

Your temporary usage period for IBM SPSS Statistics will expire in 11 days.

Your license will expire in 11 days.

GET

FILE='C:\Users\Bahador\Desktop\Analysis\Derived\Derived_Time.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_Nom_Num_CarLine_Nom_Num_MovieLine_Nom_Num_CarLine_Nom_Num_Movie

Line_Ord_Num_CarLine_Ord_Num_MoviePie_Nom_Num_CarPie_Nom_Num_MoviePie_Nom_Num_Car

Pie_Num_Num_MoviePie_Ord_Num_CarPie_Ord_Num_MovieScatter_Nom_Num_CarScatter_Nom_Num_Movie

Scatter_Num_Num_CarScatter_Num_Num_MovieScatter_Ord_Num_CarScatter_Ord_Num_Movie

Table_Nom_Num_CarTable_Nom_Num_MovieTable_Nom_Num_CarTable_Nom_Num_MovieTable_Ord_Num_Car

Table_Ord_Num_Movie

/WSFACTOR=Visualization5 PolynomialDataAttributeTypes3 PolynomialDataset2 Polynomial

/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=VisualizationDataAttributeTypesDataset Visualization*DataAttributeTypes

Visualization*Dataset DataAttributeTypes*Dataset Visualization*DataAttributeTypes*Dataset.

