

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

Your license will expire in 10 days.

GET

FILE='C:\Users\Bahador\Desktop\Analysis\Order\Order_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

/WSFACTOR=Visualization5 PolynomialDataVisualizationAttribute3 PolynomialDataset2 Polynomial

/METHOD=SSTYPE(3)

/EMMEANS=TABLES(OVERALL)

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

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

/EMMEANS=TABLES(Visualization*DataVisualizationAttribute)

/PRINT=DESCRIPTIVE ETASQ OPOWER HOMOGENEITY

/CRITERIA=ALPHA(.05)

/WSDESIGN=VisualizationDataVisualizationAttributeDataset

Visualization*DataVisualizationAttributeVisualization*DatasetDataVisualizationAttribute*Dataset

Visualization*DataVisualizationAttribute*Dataset.

General Linear Model

Notes

Output Created		07-SEP-2016 12:59:36
Comments		
Input	Data	C: \Users\Bahador\Desktop\A nalysis\Order\Order_Accur acy.sav
	Active Dataset	DataSet1
	Filter	<none>
	Weight	<none>
	Split File	<none>
	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
 n 5 Polynomial
 DataVisualizationAttribute
 3 Polynomial Dataset 2
 Polynomial
 /METHOD=SSTYPE(3)
 /EMMEANS=TABLES
 (OVERALL)
 /EMMEANS=TABLES
 (Visualization) COMPARE
 ADJ(BONFERRONI)
 /EMMEANS=TABLES
 (DataVisualizationAttribute
) COMPARE ADJ
 (BONFERRONI)
 /EMMEANS=TABLES
 (Visualization*DataVisualiz
 ationAttribute)
 /PRINT=DESCRIPTIVE
 ETASQ OPOWER
 HOMOGENEITY
 /CRITERIA=ALPHA(.05)

/WSDESIGN=Visualizatio
 n
 DataVisualizationAttribute
 Dataset

Visualization*DataVisualiz
 ationAttribute
 Visualization*Dataset

Notes

Resources	Processor Time	00:00:00.03
	Elapsed Time	00:00:00.03

[DataSet1] C:\Users\Bahador\Desktop\Analysis\Order\Order_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	DataVisualizationAttribute	Dataset	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	DataVisualizationAttribute	Dataset	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	88.8889	32.33808	18
Bar_Nom_Num_Movie	88.8889	32.33808	18
Bar_Num_Num_Car	83.3333	38.34825	18
Bar_Num_Num_Movie	88.8889	32.33808	18
Bar_Ord_Num_Car	100.0000	.00000	18
Bar_Ord_Num_Movie	88.8889	32.33808	18
Line_Nom_Num_Car	88.8889	32.33808	18
Line_Nom_Num_Movie	88.8889	32.33808	18
Line_Num_Num_Car	44.4444	51.13100	18
Line_Num_Num_Movie	44.4444	51.13100	18
Line_Ord_Num_Car	94.4444	23.57023	18
Line_Ord_Num_Movie	94.4444	23.57023	18
Pie_Nom_Num_Car	88.8889	32.33808	18
Pie_Nom_Num_Movie	88.8889	32.33808	18
Pie_Num_Num_Car	72.2222	46.08886	18
Pie_Num_Num_Movie	83.3333	38.34825	18
Pie_Ord_Num_Car	83.3333	38.34825	18
Pie_Ord_Num_Movie	88.8889	32.33808	18
Scatter_Nom_Num_Car	100.0000	.00000	18
Scatter_Nom_Num_Movie	94.4444	23.57023	18
Scatter_Num_Num_Car	88.8889	32.33808	18
Scatter_Num_Num_Movie	55.5556	51.13100	18
Scatter_Ord_Num_Car	94.4444	23.57023	18
Scatter_Ord_Num_Movie	61.1111	50.16313	18
Table_Nom_Num_Car	100.0000	.00000	18
Table_Nom_Num_Movie	88.8889	32.33808	18
Table_Num_Num_Car	66.6667	48.50713	18
Table_Num_Num_Movie	50.0000	51.44958	18
Table_Ord_Num_Car	88.8889	32.33808	18
Table_Ord_Num_Movie	100.0000	.00000	18

Multivariate Tests^a

Effect		Value	F	Hypothesis df	Error df
Visualization	Pillai's Trace	.561	4.471 ^b	4.000	14.000
	Wilks' Lambda	.439	4.471 ^b	4.000	14.000
	Hotelling's Trace	1.277	4.471 ^b	4.000	14.000
	Roy's Largest Root	1.277	4.471 ^b	4.000	14.000
DataVisualizationAttribute	Pillai's Trace	.730	21.656 ^b	2.000	16.000
	Wilks' Lambda	.270	21.656 ^b	2.000	16.000
	Hotelling's Trace	2.707	21.656 ^b	2.000	16.000
	Roy's Largest Root	2.707	21.656 ^b	2.000	16.000
Dataset	Pillai's Trace	.320	8.010 ^b	1.000	17.000
	Wilks' Lambda	.680	8.010 ^b	1.000	17.000
	Hotelling's Trace	.471	8.010 ^b	1.000	17.000
	Roy's Largest Root	.471	8.010 ^b	1.000	17.000
Visualization * DataVisualizationAttribute	Pillai's Trace	.877	8.943 ^b	8.000	10.000
	Wilks' Lambda	.123	8.943 ^b	8.000	10.000
	Hotelling's Trace	7.154	8.943 ^b	8.000	10.000
	Roy's Largest Root	7.154	8.943 ^b	8.000	10.000
Visualization * Dataset	Pillai's Trace	.539	4.086 ^b	4.000	14.000
	Wilks' Lambda	.461	4.086 ^b	4.000	14.000
	Hotelling's Trace	1.167	4.086 ^b	4.000	14.000
	Roy's Largest Root	1.167	4.086 ^b	4.000	14.000
DataVisualizationAttribute * Dataset	Pillai's Trace	.029	.236 ^b	2.000	16.000
	Wilks' Lambda	.971	.236 ^b	2.000	16.000
	Hotelling's Trace	.030	.236 ^b	2.000	16.000
	Roy's Largest Root	.030	.236 ^b	2.000	16.000
Visualization * DataVisualizationAttribute * Dataset	Pillai's Trace	.699	2.907 ^b	8.000	10.000
	Wilks' Lambda	.301	2.907 ^b	8.000	10.000
	Hotelling's Trace	2.325	2.907 ^b	8.000	10.000
	Roy's Largest Root	2.325	2.907 ^b	8.000	10.000

