datasets	1.000	.000	0	.	1.000
Visualization * DataAttributeTypes	.005	74.031	35	.000	.494
Visualization * Datasets	.348	16.265	9	.063	.662
DataAttributeTypes * Datasets	.841	2.763	2	.251	.863
Visualization * DataAttributeTypes * Datasets	.019	56.221	35	.017	.599

Mauchly's Test of Sphericity^a

Measure: MEASURE_1

Within Subjects Effect	Epsilon ^b	
	Huynh-Feldt	Lower-bound
Visualization	1.000	.250
DataAttributeTypes	1.000	.500
Datasets	1.000	1.000
Visualization * DataAttributeTypes	.663	.125
Visualization * Datasets	.796	.250
DataAttributeTypes * Datasets	.952	.500
Visualization * DataAttributeTypes * Datasets	.862	.125

Tests the null hypothesis that the error covariance matrix of the orthonormalized transformed dependent variables is proportional to an identity matrix.

a. Design: Intercept

Within Subjects Design: Visualization + DataAttributeTypes + Datasets + Visualization *

DataAttributeTypes + Visualization * Datasets + DataAttributeTypes * Datasets + Visualization * ...

b. May be used to adjust the degrees of freedom for the averaged tests of significance. Corrected tests are displayed in the Tests of Within-Subjects Effects table.

Tests of Within-Subjects Effects

Measure: MEASURE_1

Source		Type III Sum of Squares	df	Mean Square	F
Visualization	Sphericity Assumed	2851.852	4	712.963	.722
	Greenhouse-Geisser	2851.852	3.276	870.573	.722
	Huynh-Feldt	2851.852	4.000	712.963	.722
	Lower-bound	2851.852	1.000	2851.852	.722
Error(Visualization)	Sphericity Assumed	67148.148	68	987.473	
	Greenhouse-Geisser	67148.148	55.689	1205.766	
	Huynh-Feldt	67148.148	68.000	987.473	
	Lower-bound	67148.148	17.000	3949.891	
DataAttributeTypes	Sphericity Assumed	24925.926	2	12462.963	10.152
	Greenhouse-Geisser	24925.926	1.803	13828.382	10.152
	Huynh-Feldt	24925.926	2.000	12462.963	10.152
	Lower-bound	24925.926	1.000	24925.926	10.152
Error(DataAttributeTypes)	Sphericity Assumed	41740.741	34	1227.669	
	Greenhouse-Geisser	41740.741	30.643	1362.170	
	Huynh-Feldt	41740.741	34.000	1227.669	
	Lower-bound	41740.741	17.000	2455.338	
Datasets	Sphericity Assumed	666.667	1	666.667	1.417
	Greenhouse-Geisser	666.667	1.000	666.667	1.417
	Huynh-Feldt	666.667	1.000	666.667	1.417
	Lower-bound	666.667	1.000	666.667	1.417
Error(Datasets)	Sphericity Assumed	8000.000	17	470.588	
	Greenhouse-Geisser	8000.000	17.000	470.588	
	Huynh-Feldt	8000.000	17.000	470.588	
	Lower-bound	8000.000	17.000	470.588	
Visualization * DataAttributeTypes	Sphericity Assumed	40259.259	8	5032.407	4.898
	Greenhouse-Geisser	40259.259	3.954	10180.932	4.898