General Linear Model

Notes

Output Created		06-SEP-2016 15:37:06
Comments		
Input	Data	C: \Users\Bahador\Desktop\A nalysis\Derived\Derived_Ti me.sav
	Active Dataset	DataSet1
	Filter	<none>
	Weight	<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
n 5 Polynomial
DataAttributeTypes 3
Polynomial Dataset 2
Polynomial
/METHOD=SSTYPE(3)
/EMMEANS=TABLES
(OVERALL)
/EMMEANS=TABLES
(Visualization) COMPARE
ADJ(BONFERRONI)
/EMMEANS=TABLES
(DataAttributeTypes)
COMPARE ADJ
(BONFERRONI)
/EMMEANS=TABLES
(Visualization*DataAttribut
eTypes)
/PRINT=DESCRIPTIVE
ETASQ OPOWER
HOMOGENEITY
/CRITERIA=ALPHA(.05)
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/WSDESIGN=Visualizatio
n DataAttributeTypes
Dataset
Visualization*DataAttribute
Types
Visualization*Dataset
DataAttributeTypes*Datase
```

Notes

Resources	Processor Time	00:00:00.03
	Elapsed Time	00:00:00.02

[DataSet1] C:\Users\Bahador\Desktop\Analysis\Derived\Derived_Time.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	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	DataAttributeTypes	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	26.7222	18.52123	18
Bar_Nom_Num_Movie	23.8333	10.11260	18
Bar_Num_Num_Car	17.1667	6.38242	18
Bar_Num_Num_Movie	26.5000	14.51267	18
Bar_Ord_Num_Car	15.5000	9.84736	18
Bar_Ord_Num_Movie	15.2778	9.24061	18
Line_Nom_Num_Car	32.3333	44.77657	18
Line_Nom_Num_Movie	25.6111	13.75901	18
Line_Num_Num_Car	25.4444	13.69939	18
Line_Num_Num_Movie	19.2778	11.46763	18
Line_Ord_Num_Car	22.6111	12.50947	18
Line_Ord_Num_Movie	19.8333	11.77360	18
Pie_Nom_Num_Car	18.3889	10.43263	18
Pie_Nom_Num_Movie	14.6667	8.08048	18
Pie_Num_Num_Car	25.6667	21.21320	18
Pie_Num_Num_Movie	17.8333	7.23757	18
Pie_Ord_Num_Car	15.3889	4.86450	18
Pie_Ord_Num_Movie	18.8333	11.64802	18
Scatter_Nom_Num_Car	19.3889	8.74568	18
Scatter_Nom_Num_Movie	26.5556	36.61761	18
Scatter_Num_Num_Car	24.5556	11.80340	18
Scatter_Num_Num_Movie	23.5556	11.88782	18
Scatter_Ord_Num_Car	21.0556	9.79479	18
Scatter_Ord_Num_Movie	20.5000	11.70847	18
Table_Nom_Num_Car	19.4444	14.60951	18
Table_Nom_Num_Movie	14.5000	5.20464	18
Table_Num_Num_Car	18.2778	5.89921	18
Table_Num_Num_Movie	20.3333	10.90602	18
Table_Ord_Num_Car	13.2222	8.04075	18
Table_Ord_Num_Movie	11.0000	3.16228	18

Multivariate Tests^a

Effect		Value	F	Hypothesis df	Error df
Visualization	Pillai's Trace	.749	10.460 ^b	4.000	14.000
	Wilks' Lambda	.251	10.460 ^b	4.000	14.000
	Hotelling's Trace	2.989	10.460 ^b	4.000	14.000
	Roy's Largest Root	2.989	10.460 ^b	4.000	14.000
DataAttributeTypes	Pillai's Trace	.557	10.076 ^b	2.000	16.000
	Wilks' Lambda	.443	10.076 ^b	2.000	16.000
	Hotelling's Trace	1.260	10.076 ^b	2.000	16.000
	Roy's Largest Root	1.260	10.076 ^b	2.000	16.000
Dataset	Pillai's Trace	.047	.843 ^b	1.000	17.000
	Wilks' Lambda	.953	.843 ^b	1.000	17.000
	Hotelling's Trace	.050	.843 ^b	1.000	17.000
	Roy's Largest Root	.050	.843 ^b	1.000	17.000
Visualization * DataAttributeTypes	Pillai's Trace	.881	9.275 ^b	8.000	10.000
	Wilks' Lambda	.119	9.275 ^b	8.000	10.000
	Hotelling's Trace	7.420	9.275 ^b	8.000	10.000
	Roy's Largest Root	7.420	9.275 ^b	8.000	10.000
Visualization * Dataset	Pillai's Trace	.355	1.925 ^b	4.000	14.000
	Wilks' Lambda	.645	1.925 ^b	4.000	14.000
	Hotelling's Trace	.550	1.925 ^b	4.000	14.000
	Roy's Largest Root	.550	1.925 ^b	4.000	14.000
DataAttributeTypes * Dataset	Pillai's Trace	.019	.157 ^b	2.000	16.000
	Wilks' Lambda	.981	.157 ^b	2.000	16.000
	Hotelling's Trace	.020	.157 ^b	2.000	16.000
	Roy's Largest Root	.020	.157 ^b	2.000	16.000
Visualization * DataAttributeTypes * Dataset	Pillai's Trace	.399	.831 ^b	8.000	10.000
	Wilks' Lambda	.601	.831 ^b	8.000	10.000
	Hotelling's Trace	.664	.831 ^b	8.000	10.000
	Roy's Largest Root	.664	.831 ^b	8.000	10.000

Multivariate Tests^a