Multivariate Tests^a

Effect		Sig.	Partial Eta Squared	Noncent. Parameter
Visualization	Pillai's Trace	.016	.561	17.882
	Wilks' Lambda	.016	.561	17.882
	Hotelling's Trace	.016	.561	17.882
	Roy's Largest Root	.016	.561	17.882
DataVisualizationAttribute	Pillai's Trace	.000	.730	43.311
	Wilks' Lambda	.000	.730	43.311
	Hotelling's Trace	.000	.730	43.311
	Roy's Largest Root	.000	.730	43.311
Dataset	Pillai's Trace	.012	.320	8.010
	Wilks' Lambda	.012	.320	8.010
	Hotelling's Trace	.012	.320	8.010
	Roy's Largest Root	.012	.320	8.010
Visualization * DataVisualizationAttribute	Pillai's Trace	.001	.877	71.541
	Wilks' Lambda	.001	.877	71.541
	Hotelling's Trace	.001	.877	71.541
	Roy's Largest Root	.001	.877	71.541
Visualization * Dataset	Pillai's Trace	.021	.539	16.343
	Wilks' Lambda	.021	.539	16.343
	Hotelling's Trace	.021	.539	16.343
	Roy's Largest Root	.021	.539	16.343
DataVisualizationAttribute * Dataset	Pillai's Trace	.792	.029	.472
	Wilks' Lambda	.792	.029	.472
	Hotelling's Trace	.792	.029	.472
	Roy's Largest Root	.792	.029	.472
Visualization * DataVisualizationAttribute * Dataset	Pillai's Trace	.059	.699	23.254
	Wilks' Lambda	.059	.699	23.254
	Hotelling's Trace	.059	.699	23.254
	Roy's Largest Root	.059	.699	23.254

Multivariate Tests^a

Effect		Observed Power ^c
Visualization	Pillai's Trace	.830
	Wilks' Lambda	.830
	Hotelling's Trace	.830
	Roy's Largest Root	.830
DataVisualizationAttribute	Pillai's Trace	1.000
	Wilks' Lambda	1.000
	Hotelling's Trace	1.000
	Roy's Largest Root	1.000
Dataset	Pillai's Trace	.760
	Wilks' Lambda	.760
	Hotelling's Trace	.760
	Roy's Largest Root	.760
Visualization * DataVisualizationAttribute	Pillai's Trace	.996
	Wilks' Lambda	.996
	Hotelling's Trace	.996
	Roy's Largest Root	.996
Visualization * Dataset	Pillai's Trace	.791
	Wilks' Lambda	.791
	Hotelling's Trace	.791
	Roy's Largest Root	.791
DataVisualizationAttribute * Dataset	Pillai's Trace	.081
	Wilks' Lambda	.081
	Hotelling's Trace	.081
	Roy's Largest Root	.081
Visualization * DataVisualizationAttribute * Dataset	Pillai's Trace	.685
	Wilks' Lambda	.685
	Hotelling's Trace	.685
	Roy's Largest Root	.685

a. Design: Intercept

Within Subjects Design: Visualization + DataVisualizationAttribute + Dataset + Visualization * DataVisualizationAttribute + Visualization * Dataset + DataVisualizationAttribute * Dataset + Visualization * DataVisualizationAttribute * Dataset

b. Exact statistic

C.

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	.506	10.514	9	.313	.792
DataVisualizationAttribute	.970	.494	2	.781	.970
Dataset	1.000	.000	0	.	1.000
Visualization * DataVisualizationAttribute	.010	64.510	35	.002	.498
Visualization * Dataset	.336	16.798	9	.053	.713
DataVisualizationAttribute * Dataset	.649	6.924	2	.031	.740
Visualization * DataVisualizationAttribute * Dataset	.003	81.359	35	.000	.501

Mauchly's Test of Sphericity^a

Measure: MEASURE_1

Within Subjects Effect	Epsilon ^b	
	Huynh-Feldt	Lower-bound
Visualization	.994	.250
DataVisualizationAttribute	1.000	.500
Dataset	1.000	1.000
Visualization * DataVisualizationAttribute	.669	.125
Visualization * Dataset	.871	.250
DataVisualizationAttribute * Dataset	.794	.500
Visualization * DataVisualizationAttribute * Dataset	.675	.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 + DataVisualizationAttribute + Dataset + Visualization *

