```
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_Accuracy.sav.
DATASET NAME DataSet1 WINDOW=FRONT.
GLM Bar_Nom_Num_CarBar_Nom_Num_MovieBar_Num_Num_CarBar_Num_Num_MovieBar_Or
d Num Car
    Bar_Ord_Num_MovieLine_Nom_Num_CarLine_Nom_Num_MovieLine_Num_Num_CarLin
e_Num_Num_Movie
   Line_Ord_Num_CarLine_Ord_Num_MoviePie_Nom_Num_CarPie_Nom_Num_MoviePie_
Num Num Car
    Pie_Num_Num_MoviePie_Ord_Num_CarPie_Ord_Num_MovieScatter_Nom_Num_CarSc
atter_Nom_Num_Movie
    Scatter_Num_Num_CarScatter_Num_Num_MovieScatter_Ord_Num_CarScatter_Ord_
Num_Movie
    Table_Nom_Num_CarTable_Nom_Num_MovieTable_Num_Num_CarTable_Num_Num_Movi
e Table Ord Num Car
   Table Ord Num Movie
  /WSFACTOR=Visualization 5 Polynomial DataAttributeType 3 Polynomial Dataset
2 Polynomial
  /METHOD=SSTYPE(3)
  /EMMEANS=TABLES(OVERALL)
  /EMMEANS=TABLES(Visualization) COMPARE ADJ(BONFERRONI)
  /EMMEANS=TABLES(DataAttributeType COMPARE ADJ(BONFERRONI)
  /EMMEANS=TABLES(Visualization*DataAttributeType)
  /PRINT=DESCRIPTIVE ETASO OPOWER HOMOGENEITY
  /CRITERIA=ALPHA(.05)
```

Visualization*Dataset DataAttributeTypeDataset Visualization*DataAttributeType*Dataset.

/WSDESIGN=Visualization DataAttributeTypeDataset Visualization*DataAttribut

General Linear Model

eType

Notes

Output Created		06-SEP-2016 15:27:56
Comments		
Input	Data	C: \Users\Bahador\Desktop\A nalysis\Derived\Derived_A ccuracy.sav
	Active Dataset	DataSet1
	Filter	<none></none>
	Weight	<none></none>
	Split File	<none></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 GLM Bar_Nom_Num_Car **Syntax** 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 DataAttributeType 3 Polynomial Dataset 2 Polynomial /METHOD=SSTYPE(3) /EMMEANS=TABLES (OVERALL) /EMMEANS=TABLES (Visualization) COMPARE ADJ(BONFERRONI) /EMMEANS=TABLES (DataAttributeType) **COMPARE ADJ** (BONFERRONI) /EMMEANS=TABLES (Visualization*DataAttribut eType) /PRINT=DESCRIPTIVE **ETASQ OPOWER HOMOGENEITY** /CRITERIA=ALPHA(.05)

Page 3

/WSDESIGN=Visualizatio
n DataAttributeType
Dataset
Visualization*DataAttribute
Type
Visualization*Dataset
DataAttributeType*Dataset

Notes

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

[DataSet1] C:\Users\Bahador\Desktop\Analysis\Derived\Derived_Accuracy.sav

Warnings

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

Within-Subjects Factors

Visualization	DataAttributeType	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

Visualization	DataAttributeType	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	77.7778	42.77926	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	88.8889	32.33808	18
Bar_Ord_Num_Movie	94.4444	23.57023	18
Line_Nom_Num_Car	83.3333	38.34825	18
Line_Nom_Num_Movie	61.1111	50.16313	18
Line_Num_Num_Car	61.1111	50.16313	18
Line_Num_Num_Movie	61.1111	50.16313	18
Line_Ord_Num_Car	61.1111	50.16313	18
Line_Ord_Num_Movie	72.2222	46.08886	18
Pie_Nom_Num_Car	94.4444	23.57023	18
Pie_Nom_Num_Movie	88.8889	32.33808	18
Pie_Num_Num_Car	100.0000	.00000	18
Pie_Num_Num_Movie	83.3333	38.34825	18
Pie_Ord_Num_Car	88.8889	32.33808	18
Pie_Ord_Num_Movie	83.3333	38.34825	18
Scatter_Nom_Num_Car	88.8889	32.33808	18
Scatter_Nom_Num_Movie	94.4444	23.57023	18
Scatter_Num_Num_Car	83.3333	38.34825	18
Scatter_Num_Num_Movie	55.5556	51.13100	18
Scatter_Ord_Num_Car	94.4444	23.57023	18
Scatter_Ord_Num_Movie	77.7778	42.77926	18
Table_Nom_Num_Car	94.4444	23.57023	18
Table_Nom_Num_Movie	94.4444	23.57023	18
Table_Num_Num_Car	94.4444	23.57023	18
Table_Num_Num_Movie	83.3333	38.34825	18
Table_Ord_Num_Car	94.4444	23.57023	18
Table_Ord_Num_Movie	100.0000	.00000	18