Effect		Sig.	Partial Eta Squared	Noncent. Parameter
Visualization	Pillai's Trace	.000	.749	41.840
	Wilks' Lambda	.000	.749	41.840
	Hotelling's Trace	.000	.749	41.840
	Roy's Largest Root	.000	.749	41.840
DataAttributeTypes	Pillai's Trace	.001	.557	20.152
	Wilks' Lambda	.001	.557	20.152
	Hotelling's Trace	.001	.557	20.152
	Roy's Largest Root	.001	.557	20.152
Dataset	Pillai's Trace	.372	.047	.843
	Wilks' Lambda	.372	.047	.843
	Hotelling's Trace	.372	.047	.843
	Roy's Largest Root	.372	.047	.843
Visualization * DataAttributeTypes	Pillai's Trace	.001	.881	74.197
	Wilks' Lambda	.001	.881	74.197
	Hotelling's Trace	.001	.881	74.197
	Roy's Largest Root	.001	.881	74.197
Visualization * Dataset	Pillai's Trace	.162	.355	7.700
	Wilks' Lambda	.162	.355	7.700
	Hotelling's Trace	.162	.355	7.700
	Roy's Largest Root	.162	.355	7.700
DataAttributeTypes * Dataset	Pillai's Trace	.856	.019	.314
	Wilks' Lambda	.856	.019	.314
	Hotelling's Trace	.856	.019	.314
	Roy's Largest Root	.856	.019	.314
Visualization * DataAttributeTypes * Dataset	Pillai's Trace	.596	.399	6.644
	Wilks' Lambda	.596	.399	6.644
	Hotelling's Trace	.596	.399	6.644
	Roy's Largest Root	.596	.399	6.644

Multivariate Tests^a

Effect		Observed Power ^c
Visualization	Pillai's Trace	.997
	Wilks' Lambda	.997
	Hotelling's Trace	.997
	Roy's Largest Root	.997
DataAttributeTypes	Pillai's Trace	.962
	Wilks' Lambda	.962
	Hotelling's Trace	.962
	Roy's Largest Root	.962
Dataset	Pillai's Trace	.140
	Wilks' Lambda	.140
	Hotelling's Trace	.140
	Roy's Largest Root	.140
Visualization * DataAttributeTypes	Pillai's Trace	.997
	Wilks' Lambda	.997
	Hotelling's Trace	.997
	Roy's Largest Root	.997
Visualization * Dataset	Pillai's Trace	.439
	Wilks' Lambda	.439
	Hotelling's Trace	.439
	Roy's Largest Root	.439
DataAttributeTypes * Dataset	Pillai's Trace	.070
	Wilks' Lambda	.070
	Hotelling's Trace	.070
	Roy's Largest Root	.070
Visualization * DataAttributeTypes * Dataset	Pillai's Trace	.214
	Wilks' Lambda	.214
	Hotelling's Trace	.214
	Roy's Largest Root	.214

a. Design: Intercept

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

DataAttributeTypes + Visualization * Dataset + DataAttributeTypes * Dataset + 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	.313	17.901	9	.037	.613
DataAttributeTypes	.592	8.401	2	.015	.710
Dataset	1.000	.000	0	.	1.000
Visualization * DataAttributeTypes	.001	106.296	35	.000	.422
Visualization * Dataset	.196	25.129	9	.003	.626
DataAttributeTypes * Dataset	.717	5.328	2	.070	.779
Visualization * DataAttributeTypes * Dataset	.001	107.166	35	.000	.398

Mauchly's Test of Sphericity^a

Measure: MEASURE_1

Within Subjects Effect	Epsilon ^b	
	Huynh-Feldt	Lower-bound
Visualization	.725	.250
DataAttributeTypes	.756	.500
Dataset	1.000	1.000
Visualization * DataAttributeTypes	.539	.125
Visualization * Dataset	.743	.250
DataAttributeTypes * Dataset	.844	.500
Visualization * DataAttributeTypes * Dataset	.500	.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 + Dataset + Visualization *

DataAttributeTypes + Visualization * Dataset + DataAttributeTypes * Dataset + 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	4465.007	4	1116.252	6.807
	Greenhouse-Geisser	4465.007	2.454	1819.491	6.807
	Huynh-Feldt	4465.007	2.899	1540.084	6.807
	Lower-bound	4465.007	1.000	4465.007	6.807
Error(Visualization)	Sphericity Assumed	11150.526	68	163.978	
	Greenhouse-Geisser	11150.526	41.718	267.285	
	Huynh-Feldt	11150.526	49.286	226.240	
	Lower-bound	11150.526	17.000	655.913	
DataAttributeTypes	Sphericity Assumed	2636.137	2	1318.069	6.888
	Greenhouse-Geisser	2636.137	1.420	1856.488	6.888
	Huynh-Feldt	2636.137	1.512	1743.311	6.888
	Lower-bound	2636.137	1.000	2636.137	6.888
Error(DataAttributeTypes)	Sphericity Assumed	6506.330	34	191.363	
	Greenhouse-Geisser	6506.330	24.139	269.533	