DataVisualizationAttribute + Visualization * Dataset + DataVisualizationAttribute * Dataset + Visualization

* DataVisualizationAttribute * Dataset

b. May be used to adjust the degrees of freedom for the averaged tests of significance. Corrected tests are

Tests of Within-Subjects Effects

Measure: MEASURE_1

Source		Type III Sum of Squares	df	Mean Square	F
Visualization	Sphericity Assumed	10666.667	4	2666.667	2.693
	Greenhouse-Geisser	10666.667	3.167	3367.745	2.693
	Huynh-Feldt	10666.667	3.977	2682.147	2.693
	Lower-bound	10666.667	1.000	10666.667	2.693
Error(Visualization)	Sphericity Assumed	67333.333	68	990.196	
	Greenhouse-Geisser	67333.333	53.844	1250.523	
	Huynh-Feldt	67333.333	67.608	995.944	
	Lower-bound	67333.333	17.000	3960.784	
DataVisualizationAttribute	Sphericity Assumed	62703.704	2	31351.852	26.674
	Greenhouse-Geisser	62703.704	1.941	32305.812	26.674
	Huynh-Feldt	62703.704	2.000	31351.852	26.674
	Lower-bound	62703.704	1.000	62703.704	26.674
Error (DataVisualizationAttribute)	Sphericity Assumed	39962.963	34	1175.381	
	Greenhouse-Geisser	39962.963	32.996	1211.145	
	Huynh-Feldt	39962.963	34.000	1175.381	
	Lower-bound	39962.963	17.000	2350.763	
Dataset	Sphericity Assumed	3629.630	1	3629.630	8.010
	Greenhouse-Geisser	3629.630	1.000	3629.630	8.010
	Huynh-Feldt	3629.630	1.000	3629.630	8.010
	Lower-bound	3629.630	1.000	3629.630	8.010
Error(Dataset)	Sphericity Assumed	7703.704	17	453.159	
	Greenhouse-Geisser	7703.704	17.000	453.159	
	Huynh-Feldt	7703.704	17.000	453.159	
	Lower-bound	7703.704	17.000	453.159	
Visualization * DataVisualizationAttribute	Sphericity Assumed	38777.778	8	4847.222	4.875
	Greenhouse-Geisser	38777.778	3.984	9733.318	4.875

Tests of Within-Subjects Effects

Measure: MEASURE_1

Source		Sig.	Partial Eta Squared	Noncent. Parameter
Visualization	Sphericity Assumed	.038	.137	10.772
	Greenhouse-Geisser	.052	.137	8.530
	Huynh-Feldt	.038	.137	10.710
	Lower-bound	.119	.137	2.693
Error(Visualization)	Sphericity Assumed			
	Greenhouse-Geisser			
	Huynh-Feldt			
	Lower-bound			
DataVisualizationAttribute	Sphericity Assumed	.000	.611	53.348
	Greenhouse-Geisser	.000	.611	51.772
	Huynh-Feldt	.000	.611	53.348
	Lower-bound	.000	.611	26.674
Error (DataVisualizationAttribute)	Sphericity Assumed			
	Greenhouse-Geisser			
	Huynh-Feldt			
	Lower-bound			
Dataset	Sphericity Assumed	.012	.320	8.010
	Greenhouse-Geisser	.012	.320	8.010
	Huynh-Feldt	.012	.320	8.010
	Lower-bound	.012	.320	8.010
Error(Dataset)	Sphericity Assumed			
	Greenhouse-Geisser			
	Huynh-Feldt			
	Lower-bound			
Visualization * DataVisualizationAttribute	Sphericity Assumed	.000	.223	39.001
	Greenhouse-Geisser	.002	.223	19.423