Tests of Within-Subjects Effects

Measure: MEASURE_1

Source		Sig.	Partial Eta Squared	Noncent. Parameter
Visualization	Sphericity Assumed	.580	.041	2.888
	Greenhouse-Geisser	.555	.041	2.365
	Huynh-Feldt	.580	.041	2.888
	Lower-bound	.407	.041	.722
Error(Visualization)	Sphericity Assumed			
	Greenhouse-Geisser			
	Huynh-Feldt			
	Lower-bound			
DataAttributeTypes	Sphericity Assumed	.000	.374	20.303
	Greenhouse-Geisser	.001	.374	18.299
	Huynh-Feldt	.000	.374	20.303
	Lower-bound	.005	.374	10.152
Error(DataAttributeTypes)	Sphericity Assumed			
	Greenhouse-Geisser			
	Huynh-Feldt			
	Lower-bound			
Datasets	Sphericity Assumed	.250	.077	1.417
	Greenhouse-Geisser	.250	.077	1.417
	Huynh-Feldt	.250	.077	1.417
	Lower-bound	.250	.077	1.417
Error(Datasets)	Sphericity Assumed			
	Greenhouse-Geisser			
	Huynh-Feldt			
	Lower-bound			
Visualization * DataAttributeTypes	Sphericity Assumed	.000	.224	39.182
	Greenhouse-Geisser	.002	.224	19.367

Tests of Within-Subjects Effects

Measure: MEASURE_1

Source		Observed Power ^a
Visualization	Sphericity Assumed	.222
	Greenhouse-Geisser	.201
	Huynh-Feldt	.222
	Lower-bound	.126
Error(Visualization)	Sphericity Assumed	
	Greenhouse-Geisser	
	Huynh-Feldt	
	Lower-bound	
DataAttributeTypes	Sphericity Assumed	.978
	Greenhouse-Geisser	.967
	Huynh-Feldt	.978
	Lower-bound	.851
Error(DataAttributeTypes)	Sphericity Assumed	
	Greenhouse-Geisser	
	Huynh-Feldt	
	Lower-bound	
Datasets	Sphericity Assumed	.203
	Greenhouse-Geisser	.203
	Huynh-Feldt	.203
	Lower-bound	.203
Error(Datasets)	Sphericity Assumed	
	Greenhouse-Geisser	
	Huynh-Feldt	
	Lower-bound	
Visualization * DataAttributeTypes	Sphericity Assumed	.998
	Greenhouse-Geisser	.945

Tests of Within-Subjects Effects

Measure: MEASURE_1

Source		Type III Sum of Squares	df	Mean Square	F
	Huynh-Feldt	40259.259	5.303	7592.022	4.898
	Lower-bound	40259.259	1.000	40259.259	4.898
Error (Visualization*DataAttribute Types)	Sphericity Assumed	139740.741	136	1027.505	
	Greenhouse-Geisser	139740.741	67.224	2078.720	
	Huynh-Feldt	139740.741	90.148	1550.122	
	Lower-bound	139740.741	17.000	8220.044	
Visualization * Datasets	Sphericity Assumed	1740.741	4	435.185	.526
	Greenhouse-Geisser	1740.741	2.649	657.146	.526
	Huynh-Feldt	1740.741	3.183	546.869	.526
	Lower-bound	1740.741	1.000	1740.741	.526
Error (Visualization*Datasets)	Sphericity Assumed	56259.259	68	827.342	
	Greenhouse-Geisser	56259.259	45.032	1249.318	
	Huynh-Feldt	56259.259	54.113	1039.667	
	Lower-bound	56259.259	17.000	3309.368	
DataAttributeTypes * Datasets	Sphericity Assumed	2333.333	2	1166.667	.844
	Greenhouse-Geisser	2333.333	1.726	1351.693	.844
	Huynh-Feldt	2333.333	1.903	1225.874	.844
	Lower-bound	2333.333	1.000	2333.333	.844
Error (DataAttributeTypes*Datase ts)	Sphericity Assumed	47000.000	34	1382.353	
	Greenhouse-Geisser	47000.000	29.346	1601.585	
	Huynh-Feldt	47000.000	32.358	1452.506	
	Lower-bound	47000.000	17.000	2764.706	
Visualization * DataAttributeTypes * Datasets	Sphericity Assumed	11370.370	8	1421.296	1.266
	Greenhouse-Geisser	11370.370	4.789	2374.054	1.266
	Huynh-Feldt	11370.370	6.896	1648.724	1.266
	Lower-bound	11370.370	1.000	11370.370	1.266
Error (Visualization*DataAttribute Types*Datasets)	Sphericity Assumed	152629.630	136	1122.277	
	Greenhouse-Geisser	152629.630	81.420	1874.588	
	Huynh-Feldt	152629.630	117.240	1301.857	
	Lower-bound	152629.630	17.000	8978.214	