	Huynh-Feldt	6506.330	25.706	253.101	
	Lower-bound	6506.330	17.000	382.725	
Dataset	Sphericity Assumed	174.535	1	174.535	.843
	Greenhouse-Geisser	174.535	1.000	174.535	.843
	Huynh-Feldt	174.535	1.000	174.535	.843
	Lower-bound	174.535	1.000	174.535	.843
Error(Dataset)	Sphericity Assumed	3521.698	17	207.159	
	Greenhouse-Geisser	3521.698	17.000	207.159	
	Huynh-Feldt	3521.698	17.000	207.159	
	Lower-bound	3521.698	17.000	207.159	
Visualization * DataAttributeTypes	Sphericity Assumed	2199.270	8	274.909	1.427
	Greenhouse-Geisser	2199.270	3.373	652.025	1.427

Tests of Within-Subjects Effects

Measure: MEASURE_1

Source		Sig.	Partial Eta Squared	Noncent. Parameter
Visualization	Sphericity Assumed	.000	.286	27.229
	Greenhouse-Geisser	.002	.286	16.705
	Huynh-Feldt	.001	.286	19.736
	Lower-bound	.018	.286	6.807
Error(Visualization)	Sphericity Assumed			
	Greenhouse-Geisser			
	Huynh-Feldt			
	Lower-bound			
DataAttributeTypes	Sphericity Assumed	.003	.288	13.776
	Greenhouse-Geisser	.008	.288	9.780
	Huynh-Feldt	.007	.288	10.415
	Lower-bound	.018	.288	6.888
Error(DataAttributeTypes)	Sphericity Assumed			
	Greenhouse-Geisser			
	Huynh-Feldt			
	Lower-bound			
Dataset	Sphericity Assumed	.372	.047	.843
	Greenhouse-Geisser	.372	.047	.843
	Huynh-Feldt	.372	.047	.843
	Lower-bound	.372	.047	.843
Error(Dataset)	Sphericity Assumed			
	Greenhouse-Geisser			
	Huynh-Feldt			
	Lower-bound			
Visualization * DataAttributeTypes	Sphericity Assumed	.191	.077	11.417
	Greenhouse-Geisser	.242	.077	4.814

Tests of Within-Subjects Effects

Measure: MEASURE_1

Source		Observed Power ^a
Visualization	Sphericity Assumed	.990
	Greenhouse-Geisser	.937
	Huynh-Feldt	.963
	Lower-bound	.691
Error(Visualization)	Sphericity Assumed	
	Greenhouse-Geisser	
	Huynh-Feldt	
	Lower-bound	
DataAttributeTypes	Sphericity Assumed	.898
	Greenhouse-Geisser	.806
	Huynh-Feldt	.824
	Lower-bound	.696
Error(DataAttributeTypes)	Sphericity Assumed	
	Greenhouse-Geisser	
	Huynh-Feldt	
	Lower-bound	
Dataset	Sphericity Assumed	.140
	Greenhouse-Geisser	.140
	Huynh-Feldt	.140
	Lower-bound	.140
Error(Dataset)	Sphericity Assumed	
	Greenhouse-Geisser	
	Huynh-Feldt	
	Lower-bound	
Visualization * DataAttributeTypes	Sphericity Assumed	.628
	Greenhouse-Geisser	.381

Tests of Within-Subjects Effects

Measure: MEASURE_1

Source		Type III Sum of Squares	df	Mean Square	F
	Huynh-Feldt	2199.270	4.309	510.434	1.427
	Lower-bound	2199.270	1.000	2199.270	1.427
Error (Visualization*DataAttribute Types)	Sphericity Assumed	26198.596	136	192.637	
	Greenhouse-Geisser	26198.596	57.341	456.893	
	Huynh-Feldt	26198.596	73.247	357.676	
	Lower-bound	26198.596	17.000	1541.094	
Visualization * Dataset	Sphericity Assumed	1048.141	4	262.035	.987
	Greenhouse-Geisser	1048.141	2.504	418.612	.987
	Huynh-Feldt	1048.141	2.971	352.781	.987
	Lower-bound	1048.141	1.000	1048.141	.987
Error(Visualization*Dataset)	Sphericity Assumed	18047.126	68	265.399	
	Greenhouse-Geisser	18047.126	42.565	423.986	
	Huynh-Feldt	18047.126	50.508	357.309	
	Lower-bound	18047.126	17.000	1061.596	
DataAttributeTypes * Dataset	Sphericity Assumed	80.959	2	40.480	.243
	Greenhouse-Geisser	80.959	1.559	51.945	.243
	Huynh-Feldt	80.959	1.687	47.982	.243
	Lower-bound	80.959	1.000	80.959	.243
Error (DataAttributeTypes*Datase t)	Sphericity Assumed	5659.907	34	166.468	
	Greenhouse-Geisser	5659.907	26.495	213.618	
	Huynh-Feldt	5659.907	28.684	197.322	
	Lower-bound	5659.907	17.000	332.936	
Visualization * DataAttributeTypes * Dataset	Sphericity Assumed	1934.559	8	241.820	1.079
	Greenhouse-Geisser	1934.559	3.180	608.262	1.079
	Huynh-Feldt	1934.559	3.998	483.899	1.079
	Lower-bound	1934.559	1.000	1934.559	1.079
Error (Visualization*DataAttribute Types*Dataset)	Sphericity Assumed	30473.574	136	224.070	
	Greenhouse-Geisser	30473.574	54.068	563.615	