Tests of Within-Subjects Effects

Measure: MEASURE_1

Source		Observed Power ^a
Visualization	Sphericity Assumed	.718
	Greenhouse-Geisser	.640
	Huynh-Feldt	.716
	Lower-bound	.341
Error(Visualization)	Sphericity Assumed	
	Greenhouse-Geisser	
	Huynh-Feldt	
	Lower-bound	
DataVisualizationAttribute	Sphericity Assumed	1.000
	Greenhouse-Geisser	1.000
	Huynh-Feldt	1.000
	Lower-bound	.998
Error (DataVisualizationAttribute)	Sphericity Assumed	
	Greenhouse-Geisser	
	Huynh-Feldt	
	Lower-bound	
Dataset	Sphericity Assumed	.760
	Greenhouse-Geisser	.760
	Huynh-Feldt	.760
	Lower-bound	.760
Error(Dataset)	Sphericity Assumed	
	Greenhouse-Geisser	
	Huynh-Feldt	
	Lower-bound	
Visualization * DataVisualizationAttribute	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	38777.778	5.356	7240.180	4.875
	Lower-bound	38777.778	1.000	38777.778	4.875
Error (Visualization*DataVisualizationAttribute)	Sphericity Assumed	135222.222	136	994.281	
	Greenhouse-Geisser	135222.222	67.728	1996.536	
	Huynh-Feldt	135222.222	91.051	1485.134	
	Lower-bound	135222.222	17.000	7954.248	
Visualization * Dataset	Sphericity Assumed	13777.778	4	3444.444	3.128
	Greenhouse-Geisser	13777.778	2.851	4833.426	3.128
	Huynh-Feldt	13777.778	3.485	3953.577	3.128
	Lower-bound	13777.778	1.000	13777.778	3.128
Error(Visualization*Dataset)	Sphericity Assumed	74888.889	68	1101.307	
	Greenhouse-Geisser	74888.889	48.459	1545.412	
	Huynh-Feldt	74888.889	59.243	1264.095	
	Lower-bound	74888.889	17.000	4405.229	
DataVisualizationAttribute * Dataset	Sphericity Assumed	259.259	2	129.630	.128
	Greenhouse-Geisser	259.259	1.480	175.166	.128
	Huynh-Feldt	259.259	1.588	163.290	.128
	Lower-bound	259.259	1.000	259.259	.128
Error (DataVisualizationAttribute*Dataset)	Sphericity Assumed	34407.407	34	1011.983	
	Greenhouse-Geisser	34407.407	25.161	1367.472	
	Huynh-Feldt	34407.407	26.991	1274.756	
	Lower-bound	34407.407	17.000	2023.965	
Visualization * DataVisualizationAttribute * Dataset	Sphericity Assumed	10111.111	8	1263.889	1.040
	Greenhouse-Geisser	10111.111	4.008	2522.440	1.040
	Huynh-Feldt	10111.111	5.400	1872.480	1.040
	Lower-bound	10111.111	1.000	10111.111	1.040
Error (Visualization*DataVisualizationAttribute*Dataset)	Sphericity Assumed	165222.222	136	1214.869	
	Greenhouse-Geisser	165222.222	68.144	2424.608	
	Huynh-Feldt	165222.222	91.797	1799.856	
	Lower-bound	165222.222	17.000	9718.954	

Tests of Within-Subjects Effects

Measure: MEASURE_1

Source		Sig.	Partial Eta Squared	Noncent. Parameter
	Huynh-Feldt	.000	.223	26.111
	Lower-bound	.041	.223	4.875
Error (Visualization*DataVisualizationAttribute)	Sphericity Assumed			
	Greenhouse-Geisser			
	Huynh-Feldt			
	Lower-bound			
Visualization * Dataset	Sphericity Assumed	.020	.155	12.510
	Greenhouse-Geisser	.036	.155	8.915
	Huynh-Feldt	.026	.155	10.899
	Lower-bound	.095	.155	3.128
Error(Visualization*Dataset)	Sphericity Assumed			
	Greenhouse-Geisser			
	Huynh-Feldt			
	Lower-bound			
DataVisualizationAttribute * Dataset	Sphericity Assumed	.880	.007	.256
	Greenhouse-Geisser	.818	.007	.190
	Huynh-Feldt	.834	.007	.203
	Lower-bound	.725	.007	.128
Error (DataVisualizationAttribute*Dataset)	Sphericity Assumed			
	Greenhouse-Geisser			
	Huynh-Feldt			
	Lower-bound			
Visualization * DataVisualizationAttribute * Dataset	Sphericity Assumed	.409	.058	8.323
	Greenhouse-Geisser	.393	.058	4.170
	Huynh-Feldt	.401	.058	5.618
	Lower-bound	.322	.058	1.040
Error (Visualization*DataVisualizationAttribute*Dataset)	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	.549
Error (Visualization*DataVisualizationAttribute)	Sphericity Assumed	
	Greenhouse-Geisser	
	Huynh-Feldt	
	Lower-bound	
Visualization * Dataset	Sphericity Assumed	.790
	Greenhouse-Geisser	.677
	Huynh-Feldt	.745
	Lower-bound	.386
Error(Visualization*Dataset)	Sphericity Assumed	
	Greenhouse-Geisser	
	Huynh-Feldt	
	Lower-bound	
DataVisualizationAttribute * Dataset	Sphericity Assumed	.068
	Greenhouse-Geisser	.066
	Huynh-Feldt	.066
	Lower-bound	.063
Error (DataVisualizationAttribute*Dataset)	Sphericity Assumed	
	Greenhouse-Geisser	
	Huynh-Feldt	
	Lower-bound	
Visualization * DataVisualizationAttribute * Dataset	Sphericity Assumed	.469
	Greenhouse-Geisser	.312
	Huynh-Feldt	.371
	Lower-bound	.161
Error (Visualization*DataVisualizationAttribute*Dataset)	Sphericity Assumed	
	Greenhouse-Geisser	
	Huynh-Feldt	
	Lower-bound	

a. Computed using alpha = .05

Tests of Within-Subjects Contrasts

Measure: MEASURE_1

Source	Visualization	DataVisualizationAttribute	Dataset	Type III Sum of Squares
Visualization	Linear			750.000
	Quadratic			2387.566
	Cubic			4481.481
	Order 4			3047.619
Error(Visualization)	Linear			23416.667
	Quadratic			20112.434
	Cubic			12185.185
	Order 4			11619.048
DataVisualizationAttribute		Linear		444.444
		Quadratic		62259.259
Error (DataVisualizationAttribute)		Linear		16555.556
		Quadratic		23407.407
Dataset			Linear	3629.630
Error(Dataset)			Linear	7703.704
Visualization * DataVisualizationAttribute	Linear	Linear		2347.222
		Quadratic		2041.667
	Quadratic	Linear		1200.397
		Quadratic		3.307
	Cubic	Linear		3555.556
		Quadratic		21407.407
	Order 4	Linear		507.937
		Quadratic		7714.286
Error (Visualization*DataVisualizationAttribute)	Linear	Linear		10902.778
		Quadratic		23041.667
	Quadratic	Linear		11835.317
		Quadratic		16246.693
	Cubic	Linear		11944.444
		Quadratic		31425.926
	Order 4	Linear		10706.349
		Quadratic		19119.048
Visualization * Dataset	Linear		Linear	2675.926
	Quadratic		Linear	6.614
	Cubic		Linear	5333.333