Tests of Within-Subjects Effects

Measure: MEASURE_1

Source		Sig.	Partial Eta Squared	Noncent. Parameter
	Huynh-Feldt	.000	.224	25.972
	Lower-bound	.041	.224	4.898
Error (Visualization*DataAttribute Types)	Sphericity Assumed			
	Greenhouse-Geisser			
	Huynh-Feldt			
	Lower-bound			
Visualization * Datasets	Sphericity Assumed	.717	.030	2.104
	Greenhouse-Geisser	.645	.030	1.393
	Huynh-Feldt	.677	.030	1.674
	Lower-bound	.478	.030	.526
Error (Visualization*Datasets)	Sphericity Assumed			
	Greenhouse-Geisser			
	Huynh-Feldt			
	Lower-bound			
DataAttributeTypes * Datasets	Sphericity Assumed	.439	.047	1.688
	Greenhouse-Geisser	.425	.047	1.457
	Huynh-Feldt	.434	.047	1.606
	Lower-bound	.371	.047	.844
Error (DataAttributeTypes*Datase ts)	Sphericity Assumed			
	Greenhouse-Geisser			
	Huynh-Feldt			
	Lower-bound			
Visualization * DataAttributeTypes * Datasets	Sphericity Assumed	.266	.069	10.132
	Greenhouse-Geisser	.287	.069	6.066
	Huynh-Feldt	.273	.069	8.734
	Lower-bound	.276	.069	1.266
Error (Visualization*DataAttribute Types*Datasets)	Sphericity Assumed			
	Greenhouse-Geisser			
	Huynh-Feldt			
	Lower-bound			

Tests of Within-Subjects Effects

Measure: MEASURE_1

Source		Observed Power ^a
	Huynh-Feldt	.981
	Lower-bound	.551
Error (Visualization*DataAttribute Types)	Sphericity Assumed	
	Greenhouse-Geisser	
	Huynh-Feldt	
	Lower-bound	
Visualization * Datasets	Sphericity Assumed	.169
	Greenhouse-Geisser	.143
	Huynh-Feldt	.154
	Lower-bound	.105
Error (Visualization*Datasets)	Sphericity Assumed	
	Greenhouse-Geisser	
	Huynh-Feldt	
	Lower-bound	
DataAttributeTypes * Datasets	Sphericity Assumed	.183
	Greenhouse-Geisser	.172
	Huynh-Feldt	.179
	Lower-bound	.140
Error (DataAttributeTypes*Datase ts)	Sphericity Assumed	
	Greenhouse-Geisser	
	Huynh-Feldt	
	Lower-bound	
Visualization * DataAttributeTypes * Datasets	Sphericity Assumed	.565
	Greenhouse-Geisser	.418
	Huynh-Feldt	.519
	Lower-bound	.186
Error (Visualization*DataAttribute Types*Datasets)	Sphericity Assumed	
	Greenhouse-Geisser	
	Huynh-Feldt	
	Lower-bound	