	Huynh-Feldt	30473.574	67.964	448.381	
	Lower-bound	30473.574	17.000	1792.563	

Tests of Within-Subjects Effects

Measure: MEASURE_1

Source		Sig.	Partial Eta Squared	Noncent. Parameter
	Huynh-Feldt	.231	.077	6.149
	Lower-bound	.249	.077	1.427
Error (Visualization*DataAttribute Types)	Sphericity Assumed			
	Greenhouse-Geisser			
	Huynh-Feldt			
	Lower-bound			
Visualization * Dataset	Sphericity Assumed	.420	.055	3.949
	Greenhouse-Geisser	.396	.055	2.472
	Huynh-Feldt	.406	.055	2.933
	Lower-bound	.334	.055	.987
Error(Visualization*Dataset)	Sphericity Assumed			
	Greenhouse-Geisser			
	Huynh-Feldt			
	Lower-bound			
DataAttributeTypes * Dataset	Sphericity Assumed	.785	.014	.486
	Greenhouse-Geisser	.731	.014	.379
	Huynh-Feldt	.748	.014	.410
	Lower-bound	.628	.014	.243
Error (DataAttributeTypes*Datase t)	Sphericity Assumed			
	Greenhouse-Geisser			
	Huynh-Feldt			
	Lower-bound			
Visualization * DataAttributeTypes * Dataset	Sphericity Assumed	.381	.060	8.634
	Greenhouse-Geisser	.368	.060	3.432
	Huynh-Feldt	.374	.060	4.315
	Lower-bound	.313	.060	1.079
Error (Visualization*DataAttribute Types*Dataset)	Sphericity Assumed			
	Greenhouse-Geisser			
	Huynh-Feldt			
	Lower-bound			

Tests of Within-Subjects Effects

Measure: MEASURE_1

Source		Observed Power ^a
	Huynh-Feldt	.440
	Lower-bound	.204
Error (Visualization*DataAttribute Types)	Sphericity Assumed	
	Greenhouse-Geisser	
	Huynh-Feldt	
	Lower-bound	
Visualization * Dataset	Sphericity Assumed	.296
	Greenhouse-Geisser	.231
	Huynh-Feldt	.252
	Lower-bound	.155
Error(Visualization*Dataset)	Sphericity Assumed	
	Greenhouse-Geisser	
	Huynh-Feldt	
	Lower-bound	
DataAttributeTypes * Dataset	Sphericity Assumed	.085
	Greenhouse-Geisser	.081
	Huynh-Feldt	.082
	Lower-bound	.075
Error (DataAttributeTypes*Datase t)	Sphericity Assumed	
	Greenhouse-Geisser	
	Huynh-Feldt	
	Lower-bound	
Visualization * DataAttributeTypes * Dataset	Sphericity Assumed	.486
	Greenhouse-Geisser	.284
	Huynh-Feldt	.322
	Lower-bound	.165
Error (Visualization*DataAttribute Types*Dataset)	Sphericity Assumed	
	Greenhouse-Geisser	
	Huynh-Feldt	
	Lower-bound	

a. Computed using alpha = .05

Tests of Within-Subjects Contrasts

Measure: MEASURE_1

Source	Visualization	DataAttributeTypes	Dataset	Type III Sum of Squares	df
Visualization	Linear			1304.601	1
	Quadratic			738.921	1
	Cubic			25.515	1
	Order 4			2395.970	1
Error(Visualization)	Linear			1682.082	17
	Quadratic			2232.519	17
	Cubic			5296.552	17
	Order 4			1939.372	17
DataAttributeTypes		Linear		2092.844	1
		Quadratic		543.293	1
Error(DataAttributeTypes)		Linear		5075.956	17
		Quadratic		1430.374	17
Dataset			Linear	174.535	1
Error(Dataset)			Linear	3521.698	17
Visualization * DataAttributeTypes	Linear	Linear		438.672	1
		Quadratic		314.341	1
	Quadratic	Linear		552.099	1
		Quadratic		17.799	1
	Cubic	Linear		66.613	1
		Quadratic		103.578	1
	Order 4	Linear		209.272	1
		Quadratic		496.897	1
Error (Visualization*DataAttribute Types)	Linear	Linear		1694.478	17
		Quadratic		2065.976	17
	Quadratic	Linear		1569.508	17
		Quadratic		1318.689	17
	Cubic	Linear		8481.863	17
		Quadratic		3494.980	17
	Order 4	Linear		3802.196	17
		Quadratic		3770.907	17
Visualization * Dataset	Linear		Linear	.579	1
	Quadratic		Linear	174.054	1
	Cubic		Linear	871.204	1
	Order 4		Linear	2.305	1

Tests of Within-Subjects Contrasts

Measure: MEASURE_1

Source	Visualization	DataAttributeTypes	Dataset	Mean Square	F
Visualization	Linear			1304.601	13.185
	Quadratic			738.921	5.627
	Cubic			25.515	.082
	Order 4			2395.970	21.002
Error(Visualization)	Linear			98.946	
	Quadratic			131.325	
	Cubic			311.562	
	Order 4			114.081	
DataAttributeTypes		Linear		2092.844	7.009
		Quadratic		543.293	6.457
Error(DataAttributeTypes)		Linear		298.586	
		Quadratic		84.140	