Tests of Within-Subjects Contrasts

Measure: MEASURE_1

Source	Visualization	DataVisualizationAttribute	Dataset	df
Visualization	Linear			1
	Quadratic			1
	Cubic			1
	Order 4			1
Error(Visualization)	Linear			17
	Quadratic			17
	Cubic			17
	Order 4			17
DataVisualizationAttribute		Linear		1
		Quadratic		1
Error (DataVisualizationAttribute)		Linear		17
		Quadratic		17
Dataset			Linear	1
Error(Dataset)			Linear	17
Visualization * DataVisualizationAttribute	Linear	Linear		1
		Quadratic		1
	Quadratic	Linear		1
		Quadratic		1
	Cubic	Linear		1
		Quadratic		1
	Order 4	Linear		1
		Quadratic		1
Error (Visualization*DataVisualiza tionAttribute)	Linear	Linear		17
		Quadratic		17
	Quadratic	Linear		17
		Quadratic		17
	Cubic	Linear		17
		Quadratic		17
	Order 4	Linear		17
		Quadratic		17
Visualization * Dataset	Linear		Linear	1
	Quadratic		Linear	1
	Cubic		Linear	1

Tests of Within-Subjects Contrasts

Measure: MEASURE_1

Source	Visualization	DataVisualizationAttribute	Dataset	Mean Square
Visualization	Linear			750.000
	Quadratic			2387.566
	Cubic			4481.481
	Order 4			3047.619
Error(Visualization)	Linear			1377.451
	Quadratic			1183.084
	Cubic			716.776
	Order 4			683.473
DataVisualizationAttribute		Linear		444.444
		Quadratic		62259.259
Error (DataVisualizationAttribute)		Linear		973.856
		Quadratic		1376.906
Dataset			Linear	3629.630
Error(Dataset)			Linear	453.159
Visualization * DataVisualizationAttribute	Linear	Linear		2347.222
		Quadratic		2041.667
	Quadratic	Linear		1200.397
		Quadratic		3.307
	Cubic	Linear		3555.556
		Quadratic		21407.407
	Order 4	Linear		507.937
		Quadratic		7714.286
Error (Visualization*DataVisualiza tionAttribute)	Linear	Linear		641.340
		Quadratic		1355.392
	Quadratic	Linear		696.195
		Quadratic		955.688
	Cubic	Linear		702.614
		Quadratic		1848.584
	Order 4	Linear		629.785
		Quadratic		1124.650
Visualization * Dataset	Linear		Linear	2675.926
	Quadratic		Linear	6.614
	Cubic		Linear	5333.333

Tests of Within-Subjects Contrasts

Measure: MEASURE_1

Source	Visualization	DataVisualizationAttribute	Dataset	F	Sig.
Visualization	Linear			.544	.471
	Quadratic			2.018	.174
	Cubic			6.252	.023
	Order 4			4.459	.050
Error(Visualization)	Linear				
	Quadratic				
	Cubic				
	Order 4				
DataVisualizationAttribute		Linear		.456	.508
		Quadratic		45.217	.000
Error (DataVisualizationAttribute)		Linear			
		Quadratic			
Dataset			Linear	8.010	.012
Error(Dataset)			Linear		
Visualization * DataVisualizationAttribute	Linear	Linear		3.660	.073
		Quadratic		1.506	.236
	Quadratic	Linear		1.724	.207
		Quadratic		.003	.954
	Cubic	Linear		5.060	.038
		Quadratic		11.580	.003
	Order 4	Linear		.807	.382
		Quadratic		6.859	.018
Error (Visualization*DataVisualiza tionAttribute)	Linear	Linear			
		Quadratic			
	Quadratic	Linear			
		Quadratic			
	Cubic	Linear			
		Quadratic			
	Order 4	Linear			
		Quadratic			
Visualization * Dataset	Linear		Linear	3.069	.098
	Quadratic		Linear	.006	.939
	Cubic		Linear	3.676	.072

Tests of Within-Subjects Contrasts

Measure: MEASURE_1

Source	Visualization	DataVisualizationAttribute	Dataset	Partial Eta Squared
Visualization	Linear			.031
	Quadratic			.106
	Cubic			.269
	Order 4			.208
Error(Visualization)	Linear			
	Quadratic			
	Cubic			
	Order 4			
DataVisualizationAttribute		Linear		.026
		Quadratic		.727
Error (DataVisualizationAttribute)		Linear		
		Quadratic		
Dataset			Linear	.320
Error(Dataset)			Linear	
Visualization * DataVisualizationAttribute	Linear	Linear		.177
		Quadratic		.081
	Quadratic	Linear		.092
		Quadratic		.000
	Cubic	Linear		.229
		Quadratic		.405
	Order 4	Linear		.045
		Quadratic		.287
Error (Visualization*DataVisualizationAttribute)	Linear	Linear		
		Quadratic		
	Quadratic	Linear		
		Quadratic		
	Cubic	Linear		
		Quadratic		
	Order 4	Linear		
		Quadratic		
Visualization * Dataset	Linear		Linear	.153
	Quadratic		Linear	.000
	Cubic		Linear	.178