a. Computed using alpha = .05

Tests of Within-Subjects Contrasts

Measure: MEASURE_1

Source	Visualization	DataAttributeTypes	Datasets	Type III Sum of Squares	df
Visualization	Linear			750.000	1
	Quadratic			6.614	1
	Cubic			1333.333	1
	Order 4			761.905	1
Error(Visualization)	Linear			7750.000	17
	Quadratic			25588.624	17
	Cubic			17666.667	17
	Order 4			16142.857	17
DataAttributeTypes		Linear		1777.778	1
		Quadratic		23148.148	1
Error(DataAttributeTypes)		Linear		15222.222	17
		Quadratic		26518.519	17
Datasets			Linear	666.667	1
Error(Datasets)			Linear	8000.000	17
Visualization * DataAttributeTypes	Linear	Linear		3555.556	1
		Quadratic		8166.667	1
	Quadratic	Linear		6706.349	1
		Quadratic		52.910	1
	Cubic	Linear		55.556	1
		Quadratic		20166.667	1
	Order 4	Linear		960.317	1
		Quadratic		595.238	1
Error (Visualization*DataAttribute Types)	Linear	Linear		7944.444	17
		Quadratic		16333.333	17
	Quadratic	Linear		12936.508	17
		Quadratic		17923.280	17
	Cubic	Linear		25944.444	17
		Quadratic		22833.333	17
	Order 4	Linear		14896.825	17
		Quadratic		20928.571	17
Visualization * Datasets	Linear		Linear	9.259	1
	Quadratic		Linear	800.265	1
	Cubic		Linear	592.593	1
	Order 4		Linear	338.624	1

Tests of Within-Subjects Contrasts

Measure: MEASURE_1

Source	Visualization	DataAttributeTypes	Datasets	Mean Square	F
Visualization	Linear			750.000	1.645
	Quadratic			6.614	.004
	Cubic			1333.333	1.283
	Order 4			761.905	.802
Error(Visualization)	Linear			455.882	
	Quadratic			1505.213	
	Cubic			1039.216	
	Order 4			949.580	
DataAttributeTypes		Linear		1777.778	1.985
		Quadratic		23148.148	14.839
Error(DataAttributeTypes)		Linear		895.425	
		Quadratic		1559.913	
Datasets			Linear	666.667	1.417
Error(Datasets)			Linear	470.588	
Visualization * DataAttributeTypes	Linear	Linear		3555.556	7.608
		Quadratic		8166.667	8.500
	Quadratic	Linear		6706.349	8.813
		Quadratic		52.910	.050
	Cubic	Linear		55.556	.036
		Quadratic		20166.667	15.015
	Order 4	Linear		960.317	1.096
		Quadratic		595.238	.484
Error (Visualization*DataAttribute Types)	Linear	Linear		467.320	
		Quadratic		960.784	
	Quadratic	Linear		760.971	
		Quadratic		1054.311	
	Cubic	Linear		1526.144	
		Quadratic		1343.137	
	Order 4	Linear		876.284	
		Quadratic		1231.092	
Visualization * Datasets	Linear		Linear	9.259	.010
	Quadratic		Linear	800.265	1.896
	Cubic		Linear	592.593	.910
	Order 4		Linear	338.624	.259

Tests of Within-Subjects Contrasts

Measure: MEASURE_1

Source	Visualization	DataAttributeTypes	Datasets	Sig.	Partial Eta Squared
Visualization	Linear			.217	.088
	Quadratic			.948	.000
	Cubic			.273	.070
	Order 4			.383	.045
Error(Visualization)	Linear				
	Quadratic				
	Cubic				
	Order 4				
DataAttributeTypes		Linear		.177	.105
		Quadratic		.001	.466
Error(DataAttributeTypes)		Linear			
		Quadratic			
Datasets			Linear	.250	.077
Error(Datasets)			Linear		
Visualization * DataAttributeTypes	Linear	Linear		.013	.309
		Quadratic		.010	.333
	Quadratic	Linear		.009	.341
		Quadratic		.825	.003
	Cubic	Linear		.851	.002
		Quadratic		.001	.469
	Order 4	Linear		.310	.061
		Quadratic		.496	.028
Error (Visualization*DataAttribute Types)	Linear	Linear			
		Quadratic			
	Quadratic	Linear			
		Quadratic			
	Cubic	Linear			
		Quadratic			
	Order 4	Linear			
		Quadratic			
Visualization * Datasets	Linear		Linear	.922	.001
	Quadratic		Linear	.186	.100
	Cubic		Linear	.354	.051
	Order 4		Linear	.617	.015