Dataset			Linear	174.535	.843
Error(Dataset)			Linear	207.159	
Visualization * DataAttributeTypes	Linear	Linear		438.672	4.401
		Quadratic		314.341	2.587
	Quadratic	Linear		552.099	5.980
		Quadratic		17.799	.229
	Cubic	Linear		66.613	.134
		Quadratic		103.578	.504
	Order 4	Linear		209.272	.936
		Quadratic		496.897	2.240
Error (Visualization*DataAttribute Types)	Linear	Linear		99.675	
		Quadratic		121.528	
	Quadratic	Linear		92.324	
		Quadratic		77.570	
	Cubic	Linear		498.933	
		Quadratic		205.587	
	Order 4	Linear		223.659	
		Quadratic		221.818	
Visualization * Dataset	Linear		Linear	.579	.003
	Quadratic		Linear	174.054	1.660
	Cubic		Linear	871.204	3.062
	Order 4		Linear	2.305	.005

Tests of Within-Subjects Contrasts

Measure: MEASURE_1

Source	Visualization	DataAttributeTypes	Dataset	Sig.	Partial Eta Squared
Visualization	Linear			.002	.437
	Quadratic			.030	.249
	Cubic			.778	.005
	Order 4			.000	.553
Error(Visualization)	Linear				
	Quadratic				
	Cubic				
	Order 4				
DataAttributeTypes		Linear		.017	.292
		Quadratic		.021	.275
Error(DataAttributeTypes)		Linear			
		Quadratic			
Dataset			Linear	.372	.047
Error(Dataset)			Linear		
Visualization * DataAttributeTypes	Linear	Linear		.051	.206
		Quadratic		.126	.132
	Quadratic	Linear		.026	.260
		Quadratic		.638	.013
	Cubic	Linear		.719	.008
		Quadratic		.487	.029
	Order 4	Linear		.347	.052
		Quadratic		.153	.116
Error (Visualization*DataAttribute Types)	Linear	Linear			
		Quadratic			
	Quadratic	Linear			
		Quadratic			
	Cubic	Linear			
		Quadratic			
	Order 4	Linear			
		Quadratic			
Visualization * Dataset	Linear		Linear	.955	.000
	Quadratic		Linear	.215	.089
	Cubic		Linear	.098	.153
	Order 4		Linear	.946	.000

Tests of Within-Subjects Contrasts

Measure: MEASURE_1

Source	Visualization	DataAttributeTypes	Dataset	Noncent. Parameter
Visualization	Linear			13.185
	Quadratic			5.627
	Cubic			.082
	Order 4			21.002
Error(Visualization)	Linear			
	Quadratic			
	Cubic			
	Order 4			
DataAttributeTypes		Linear		7.009
		Quadratic		6.457
Error(DataAttributeTypes)		Linear		
		Quadratic		
Dataset			Linear	.843
Error(Dataset)			Linear	
Visualization * DataAttributeTypes	Linear	Linear		4.401
		Quadratic		2.587
	Quadratic	Linear		5.980
		Quadratic		.229
	Cubic	Linear		.134
		Quadratic		.504
	Order 4	Linear		.936
		Quadratic		2.240
Error (Visualization*DataAttribute Types)	Linear	Linear		
		Quadratic		
	Quadratic	Linear		
		Quadratic		
	Cubic	Linear		
		Quadratic		
	Order 4	Linear		
		Quadratic		
Visualization * Dataset	Linear		Linear	.003
	Quadratic		Linear	1.660
	Cubic		Linear	3.062
	Order 4		Linear	.005

Tests of Within-Subjects Contrasts

Measure: MEASURE_1

Source	Visualization	DataAttributeTypes	Dataset	Observed Power ^a
Visualization	Linear			.928
	Quadratic			.609
	Cubic			.058
	Order 4			.991
Error(Visualization)	Linear			
	Quadratic			
	Cubic			
	Order 4			
DataAttributeTypes		Linear		.704
		Quadratic		.669
Error(DataAttributeTypes)		Linear		
		Quadratic		
Dataset			Linear	.140
Error(Dataset)			Linear	
Visualization * DataAttributeTypes	Linear	Linear		.508
		Quadratic		.329
	Quadratic	Linear		.635
		Quadratic		.074
	Cubic	Linear		.064
		Quadratic		.103
	Order 4	Linear		.150
		Quadratic		.292
Error (Visualization*DataAttribute Types)	Linear	Linear		
		Quadratic		
	Quadratic	Linear		
		Quadratic		
	Cubic	Linear		
		Quadratic		
	Order 4	Linear		
		Quadratic		
Visualization * Dataset	Linear		Linear	.050
	Quadratic		Linear	.229
	Cubic		Linear	.379
	Order 4		Linear	.050

Tests of Within-Subjects Contrasts

Measure: MEASURE_1

Source	Visualization	DataAttributeTypes	Dataset	Type III Sum of Squares	df
Error(Visualization*Dataset)	Linear		Linear	3062.038	17
	Quadratic		Linear	1782.101	17
	Cubic		Linear	4837.263	17
	Order 4		Linear	8365.724	17