Multivariate Tests^a

Effect		Value	F	Hypothesis df	Error df
Visualization	Pillai's Trace	.767	11.553 ^b	4.000	14.000
	Wilks' Lambda	.233	11.553 ^b	4.000	14.000
	Hotelling's Trace	3.301	11.553 ^b	4.000	14.000
	Roy's Largest Root	3.301	11.553 ^b	4.000	14.000
DataAttributeType	Pillai's Trace	.204	2.047 ^b	2.000	16.000
	Wilks' Lambda	.796	2.047 ^b	2.000	16.000
	Hotelling's Trace	.256	2.047 ^b	2.000	16.000
	Roy's Largest Root	.256	2.047 ^b	2.000	16.000
Dataset	Pillai's Trace	.144	2.870 ^b	1.000	17.000
	Wilks' Lambda	.856	2.870 ^b	1.000	17.000
	Hotelling's Trace	.169	2.870 ^b	1.000	17.000
	Roy's Largest Root	.169	2.870 ^b	1.000	17.000
Visualization *	Pillai's Trace	.582	1.744 ^b	8.000	10.000
DataAttributeType	Wilks' Lambda	.418	1.744 ^b	8.000	10.000
	Hotelling's Trace	1.395	1.744 ^b	8.000	10.000
	Roy's Largest Root	1.395	1.744 ^b	8.000	10.000
Visualization * Dataset	Pillai's Trace	.429	2.626 ^b	4.000	14.000
	Wilks' Lambda	.571	2.626 ^b	4.000	14.000
	Hotelling's Trace	.750	2.626 ^b	4.000	14.000
	Roy's Largest Root	.750	2.626 ^b	4.000	14.000
DataAttributeType * Dataset	Pillai's Trace	.183	1.791 ^b	2.000	16.000
•	Wilks' Lambda	.817	1.791 ^b	2.000	16.000
•	Hotelling's Trace	.224	1.791 ^b	2.000	16.000
	Roy's Largest Root	.224	1.791 ^b	2.000	16.000
Visualization *	Pillai's Trace	.583	1.751 ^b	8.000	10.000
DataAttributeType * Dataset	Wilks' Lambda	.417	1.751 ^b	8.000	10.000
	Hotelling's Trace	1.400	1.751 ^b	8.000	10.000
	Roy's Largest Root	1.400	1.751 ^b	8.000	10.000

Multivariate Tests^a

Effect		Sig.	Partial Eta Squared	Noncent. Parameter
Visualization	Pillai's Trace	.000	.767	46.214
	Wilks' Lambda	.000	.767	46.214
	Hotelling's Trace	.000	.767	46.214
	Roy's Largest Root	.000	.767	46.214
DataAttributeType	Pillai's Trace	.162	.204	4.093
	Wilks' Lambda	.162	.204	4.093
	Hotelling's Trace	.162	.204	4.093
	Roy's Largest Root	.162	.204	4.093
Dataset	Pillai's Trace	.108	.144	2.870
	Wilks' Lambda	.108	.144	2.870
	Hotelling's Trace	.108	.144	2.870
	Roy's Largest Root	.108	.144	2.870
Visualization *	Pillai's Trace	.202	.582	13.948
DataAttributeType	Wilks' Lambda	.202	.582	13.948
	Hotelling's Trace	.202	.582	13.948
	Roy's Largest Root	.202	.582	13.948
Visualization * Dataset	Pillai's Trace	.079	.429	10.505
	Wilks' Lambda	.079	.429	10.505
	Hotelling's Trace	.079	.429	10.505
	Roy's Largest Root	.079	.429	10.505
DataAttributeType * Dataset	Pillai's Trace	.199	.183	3.583
	Wilks' Lambda	.199	.183	3.583
	Hotelling's Trace	.199	.183	3.583
	Roy's Largest Root	.199	.183	3.583
Visualization *	Pillai's Trace	.200	.583	14.004
DataAttributeType * Dataset	Wilks' Lambda	.200	.583	14.004
	Hotelling's Trace	.200	.583	14.004
	Roy's Largest Root	.200	.583	14.004