Tests of Within-Subjects Contrasts

Measure: MEASURE_1

Source	Visualization	DataAttributeTypes	Datasets	Noncent. Parameter
Visualization	Linear			1.645
	Quadratic			.004
	Cubic			1.283
	Order 4			.802
Error(Visualization)	Linear			
	Quadratic			
	Cubic			
	Order 4			
DataAttributeTypes		Linear		1.985
		Quadratic		14.839
Error(DataAttributeTypes)		Linear		
		Quadratic		
Datasets			Linear	1.417
Error(Datasets)			Linear	
Visualization * DataAttributeTypes	Linear	Linear		7.608
		Quadratic		8.500
	Quadratic	Linear		8.813
		Quadratic		.050
	Cubic	Linear		.036
		Quadratic		15.015
	Order 4	Linear		1.096
		Quadratic		.484
Error (Visualization*DataAttribute Types)	Linear	Linear		
		Quadratic		
	Quadratic	Linear		
		Quadratic		
	Cubic	Linear		
		Quadratic		
	Order 4	Linear		
		Quadratic		
Visualization * Datasets	Linear		Linear	.010
	Quadratic		Linear	1.896
	Cubic		Linear	.910
	Order 4		Linear	.259

Tests of Within-Subjects Contrasts

Measure: MEASURE_1

Source	Visualization	DataAttributeTypes	Datasets	Observed Power ^a
Visualization	Linear			.228
	Quadratic			.050
	Cubic			.188
	Order 4			.135
Error(Visualization)	Linear			
	Quadratic			
	Cubic			
	Order 4			
DataAttributeTypes		Linear		.265
		Quadratic		.952
Error(DataAttributeTypes)		Linear		
		Quadratic		
Datasets			Linear	.203
Error(Datasets)			Linear	
Visualization * DataAttributeTypes	Linear	Linear		.739
		Quadratic		.785
	Quadratic	Linear		.799
		Quadratic		.055
	Cubic	Linear		.054
		Quadratic		.954
	Order 4	Linear		.167
		Quadratic		.101
Error (Visualization*DataAttribute Types)	Linear	Linear		
		Quadratic		
	Quadratic	Linear		
		Quadratic		
	Cubic	Linear		
		Quadratic		
	Order 4	Linear		
		Quadratic		
Visualization * Datasets	Linear		Linear	.051
	Quadratic		Linear	.255
	Cubic		Linear	.147
	Order 4		Linear	.077

Tests of Within-Subjects Contrasts

Measure: MEASURE_1

Source	Visualization	DataAttributeTypes	Datasets	Type III Sum of Squares	df
Error (Visualization*Datasets)	Linear		Linear	15824.074	17
	Quadratic		Linear	7175.926	17
	Cubic		Linear	11074.074	17
	Order 4		Linear	22185.185	17
DataAttributeTypes * Datasets		Linear	Linear	1000.000	1
		Quadratic	Linear	1333.333	1
Error (DataAttributeTypes*Datase ts)		Linear	Linear	22000.000	17
		Quadratic	Linear	25000.000	17
Visualization * DataAttributeTypes * Datasets	Linear	Linear	Linear	1388.889	1
		Quadratic	Linear	1185.185	1
	Quadratic	Linear	Linear	2.910E-11	1
		Quadratic	Linear	3822.751	1
	Cubic	Linear	Linear	1388.889	1
		Quadratic	Linear	2240.741	1
	Order 4	Linear	Linear	388.889	1
		Quadratic	Linear	955.026	1
Error (Visualization*DataAttribute Types*Datasets)	Linear	Linear	Linear	6111.111	17
		Quadratic	Linear	29981.481	17
	Quadratic	Linear	Linear	13928.571	17
		Quadratic	Linear	24629.630	17
	Cubic	Linear	Linear	13611.111	17
		Quadratic	Linear	29092.593	17
	Order 4	Linear	Linear	20182.540	17
		Quadratic	Linear	15092.593	17