Tests of Within-Subjects Contrasts

Measure: MEASURE_1

Source	Visualization	DataVisualizationAttribute	Dataset	Noncent. Parameter
Visualization	Linear			.544
	Quadratic			2.018
	Cubic			6.252
	Order 4			4.459
Error(Visualization)	Linear			
	Quadratic			
	Cubic			
	Order 4			
DataVisualizationAttribute		Linear		.456
		Quadratic		45.217
Error (DataVisualizationAttribute)		Linear		
		Quadratic		
Dataset			Linear	8.010
Error(Dataset)			Linear	
Visualization * DataVisualizationAttribute	Linear	Linear		3.660
		Quadratic		1.506
	Quadratic	Linear		1.724
		Quadratic		.003
	Cubic	Linear		5.060
		Quadratic		11.580
	Order 4	Linear		.807
		Quadratic		6.859
Error (Visualization*DataVisualiza tionAttribute)	Linear	Linear		
		Quadratic		
	Quadratic	Linear		
		Quadratic		
	Cubic	Linear		
		Quadratic		
	Order 4	Linear		
		Quadratic		
Visualization * Dataset	Linear		Linear	3.069
	Quadratic		Linear	.006
	Cubic		Linear	3.676

Tests of Within-Subjects Contrasts

Measure: MEASURE_1

Source	Visualization	DataVisualizationAttribute	Dataset	Observed Power ^a
Visualization	Linear			.107
	Quadratic			.268
	Cubic			.655
	Order 4			.513
Error(Visualization)	Linear			
	Quadratic			
	Cubic			
	Order 4			
DataVisualizationAttribute		Linear		.098
		Quadratic		1.000
Error (DataVisualizationAttribute)		Linear		
		Quadratic		
Dataset			Linear	.760
Error(Dataset)			Linear	
Visualization * DataVisualizationAttribute	Linear	Linear		.438
		Quadratic		.212
	Quadratic	Linear		.236
		Quadratic		.050
	Cubic	Linear		.564
		Quadratic		.894
	Order 4	Linear		.136
		Quadratic		.695
Error (Visualization*DataVisualizationAttribute)	Linear	Linear		
		Quadratic		
	Quadratic	Linear		
		Quadratic		
	Cubic	Linear		
		Quadratic		
	Order 4	Linear		
		Quadratic		
Visualization * Dataset	Linear		Linear	.380
	Quadratic		Linear	.051
	Cubic		Linear	.440

Tests of Within-Subjects Contrasts

Measure: MEASURE_1

Source	Visualization	DataVisualizationAttribute	Dataset	Type III Sum of Squares
	Order 4		Linear	5761.905
Error(Visualization*Dataset)	Linear		Linear	14824.074
	Quadratic		Linear	18683.862
	Cubic		Linear	24666.667
	Order 4		Linear	16714.286
DataVisualizationAttribute * Dataset		Linear	Linear	111.111
		Quadratic	Linear	148.148
Error (DataVisualizationAttribute* Dataset)		Linear	Linear	8888.889
		Quadratic	Linear	25518.519
Visualization * DataVisualizationAttribute * Dataset	Linear	Linear	Linear	680.556
		Quadratic	Linear	2893.519
	Quadratic	Linear	Linear	486.111
		Quadratic	Linear	82.672
	Cubic	Linear	Linear	3555.556
		Quadratic	Linear	1.455E-11
	Order 4	Linear	Linear	1555.556
		Quadratic	Linear	857.143
Error (Visualization*DataVisualizationAttribute*Dataset)	Linear	Linear	Linear	10569.444
		Quadratic	Linear	18856.481
	Quadratic	Linear	Linear	18263.889
		Quadratic	Linear	45691.138
	Cubic	Linear	Linear	13944.444
		Quadratic	Linear	9500.000
	Order 4	Linear	Linear	11944.444
		Quadratic	Linear	36452.381

Tests of Within-Subjects Contrasts

Measure: MEASURE_1

Source	Visualization	DataVisualizationAttribute	Dataset	df
	Order 4		Linear	1
Error(Visualization*Dataset)	Linear		Linear	17
	Quadratic		Linear	17
	Cubic		Linear	17
	Order 4		Linear	17
DataVisualizationAttribute * Dataset		Linear	Linear	1
		Quadratic	Linear	1
Error (DataVisualizationAttribute* Dataset)		Linear	Linear	17
		Quadratic	Linear	17
Visualization * DataVisualizationAttribute * Dataset	Linear	Linear	Linear	1
		Quadratic	Linear	1
	Quadratic	Linear	Linear	1
		Quadratic	Linear	1
	Cubic	Linear	Linear	1
		Quadratic	Linear	1
	Order 4	Linear	Linear	1
		Quadratic	Linear	1
Error (Visualization*DataVisualiza tionAttribute*Dataset)	Linear	Linear	Linear	17
		Quadratic	Linear	17
	Quadratic	Linear	Linear	17
		Quadratic	Linear	17
	Cubic	Linear	Linear	17
		Quadratic	Linear	17
	Order 4	Linear	Linear	17
		Quadratic	Linear	17