Multivariate Tests^a

Effect		Observed Power ^c
Visualization	Pillai's Trace	.998
	Wilks' Lambda	.998
	Hotelling's Trace	.998
	Roy's Largest Root	.998
DataAttributeType	Pillai's Trace	.359
	Wilks' Lambda	.359
	Hotelling's Trace	.359
	Roy's Largest Root	.359
Dataset	Pillai's Trace	.359
	Wilks' Lambda	.359
	Hotelling's Trace	.359
	Roy's Largest Root	.359
Visualization *	Pillai's Trace	.439
DataAttributeType	Wilks' Lambda	.439
	Hotelling's Trace	.439
	Roy's Largest Root	.439
Visualization * Dataset	Pillai's Trace	.578
	Wilks' Lambda	.578
	Hotelling's Trace	.578
	Roy's Largest Root	.578
DataAttributeType * Dataset	Pillai's Trace	.319
	Wilks' Lambda	.319
	Hotelling's Trace	.319
	Roy's Largest Root	.319
Visualization *	Pillai's Trace	.441
DataAttributeType * Dataset	Wilks' Lambda	.441
	Hotelling's Trace	.441
	Roy's Largest Root	.441

a. Design: Intercept

Within Subjects Design: Visualization + DataAttributeType + Dataset + Visualization * DataAttributeType + Visualization * DataSet + DataSet + DataSet + Visualization * DataAttributeType * Dataset

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	.449	12.353	9	.197	.697
DataAttributeType	.935	1.068	2	.586	.939
Dataset	1.000	.000	0		1.000
Visualization * DataAttributeType	.008	68.266	35	.001	.522
Visualization * Dataset	.236	22.276	9	.008	.586
DataAttributeType * Dataset	.947	.875	2	.646	.949
Visualization * DataAttributeType * Dataset	.016	58.663	35	.010	.617

Mauchly's Test of Sphericity^a

Measure: MEASURE_1

Epsilon^b

Within Subjects Effect	Huynh-Feldt	Lower-bound
Visualization	.848	.250
DataAttributeType	1.000	.500
Dataset	1.000	1.000
Visualization * DataAttributeType	.713	.125
Visualization * Dataset	.685	.250
DataAttributeType * Dataset	1.000	.500
Visualization * DataAttributeType * Dataset	.899	.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 + DataAttributeType + Dataset + Visualization * DataAttributeType + Visualization * DataAttributeType * Dataset + Visualization * DataAttributeType * Dataset
- 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

Source		Type III Sum of Squares	df	Mean Square	F
Visualization	Sphericity Assumed	50851.852	4	12712.963	16.266
	Greenhouse-Geisser	50851.852	2.789	18234.163	16.266
	Huynh-Feldt	50851.852	3.392	14993.412	16.266
	Lower-bound	50851.852	1.000	50851.852	16.266
Error(Visualization)	Sphericity Assumed	53148.148	68	781.590	
	Greenhouse-Geisser	53148.148	47.410	1121.033	
	Huynh-Feldt	53148.148	57.657	921.792	
	Lower-bound	53148.148	17.000	3126.362	
DataAttributeType	Sphericity Assumed	3592.593	2	1796.296	2.202
	Greenhouse-Geisser	3592.593	1.879	1912.300	2.202
	Huynh-Feldt	3592.593	2.000	1796.296	2.202
	Lower-bound	3592.593	1.000	3592.593	2.202
Error(DataAttributeType)	Sphericity Assumed	27740.741	34	815.904	
	Greenhouse-Geisser	27740.741	31.938	868.595	
	Huynh-Feldt	27740.741	34.000	815.904	
	Lower-bound	27740.741	17.000	1631.808	
Dataset	Sphericity Assumed	3129.630	1	3129.630	2.870
	Greenhouse-Geisser	3129.630	1.000	3129.630	2.870
	Huynh-Feldt	3129.630	1.000	3129.630	2.870
	Lower-bound	3129.630	1.000	3129.630	2.870
Error(Dataset)	Sphericity Assumed	18537.037	17	1090.414	
	Greenhouse-Geisser	18537.037	17.000	1090.414	
	Huynh-Feldt	18537.037	17.000	1090.414	
	Lower-bound	18537.037	17.000	1090.414	
Visualization *	Sphericity Assumed	11592.593	8	1449.074	1.404
DataAttributeType	Greenhouse-Geisser	11592.593	4.174	2777.392	1.404