Tests of Within-Subjects Contrasts

Measure: MEASURE_1

Source	Visualization	DataAttributeTypes	Datasets	Mean Square	F
Error (Visualization*Datasets)	Linear		Linear	930.828	
	Quadratic		Linear	422.113	
	Cubic		Linear	651.416	
	Order 4		Linear	1305.011	
DataAttributeTypes * Datasets		Linear	Linear	1000.000	.773
		Quadratic	Linear	1333.333	.907
Error (DataAttributeTypes*Dataset s)		Linear	Linear	1294.118	
		Quadratic	Linear	1470.588	
Visualization * DataAttributeTypes * Datasets	Linear	Linear	Linear	1388.889	3.864
		Quadratic	Linear	1185.185	.672
	Quadratic	Linear	Linear	2.910E-11	.000
		Quadratic	Linear	3822.751	2.639
	Cubic	Linear	Linear	1388.889	1.735
		Quadratic	Linear	2240.741	1.309
	Order 4	Linear	Linear	388.889	.328
		Quadratic	Linear	955.026	1.076
Error (Visualization*DataAttribute Types*Datasets)	Linear	Linear	Linear	359.477	
		Quadratic	Linear	1763.617	
	Quadratic	Linear	Linear	819.328	
		Quadratic	Linear	1448.802	
	Cubic	Linear	Linear	800.654	
		Quadratic	Linear	1711.329	
	Order 4	Linear	Linear	1187.208	
		Quadratic	Linear	887.800	

Tests of Within-Subjects Contrasts

Measure: MEASURE_1

Source	Visualization	DataAttributeTypes	Datasets	Sig.	Partial Eta Squared
Error (Visualization*Datasets)	Linear		Linear		
	Quadratic		Linear		
	Cubic		Linear		
	Order 4		Linear		
DataAttributeTypes * Datasets		Linear	Linear	.392	.043
		Quadratic	Linear	.354	.051
Error (DataAttributeTypes*Datase ts)		Linear	Linear		
		Quadratic	Linear		
Visualization * DataAttributeTypes * Datasets	Linear	Linear	Linear	.066	.185
		Quadratic	Linear	.424	.038
	Quadratic	Linear	Linear	1.000	.000
		Quadratic	Linear	.123	.134
	Cubic	Linear	Linear	.205	.093
		Quadratic	Linear	.268	.072
	Order 4	Linear	Linear	.575	.019
		Quadratic	Linear	.314	.060
Error (Visualization*DataAttribute Types*Datasets)	Linear	Linear	Linear		
		Quadratic	Linear		
	Quadratic	Linear	Linear		
		Quadratic	Linear		
	Cubic	Linear	Linear		
		Quadratic	Linear		
	Order 4	Linear	Linear		
		Quadratic	Linear		

Tests of Within-Subjects Contrasts

Measure: MEASURE_1

Source	Visualization	DataAttributeTypes	Datasets	Noncent. Parameter
Error (Visualization*Datasets)	Linear		Linear	
	Quadratic		Linear	
	Cubic		Linear	
	Order 4		Linear	
DataAttributeTypes * Datasets		Linear	Linear	.773
		Quadratic	Linear	.907
Error (DataAttributeTypes*Datase ts)		Linear	Linear	
		Quadratic	Linear	
Visualization * DataAttributeTypes * Datasets	Linear	Linear	Linear	3.864
		Quadratic	Linear	.672
	Quadratic	Linear	Linear	.000
		Quadratic	Linear	2.639
	Cubic	Linear	Linear	1.735
		Quadratic	Linear	1.309
	Order 4	Linear	Linear	.328
		Quadratic	Linear	1.076
Error (Visualization*DataAttribute Types*Datasets)	Linear	Linear	Linear	
		Quadratic	Linear	
	Quadratic	Linear	Linear	
		Quadratic	Linear	
	Cubic	Linear	Linear	
		Quadratic	Linear	
	Order 4	Linear	Linear	
		Quadratic	Linear	