Tests of Within-Subjects Contrasts

Measure: MEASURE_1

Source	Visualization	DataVisualizationAttribute	Dataset	Mean Square
	Order 4		Linear	5761.905
Error(Visualization*Dataset)	Linear		Linear	872.004
	Quadratic		Linear	1099.051
	Cubic		Linear	1450.980
	Order 4		Linear	983.193
DataVisualizationAttribute * Dataset		Linear	Linear	111.111
		Quadratic	Linear	148.148
Error (DataVisualizationAttribute* Dataset)		Linear	Linear	522.876
		Quadratic	Linear	1501.089
Visualization * DataVisualizationAttribute * Dataset	Linear	Linear	Linear	680.556
		Quadratic	Linear	2893.519
	Quadratic	Linear	Linear	486.111
		Quadratic	Linear	82.672
	Cubic	Linear	Linear	3555.556
		Quadratic	Linear	1.455E-11
	Order 4	Linear	Linear	1555.556
		Quadratic	Linear	857.143
Error (Visualization*DataVisualiza tionAttribute*Dataset)	Linear	Linear	Linear	621.732
		Quadratic	Linear	1109.205
	Quadratic	Linear	Linear	1074.346
		Quadratic	Linear	2687.714
	Cubic	Linear	Linear	820.261
		Quadratic	Linear	558.824
	Order 4	Linear	Linear	702.614
		Quadratic	Linear	2144.258

Tests of Within-Subjects Contrasts

Measure: MEASURE_1

Source	Visualization	DataVisualizationAttribute	Dataset	F	Sig.
	Order 4		Linear	5.860	.027
Error(Visualization*Dataset)	Linear		Linear		
	Quadratic		Linear		
	Cubic		Linear		
	Order 4		Linear		
DataVisualizationAttribute * Dataset		Linear	Linear	.213	.651
		Quadratic	Linear	.099	.757
Error (DataVisualizationAttribute* Dataset)		Linear	Linear		
		Quadratic	Linear		
Visualization * DataVisualizationAttribute * Dataset	Linear	Linear	Linear	1.095	.310
		Quadratic	Linear	2.609	.125
	Quadratic	Linear	Linear	.452	.510
		Quadratic	Linear	.031	.863
	Cubic	Linear	Linear	4.335	.053
		Quadratic	Linear	.000	1.000
	Order 4	Linear	Linear	2.214	.155
		Quadratic	Linear	.400	.536
Error (Visualization*DataVisualiza tionAttribute*Dataset)	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	DataVisualizationAttribute	Dataset	Partial Eta Squared
	Order 4		Linear	.256
Error(Visualization*Dataset)	Linear		Linear	
	Quadratic		Linear	
	Cubic		Linear	
	Order 4		Linear	
DataVisualizationAttribute * Dataset		Linear	Linear	.012
		Quadratic	Linear	.006
Error (DataVisualizationAttribute* Dataset)		Linear	Linear	
		Quadratic	Linear	
Visualization * DataVisualizationAttribute * Dataset	Linear	Linear	Linear	.060
		Quadratic	Linear	.133
	Quadratic	Linear	Linear	.026
		Quadratic	Linear	.002
	Cubic	Linear	Linear	.203
		Quadratic	Linear	.000
	Order 4	Linear	Linear	.115
		Quadratic	Linear	.023
Error (Visualization*DataVisualizationAttribute*Dataset)	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	DataVisualizationAttribute	Dataset	Noncent. Parameter
	Order 4		Linear	5.860
Error(Visualization*Dataset)	Linear		Linear	
	Quadratic		Linear	
	Cubic		Linear	
	Order 4		Linear	
DataVisualizationAttribute * Dataset		Linear	Linear	.213
		Quadratic	Linear	.099
Error (DataVisualizationAttribute* Dataset)		Linear	Linear	
		Quadratic	Linear	
Visualization * DataVisualizationAttribute * Dataset	Linear	Linear	Linear	1.095
		Quadratic	Linear	2.609
	Quadratic	Linear	Linear	.452
		Quadratic	Linear	.031
	Cubic	Linear	Linear	4.335
		Quadratic	Linear	.000
	Order 4	Linear	Linear	2.214
		Quadratic	Linear	.400
Error (Visualization*DataVisualiza tionAttribute*Dataset)	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	DataVisualizationAttribute	Dataset	Observed Power ^a
	Order 4		Linear	.627
Error(Visualization*Dataset)	Linear		Linear	
	Quadratic		Linear	
	Cubic		Linear	
	Order 4		Linear	
DataVisualizationAttribute * Dataset		Linear	Linear	.072
		Quadratic	Linear	.060
Error (DataVisualizationAttribute* Dataset)		Linear	Linear	
		Quadratic	Linear	
Visualization * DataVisualizationAttribute * Dataset	Linear	Linear	Linear	.167
		Quadratic	Linear	.332
	Quadratic	Linear	Linear	.097
		Quadratic	Linear	.053
	Cubic	Linear	Linear	.502
		Quadratic	Linear	.050
	Order 4	Linear	Linear	.290
		Quadratic	Linear	.092
Error (Visualization*DataVisualizationAttribute*Dataset)	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	3716740.741	1	3716740.741	640.866	.000	.974
Error	98592.593	17	5799.564			

Tests of Between-Subjects Effects

Measure: MEASURE_1

Transformed Variable: Average

Source	Noncent. Parameter	Observed Power ^a
Intercept	640.866	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
82.963	3.277	76.049	89.877