		C:-	Partial Eta	Noncent.
Source		Sig.	Squared	Parameter
Visualization	Sphericity Assumed	.000	.489	65.062
	Greenhouse-Geisser	.000	.489	45.362
	Huynh-Feldt	.000	.489	55.166
	Lower-bound	.001	.489	16.266
Error(Visualization)	Sphericity Assumed			
	Greenhouse-Geisser			
	Huynh-Feldt			
	Lower-bound			
DataAttributeType	Sphericity Assumed	.126	.115	4.403
	Greenhouse-Geisser	.130	.115	4.136
	Huynh-Feldt	.126	.115	4.403
	Lower-bound	.156	.115	2.202
Error(DataAttributeType)	Sphericity Assumed			
	Greenhouse-Geisser			
	Huynh-Feldt			
	Lower-bound			
Dataset	Sphericity Assumed	.108	.144	2.870
	Greenhouse-Geisser	.108	.144	2.870
	Huynh-Feldt	.108	.144	2.870
	Lower-bound	.108	.144	2.870
Error(Dataset)	Sphericity Assumed			
	Greenhouse-Geisser			
	Huynh-Feldt			
	Lower-bound			
Visualization *	Sphericity Assumed	.200	.076	11.229
DataAttributeType	Greenhouse-Geisser	.240	.076	5.858

Source		Observed Power ^a
Visualization	Sphericity Assumed	1.000
	Greenhouse-Geisser	1.000
	Huynh-Feldt	1.000
	Lower-bound	.967
Error(Visualization)	Sphericity Assumed	
	Greenhouse-Geisser	
	Huynh-Feldt	
	Lower-bound	
DataAttributeType	Sphericity Assumed	.418
	Greenhouse-Geisser	.404
	Huynh-Feldt	.418
	Lower-bound	.288
Error(DataAttributeType)	Sphericity Assumed	
	Greenhouse-Geisser	
	Huynh-Feldt	
	Lower-bound	
Dataset	Sphericity Assumed	.359
	Greenhouse-Geisser	.359
	Huynh-Feldt	.359
	Lower-bound	.359
Error(Dataset)	Sphericity Assumed	
	Greenhouse-Geisser	
	Huynh-Feldt	
	Lower-bound	
Visualization *	Sphericity Assumed	.619
DataAttributeType	Greenhouse-Geisser	.425