Tests of Within-Subjects Contrasts

Measure: MEASURE_1

Source	Visualization	DataAttributeTypes	Datasets	Observed Power ^a
Error (Visualization*Datasets)	Linear		Linear	
	Quadratic		Linear	
	Cubic		Linear	
	Order 4		Linear	
DataAttributeTypes * Datasets		Linear	Linear	.132
		Quadratic	Linear	.147
Error (DataAttributeTypes*Dataset s)		Linear	Linear	
		Quadratic	Linear	
Visualization * DataAttributeTypes * Datasets	Linear	Linear	Linear	.458
		Quadratic	Linear	.121
	Quadratic	Linear	Linear	.050
		Quadratic	Linear	.335
	Cubic	Linear	Linear	.237
		Quadratic	Linear	.191
	Order 4	Linear	Linear	.084
		Quadratic	Linear	.165
Error (Visualization*DataAttribute Types*Datasets)	Linear	Linear	Linear	
		Quadratic	Linear	
	Quadratic	Linear	Linear	
		Quadratic	Linear	
	Cubic	Linear	Linear	
		Quadratic	Linear	
	Order 4	Linear	Linear	
		Quadratic	Linear	

a. Computed using alpha = .05

Tests of Between-Subjects Effects

Measure: MEASURE_1

Transformed Variable: Average

Source	Type III Sum of Squares	df	Mean Square	F	Sig.	Partial Eta Squared
Intercept	3986962.963	1	3986962.963	1202.376	.000	.986
Error	56370.370	17	3315.904			

Tests of Between-Subjects Effects

Measure: MEASURE_1

Transformed Variable: Average

Source	Noncent. Parameter	Observed Power ^a
Intercept	1202.376	1.000
Error		

a. Computed using alpha = .05

Estimated Marginal Means

1. Grand Mean

Measure: MEASURE_1

Mean	Std. Error	95% Confidence Interval	
		Lower Bound	Upper Bound
85.926	2.478	80.698	91.154

2. Visualization

Estimates

Measure: MEASURE_1

Visualization	Mean	Std. Error	95% Confidence Interval	
			Lower Bound	Upper Bound
1	88.889	3.811	80.848	96.930
2	83.333	3.300	76.370	90.297
3	87.963	3.515	80.547	95.379
4	86.111	4.098	77.465	94.757
5	83.333	3.565	75.812	90.855

Pairwise Comparisons

Measure: MEASURE_1

(I) Visualization	(J) Visualization	Mean Difference (I-J)	Std. Error	Sig. ^a	95% Confidence a...
					Lower Bound
1	2	5.556	4.469	1.000	-8.845
	3	.926	4.360	1.000	-13.125
	4	2.778	4.519	1.000	-11.786
	5	5.556	3.300	1.000	-5.080
2	1	-5.556	4.469	1.000	-19.956
	3	-4.630	4.429	1.000	-18.903
	4	-2.778	4.098	1.000	-15.983
	5	-3.553E-15	3.565	1.000	-11.488
3	1	-.926	4.360	1.000	-14.977
	2	4.630	4.429	1.000	-9.643
	4	1.852	4.017	1.000	-11.093
	5	4.630	5.006	1.000	-11.503
4	1	-2.778	4.519	1.000	-17.341
	2	2.778	4.098	1.000	-10.428
	3	-1.852	4.017	1.000	-14.797
	5	2.778	4.716	1.000	-12.419
5	1	-5.556	3.300	1.000	-16.191
	2	3.553E-15	3.565	1.000	-11.488
	3	-4.630	5.006	1.000	-20.763
	4	-2.778	4.716	1.000	-17.975

Pairwise Comparisons

Measure: MEASURE_1

		95% Confidence Interval for ^a ..
(I) Visualization	(J) Visualization	Upper Bound
1	2	19.956
	3	14.977
	4	17.341
	5	16.191
2	1	8.845
	3	9.643
	4	10.428
	5	11.488
3	1	13.125
	2	18.903
	4	14.797
	5	20.763
4	1	11.786
	2	15.983
	3	11.093
	5	17.975
5	1	5.080
	2	11.488
	3	11.503
	4	12.419

Based on estimated marginal means

a. Adjustment for multiple comparisons: Bonferroni.