2. Visualization

Estimates

Measure: MEASURE_1

Visualization	Mean	Std. Error	95% Confidence Interval	
			Lower Bound	Upper Bound
1	89.815	4.290	80.763	98.867
2	75.926	3.864	67.774	84.078
3	84.259	5.469	72.721	95.797
4	82.407	4.147	73.658	91.157
5	82.407	3.152	75.757	89.058

Pairwise Comparisons

Measure: MEASURE_1

(I) Visualization	(J) Visualization	Mean Difference (I-J)	Std. Error	Sig. ^b	95% Confidence b...
					Lower Bound
1	2	13.889 [*]	3.087	.003	3.940
	3	5.556	4.042	1.000	-7.470
	4	7.407	4.900	1.000	-8.381
	5	7.407	4.308	1.000	-6.475
2	1	-13.889 [*]	3.087	.003	-23.838
	3	-8.333	4.314	.702	-22.234
	4	-6.481	4.497	1.000	-20.973
	5	-6.481	4.497	1.000	-20.973
3	1	-5.556	4.042	1.000	-18.582
	2	8.333	4.314	.702	-5.568
	4	1.852	3.537	1.000	-9.544
	5	1.852	5.022	1.000	-14.330
4	1	-7.407	4.900	1.000	-23.196
	2	6.481	4.497	1.000	-8.010
	3	-1.852	3.537	1.000	-13.248
	5	7.105E-15	4.261	1.000	-13.731
5	1	-7.407	4.308	1.000	-21.290
	2	6.481	4.497	1.000	-8.010
	3	-1.852	5.022	1.000	-18.034
	4	-7.105E-15	4.261	1.000	-13.731

Pairwise Comparisons

Measure: MEASURE_1

		95% Confidence Interval for ^b ...
(I) Visualization	(J) Visualization	Upper Bound
1	2	23.838
	3	18.582
	4	23.196
	5	21.290
2	1	-3.940
	3	5.568
	4	8.010
	5	8.010
3	1	7.470
	2	22.234
	4	13.248
	5	18.034
4	1	8.381
	2	20.973
	3	9.544
	5	13.731
5	1	6.475
	2	20.973
	3	14.330
	4	13.731

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	.561	4.471 ^a	4.000	14.000	.016	.561
Wilks' lambda	.439	4.471 ^a	4.000	14.000	.016	.561
Hotelling's trace	1.277	4.471 ^a	4.000	14.000	.016	.561
Roy's largest root	1.277	4.471 ^a	4.000	14.000	.016	.561

Multivariate Tests

	Noncent. Parameter	Observed Power ^b
Pillai's trace	17.882	.830
Wilks' lambda	17.882	.830
Hotelling's trace	17.882	.830
Roy's largest root	17.882	.830

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. DataVisualizationAttribute

Estimates

Measure: MEASURE_1

DataVisualizationAttribute	Mean	Std. Error	95% Confidence Interval	
			Lower Bound	Upper Bound
1	91.667	4.519	82.132	101.202
2	67.778	3.924	59.499	76.056
3	89.444	3.076	82.956	95.933

Pairwise Comparisons

Measure: MEASURE_1

(I) DataVisualizationAttribute	(J) DataVisualizationAttribute	Mean Difference (I-J)	Std. Error	Sig. ^b
1	2	23.889 [*]	3.717	.000
	3	2.222	3.289	1.000
2	1	-23.889 [*]	3.717	.000
	3	-21.667 [*]	3.813	.000
3	1	-2.222	3.289	1.000
	2	21.667 [*]	3.813	.000

Pairwise Comparisons

Measure: MEASURE_1

(I) DataVisualizationAttribute	(J) DataVisualizationAttribute	95% Confidence Interval for Difference ^b	
		Lower Bound	Upper Bound
1	2	14.020	33.758
	3	-6.511	10.956
2	1	-33.758	-14.020
	3	-31.791	-11.542
3	1	-10.956	6.511
	2	11.542	31.791

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	.730	21.656 ^a	2.000	16.000	.000	.730
Wilks' lambda	.270	21.656 ^a	2.000	16.000	.000	.730
Hotelling's trace	2.707	21.656 ^a	2.000	16.000	.000	.730
Roy's largest root	2.707	21.656 ^a	2.000	16.000	.000	.730

Multivariate Tests

	Noncent. Parameter	Observed Power ^b
Pillai's trace	43.311	1.000
Wilks' lambda	43.311	1.000
Hotelling's trace	43.311	1.000
Roy's largest root	43.311	1.000

Each F tests the multivariate effect of DataVisualizationAttribute. 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 * DataVisualizationAttribute

Measure: MEASURE_1

Visualization	DataVisualizationAttribute	Mean	Std. Error	95% Confidence Interval	
				Lower Bound	Upper Bound
1	1	88.889	6.462	75.255	102.523
	2	86.111	6.771	71.826	100.396
	3	94.444	3.811	86.404	102.485
2	1	88.889	7.622	72.808	104.970
	2	44.444	7.971	27.626	61.263
	3	94.444	3.811	86.404	102.485
3	1	88.889	6.462	75.255	102.523
	2	77.778	7.256	62.469	93.087
	3	86.111	5.432	74.651	97.571
4	1	97.222	2.778	91.362	103.083
	2	72.222	7.256	56.913	87.531
	3	77.778	7.256	62.469	93.087
5	1	94.444	3.811	86.404	102.485
	2	58.333	7.287	42.958	73.708
	3	94.444	3.811	86.404	102.485