DataAttributeTypes * Dataset		Linear	Linear	69.344	1
		Quadratic	Linear	11.615	1
Error (DataAttributeTypes*Dataset)		Linear	Linear	3547.856	17
		Quadratic	Linear	2112.052	17
Visualization * DataAttributeTypes * Dataset	Linear	Linear	Linear	60.089	1
		Quadratic	Linear	107.557	1
	Quadratic	Linear	Linear	.016	1
		Quadratic	Linear	1257.440	1
	Cubic	Linear	Linear	246.168	1
		Quadratic	Linear	.167	1
	Order 4	Linear	Linear	259.216	1
		Quadratic	Linear	3.905	1
Error (Visualization*DataAttributeTypes*Dataset)	Linear	Linear	Linear	3936.461	17
		Quadratic	Linear	1933.426	17
	Quadratic	Linear	Linear	2653.734	17
		Quadratic	Linear	4337.048	17
	Cubic	Linear	Linear	6255.407	17
		Quadratic	Linear	3773.891	17
	Order 4	Linear	Linear	5091.209	17
		Quadratic	Linear	2492.398	17

Tests of Within-Subjects Contrasts

Measure: MEASURE_1

Source	Visualization	DataAttributeTypes	Dataset	Mean Square	F
Error(Visualization*Dataset)	Linear		Linear	180.120	
	Quadratic		Linear	104.829	
	Cubic		Linear	284.545	
	Order 4		Linear	492.101	
DataAttributeTypes * Dataset		Linear	Linear	69.344	.332
		Quadratic	Linear	11.615	.093
Error (DataAttributeTypes*Dataset)		Linear	Linear	208.697	
		Quadratic	Linear	124.238	
Visualization * DataAttributeTypes * Dataset	Linear	Linear	Linear	60.089	.259
		Quadratic	Linear	107.557	.946
	Quadratic	Linear	Linear	.016	.000
		Quadratic	Linear	1257.440	4.929
	Cubic	Linear	Linear	246.168	.669
		Quadratic	Linear	.167	.001
	Order 4	Linear	Linear	259.216	.866
		Quadratic	Linear	3.905	.027
Error (Visualization*DataAttributeTypes*Dataset)	Linear	Linear	Linear	231.557	
		Quadratic	Linear	113.731	
	Quadratic	Linear	Linear	156.102	
		Quadratic	Linear	255.120	
	Cubic	Linear	Linear	367.965	
		Quadratic	Linear	221.994	
	Order 4	Linear	Linear	299.483	
		Quadratic	Linear	146.612	

Tests of Within-Subjects Contrasts

Measure: MEASURE_1

Source	Visualization	DataAttributeTypes	Dataset	Sig.	Partial Eta Squared
Error(Visualization*Dataset)	Linear		Linear		
	Quadratic		Linear		
	Cubic		Linear		
	Order 4		Linear		
DataAttributeTypes * Dataset		Linear	Linear	.572	.019
		Quadratic	Linear	.764	.005
Error (DataAttributeTypes*Dataset)		Linear	Linear		
		Quadratic	Linear		
Visualization * DataAttributeTypes * Dataset	Linear	Linear	Linear	.617	.015
		Quadratic	Linear	.344	.053
	Quadratic	Linear	Linear	.992	.000
		Quadratic	Linear	.040	.225
	Cubic	Linear	Linear	.425	.038
		Quadratic	Linear	.978	.000
	Order 4	Linear	Linear	.365	.048
		Quadratic	Linear	.872	.002
Error (Visualization*DataAttributeTypes*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	DataAttributeTypes	Dataset	Noncent. Parameter
Error(Visualization*Dataset)	Linear		Linear	
	Quadratic		Linear	
	Cubic		Linear	
	Order 4		Linear	
DataAttributeTypes * Dataset		Linear	Linear	.332
		Quadratic	Linear	.093
Error (DataAttributeTypes*Dataset)		Linear	Linear	
		Quadratic	Linear	
Visualization * DataAttributeTypes * Dataset	Linear	Linear	Linear	.259
		Quadratic	Linear	.946
	Quadratic	Linear	Linear	.000
		Quadratic	Linear	4.929
	Cubic	Linear	Linear	.669
		Quadratic	Linear	.001
	Order 4	Linear	Linear	.866
		Quadratic	Linear	.027
Error (Visualization*DataAttribute Types*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	DataAttributeTypes	Dataset	Observed Power ^a
Error(Visualization*Dataset)	Linear		Linear	
	Quadratic		Linear	
	Cubic		Linear	
	Order 4		Linear	
DataAttributeTypes * Dataset		Linear	Linear	.085
		Quadratic	Linear	.060
Error (DataAttributeTypes*Dataset)		Linear	Linear	
		Quadratic	Linear	
Visualization * DataAttributeTypes * Dataset	Linear	Linear	Linear	.077
		Quadratic	Linear	.151
	Quadratic	Linear	Linear	.050
		Quadratic	Linear	.553
	Cubic	Linear	Linear	.121
		Quadratic	Linear	.050
	Order 4	Linear	Linear	.142
		Quadratic	Linear	.053