Multivariate Tests

	Value	F	Hypothesis df	Error df	Sig.	Partial Eta Squared
Pillai's trace	.148	.610 ^a	4.000	14.000	.662	.148
Wilks' lambda	.852	.610 ^a	4.000	14.000	.662	.148
Hotelling's trace	.174	.610 ^a	4.000	14.000	.662	.148
Roy's largest root	.174	.610 ^a	4.000	14.000	.662	.148

Multivariate Tests

	Noncent. Parameter	Observed Power ^b
Pillai's trace	2.441	.157
Wilks' lambda	2.441	.157
Hotelling's trace	2.441	.157
Roy's largest root	2.441	.157

Each F tests the multivariate effect of Visualization. These tests are based on the linearly independent pairwise comparisons among the estimated marginal means.

a. Exact statistic

b. Computed using alpha = .05

3. DataAttributeTypes

Estimates

Measure: MEASURE_1

DataAttributeTypes	Mean	Std. Error	95% Confidence Interval	
			Lower Bound	Upper Bound
1	92.778	2.109	88.328	97.227
2	76.667	4.428	67.324	86.009
3	88.333	2.830	82.363	94.303

Pairwise Comparisons

Measure: MEASURE_1

(I) DataAttributeTypes	(J) DataAttributeTypes	Mean Difference (I-J)	Std. Error	Sig. ^b	95% Confidence ^b ...
					Lower Bound
1	2	16.111 [*]	4.212	.004	4.929
	3	4.444	3.154	.531	-3.930
2	1	-16.111 [*]	4.212	.004	-27.293
	3	-11.667 [*]	3.638	.016	-21.326
3	1	-4.444	3.154	.531	-12.819
	2	11.667 [*]	3.638	.016	2.008

Pairwise Comparisons

Measure: MEASURE_1

(I) DataAttributeTypes	(J) DataAttributeTypes	95% Confidence Interval for ^b ...
		Upper Bound
1	2	27.293
	3	12.819
2	1	-4.929
	3	-2.008
3	1	3.930
	2	21.326

Based on estimated marginal means

*. The mean difference is significant at the .05 level.

b. Adjustment for multiple comparisons: Bonferroni.

Multivariate Tests

	Value	F	Hypothesis df	Error df	Sig.	Partial Eta Squared
Pillai's trace	.473	7.188 ^a	2.000	16.000	.006	.473
Wilks' lambda	.527	7.188 ^a	2.000	16.000	.006	.473
Hotelling's trace	.898	7.188 ^a	2.000	16.000	.006	.473
Roy's largest root	.898	7.188 ^a	2.000	16.000	.006	.473

Multivariate Tests

	Noncent. Parameter	Observed Power ^b
Pillai's trace	14.376	.878
Wilks' lambda	14.376	.878
Hotelling's trace	14.376	.878
Roy's largest root	14.376	.878

Each F tests the multivariate effect of DataAttributeTypes. These tests are based on the linearly independent pairwise comparisons among the estimated marginal means.

a. Exact statistic

b. Computed using alpha = .05

4. Visualization * DataAttributeTypes

Measure: MEASURE_1

Visualization	DataAttributeTypes	Mean	Std. Error	95% Confidence Interval	
				Lower Bound	Upper Bound
1	1	97.222	2.778	91.362	103.083
	2	94.444	3.811	86.404	102.485
	3	75.000	9.262	55.459	94.541
2	1	97.222	2.778	91.362	103.083
	2	63.889	7.886	47.252	80.526
	3	88.889	5.042	78.252	99.526
3	1	86.111	6.771	71.826	100.396
	2	80.556	7.162	65.446	95.665
	3	97.222	2.778	91.362	103.083
4	1	86.111	5.432	74.651	97.571
	2	83.333	7.001	68.562	98.105
	3	88.889	5.042	78.252	99.526
5	1	97.222	2.778	91.362	103.083
	2	61.111	7.622	45.030	77.192
	3	91.667	4.519	82.132	101.202