_		Type III Sum of			
Source		Squares	df	Mean Square	F
	Huynh-Feldt	11592.593	5.702	2033.183	1.404
	Lower-bound	11592.593	1.000	11592.593	1.404
Error	Sphericity Assumed	140407.407	136	1032.407	
(Visualization*DataAttribute Type)	Greenhouse-Geisser	140407.407	70.957	1978.781	
	Huynh-Feldt	140407.407	96.929	1448.562	
	Lower-bound	140407.407	17.000	8259.259	
Visualization * Dataset	Sphericity Assumed	4555.556	4	1138.889	.811
	Greenhouse-Geisser	4555.556	2.343	1944.270	.811
	Huynh-Feldt	4555.556	2.741	1661.982	.811
	Lower-bound	4555.556	1.000	4555.556	.811
Error(Visualization*Dataset)	Sphericity Assumed	95444.444	68	1403.595	
	Greenhouse-Geisser	95444.444	39.832	2396.167	
	Huynh-Feldt	95444.444	46.598	2048.268	
	Lower-bound	95444.444	17.000	5614.379	
DataAttributeType * Dataset	Sphericity Assumed	4925.926	2	2462.963	2.180
	Greenhouse-Geisser	4925.926	1.899	2594.092	2.180
	Huynh-Feldt	4925.926	2.000	2462.963	2.180
	Lower-bound	4925.926	1.000	4925.926	2.180
Error	Sphericity Assumed	38407.407	34	1129.630	
(DataAttributeType*Dataset)	Greenhouse-Geisser	38407.407	32.281	1189.771	
	Huynh-Feldt	38407.407	34.000	1129.630	
	Lower-bound	38407.407	17.000	2259.259	
Visualization *	Sphericity Assumed	11000.000	8	1375.000	1.107
DataAttributeType * Dataset	Greenhouse-Geisser	11000.000	4.933	2229.912	1.107
	Huynh-Feldt	11000.000	7.193	1529.364	1.107
	Lower-bound	11000.000	1.000	11000.000	1.107
Error	Sphericity Assumed	169000.000	136	1242.647	
(Visualization*DataAttribute Type*Dataset)	Greenhouse-Geisser	169000.000	83.860	2015.268	
.,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,	Huynh-Feldt	169000.000	122.273	1382.153	
	Lower-bound	169000.000	17.000	9941.176	

Source		Sig.	Partial Eta Squared	Noncent. Parameter
	Huynh-Feldt	.224	.076	8.003
	Lower-bound	.252	.076	1.404
Error	Sphericity Assumed			
(Visualization*DataAttribute Type)	Greenhouse-Geisser			
1,400)	Huynh-Feldt			
	Lower-bound			
Visualization * Dataset	Sphericity Assumed	.522	.046	3.246
	Greenhouse-Geisser	.469	.046	1.901
	Huynh-Feldt	.484	.046	2.224
	Lower-bound	.380	.046	.811
Error(Visualization*Dataset)	Sphericity Assumed			
	Greenhouse-Geisser			
	Huynh-Feldt			
	Lower-bound			
DataAttributeType * Dataset	Sphericity Assumed	.129	.114	4.361
	Greenhouse-Geisser	.132	.114	4.140
	Huynh-Feldt	.129	.114	4.361
	Lower-bound	.158	.114	2.180
Error	Sphericity Assumed			
(DataAttributeType*Dataset	Greenhouse-Geisser			
,	Huynh-Feldt			
	Lower-bound			
Visualization *	Sphericity Assumed	.363	.061	8.852
DataAttributeType * Dataset	Greenhouse-Geisser	.363	.061	5.458
	Huynh-Feldt	.363	.061	7.959
	Lower-bound	.308	.061	1.107
Error	Sphericity Assumed			
(Visualization*DataAttribute Type*Dataset)	Greenhouse-Geisser			
Type Dataset)	Huynh-Feldt			
	Lower-bound			

Source		Observed Power ^a
	Huynh-Feldt	.511
	Lower-bound	.201
Error	Sphericity Assumed	
(Visualization*DataAttribute Type)	Greenhouse-Geisser	
1,700)	Huynh-Feldt	
	Lower-bound	
Visualization * Dataset	Sphericity Assumed	.246
	Greenhouse-Geisser	.190
	Huynh-Feldt	.204
	Lower-bound	.136
Error(Visualization*Dataset)	Sphericity Assumed	
	Greenhouse-Geisser	
	Huynh-Feldt	
	Lower-bound	
DataAttributeType * Dataset	Sphericity Assumed	.415
	Greenhouse-Geisser	.403
	Huynh-Feldt	.415
	Lower-bound	.286
Error	Sphericity Assumed	
(DataAttributeType*Dataset)	Greenhouse-Geisser	
,	Huynh-Feldt	
	Lower-bound	
Visualization *	Sphericity Assumed	.498
DataAttributeType * Dataset	Greenhouse-Geisser	.373
	Huynh-Feldt	.467
	Lower-bound	.168
Error	Sphericity Assumed	
(Visualization*DataAttribute Type*Dataset)	Greenhouse-Geisser	
Typo Datasoty	Huynh-Feldt	
	Lower-bound	