Error (Visualization*DataAttributeTypes*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	225665.780	1	225665.780	237.707	.000	.933
Error	16138.854	17	949.344			

Tests of Between-Subjects Effects

Measure: MEASURE_1

Transformed Variable: Average

Source	Noncent. Parameter	Observed Power ^a
Intercept	237.707	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
20.443	1.326	17.645	23.240

2. Visualization

Estimates

Measure: MEASURE_1

Visualization	Mean	Std. Error	95% Confidence Interval	
			Lower Bound	Upper Bound
1	20.833	1.771	17.096	24.571
2	24.185	2.120	19.713	28.658
3	18.463	1.760	14.749	22.177
4	22.602	1.705	19.004	26.200
5	16.130	1.107	13.794	18.465

Pairwise Comparisons

Measure: MEASURE_1

(I) Visualization	(J) Visualization	Mean Difference (I-J)	Std. Error	Sig. ^b	95% Confidence b...
					Lower Bound
1	2	-3.352	2.312	1.000	-10.804
	3	2.370	1.156	.560	-1.353
	4	-1.769	1.213	1.000	-5.676
	5	4.704 [*]	1.424	.042	.115
2	1	3.352	2.312	1.000	-4.100
	3	5.722	2.096	.143	-1.032
	4	1.583	2.361	1.000	-6.025
	5	8.056 [*]	2.013	.009	1.570
3	1	-2.370	1.156	.560	-6.094
	2	-5.722	2.096	.143	-12.477
	4	-4.139 [*]	1.109	.017	-7.713
	5	2.333	1.582	1.000	-2.764
4	1	1.769	1.213	1.000	-2.139
	2	-1.583	2.361	1.000	-9.191
	3	4.139 [*]	1.109	.017	.565
	5	6.472 [*]	1.560	.007	1.444
5	1	-4.704 [*]	1.424	.042	-9.293
	2	-8.056 [*]	2.013	.009	-14.541
	3	-2.333	1.582	1.000	-7.431
	4	-6.472 [*]	1.560	.007	-11.501

Pairwise Comparisons

Measure: MEASURE_1

		95% Confidence Interval for ... ^b
(I) Visualization	(J) Visualization	Upper Bound
1	2	4.100
	3	6.094
	4	2.139
	5	9.293
2	1	10.804
	3	12.477
	4	9.191
	5	14.541
3	1	1.353
	2	1.032
	4	-.565
	5	7.431
4	1	5.676
	2	6.025
	3	7.713
	5	11.501
5	1	-.115
	2	-1.570
	3	2.764
	4	-1.444

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	.749	10.460 ^a	4.000	14.000	.000	.749
Wilks' lambda	.251	10.460 ^a	4.000	14.000	.000	.749
Hotelling's trace	2.989	10.460 ^a	4.000	14.000	.000	.749
Roy's largest root	2.989	10.460 ^a	4.000	14.000	.000	.749

Multivariate Tests

	Noncent. Parameter	Observed Power ^b
Pillai's trace	41.840	.997
Wilks' lambda	41.840	.997
Hotelling's trace	41.840	.997
Roy's largest root	41.840	.997

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	22.144	1.900	18.135	26.153
2	21.861	1.575	18.539	25.183
3	17.322	1.145	14.907	19.737

Pairwise Comparisons

Measure: MEASURE_1

(I) DataAttributeTypes	(J) DataAttributeTypes	Mean Difference (I-J)	Std. Error	Sig. ^b	95% Confidence ^b ...
					Lower Bound
1	2	.283	1.448	1.000	-3.561
	3	4.822	1.821	.051	-.014
2	1	-.283	1.448	1.000	-4.128
	3	4.539 [*]	.982	.001	1.932
3	1	-4.822	1.821	.051	-9.658
	2	-4.539 [*]	.982	.001	-7.146

Pairwise Comparisons

Measure: MEASURE_1

(I) DataAttributeTypes	(J) DataAttributeTypes	95% Confidence Interval for ... ^b
		Upper Bound
1	2	4.128
	3	9.658
2	1	3.561
	3	7.146
3	1	.014
	2	-1.932

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	.557	10.076 ^a	2.000	16.000	.001	.557
Wilks' lambda	.443	10.076 ^a	2.000	16.000	.001	.557
Hotelling's trace	1.260	10.076 ^a	2.000	16.000	.001	.557
Roy's largest root	1.260	10.076 ^a	2.000	16.000	.001	.557

Multivariate Tests

	Noncent. Parameter	Observed Power ^b
Pillai's trace	20.152	.962
Wilks' lambda	20.152	.962
Hotelling's trace	20.152	.962
Roy's largest root	20.152	.962

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	25.278	2.628	19.734	30.821
	2	21.833	2.006	17.601	26.066
	3	15.389	2.045	11.075	19.703
2	1	28.972	5.204	17.993	39.951
	2	22.361	2.161	17.802	26.920
	3	21.222	1.536	17.981	24.463
3	1	16.528	1.655	13.036	20.020
	2	21.750	2.961	15.503	27.997
	3	17.111	1.727	13.467	20.755
4	1	22.972	4.317	13.864	32.081
	2	24.056	2.100	19.624	28.487
	3	20.778	2.039	16.477	25.079
5	1	16.972	1.813	13.146	20.798
	2	19.306	1.561	16.011	22.600
	3	12.111	1.179	9.624	14.598