a. Computed using alpha = .05

				Type III Sum of	
Source	Visualization	DataAttributeType	Dataset	Squares	df
Visualization	Linear			4898.148	1
	Quadratic			12228.836	1
	Cubic			8898.148	1
	Order 4			24826.720	1
Error(Visualization)	Linear			7935.185	17
	Quadratic			10747.355	17
	Cubic			18268.519	17
	Order 4			16197.090	17
DataAttributeType		Linear		250.000	1
		Quadratic		3342.593	1
Error(DataAttributeType)		Linear		11250.000	17
		Quadratic		16490.741	17
Dataset			Linear	3129.630	1
Error(Dataset)			Linear	18537.037	17
Visualization *	Linear	Linear		55.556	1
DataAttributeType		Quadratic		3129.630	1
	Quadratic	Linear		1944.444	1
		Quadratic		648.148	1
	Cubic	Linear		13.889	1
		Quadratic		226.852	1
	Order 4	Linear		97.222	1
		Quadratic		5476.852	1
Error	Linear	Linear		7944.444	17
(Visualization*DataAttribute Type)		Quadratic		10537.037	17
1 ype)	Quadratic	Linear		9484.127	17
		Quadratic		25304.233	17
	Cubic	Linear		18236.111	17
		Quadratic		29856.481	17
	Order 4	Linear		13224.206	17
		Quadratic		25820.767	17
Visualization * Dataset	Linear		Linear	1120.370	1
	Quadratic		Linear	2916.667	1
	Cubic		Linear	453.704	1
	Order 4		Linear	64.815	1

Source	Visualization	DataAttributeType	Dataset	Mean Square	F
Visualization	Linear			4898.148	10.494
	Quadratic			12228.836	19.343
	Cubic			8898.148	8.280
	Order 4			24826.720	26.057
Error(Visualization)	Linear			466.776	
	Quadratic			632.197	
	Cubic			1074.619	
	Order 4			952.770	
DataAttributeType		Linear		250.000	.378
		Quadratic		3342.593	3.446
Error(DataAttributeType)		Linear		661.765	
		Quadratic		970.044	
Dataset			Linear	3129.630	2.870
Error(Dataset)			Linear	1090.414	
Visualization *	Linear	Linear		55.556	.119
DataAttributeType		Quadratic		3129.630	5.049
	Quadratic	Linear		1944.444	3.485
		Quadratic		648.148	.435
	Cubic	Linear		13.889	.013
		Quadratic		226.852	.129
	Order 4	Linear		97.222	.125
		Quadratic		5476.852	3.606
Error	Linear	Linear		467.320	
(Visualization*DataAttribute Type)		Quadratic		619.826	
.,,,,	Quadratic	Linear		557.890	
		Quadratic		1488.484	
	Cubic	Linear		1072.712	
		Quadratic		1756.264	
	Order 4	Linear		777.894	
		Quadratic		1518.869	
Visualization * Dataset	Linear		Linear	1120.370	1.389
	Quadratic		Linear	2916.667	4.929
	Cubic		Linear	453.704	.150
	Order 4		Linear	64.815	.054

Source	Visualization	DataAttributeType	Dataset	Sig.	Partial Eta Squared
Visualization	Linear			.005	.382
	Quadratic			.000	.532
	Cubic			.010	.328
	Order 4			.000	.605
Error(Visualization)	Linear				
	Quadratic				
	Cubic				
	Order 4				
DataAttributeType		Linear		.547	.022
		Quadratic		.081	.169
Error(DataAttributeType)		Linear			
		Quadratic			
Dataset			Linear	.108	.144
Error(Dataset)			Linear		
Visualization *	Linear	Linear		.734	.007
DataAttributeType		Quadratic		.038	.229
	Quadratic	Linear		.079	.170
		Quadratic		.518	.025
	Cubic	Linear		.911	.001
		Quadratic		.724	.008
	Order 4	Linear		.728	.007
		Quadratic		.075	.175
Error	Linear	Linear			
(Visualization*DataAttribute Type)		Quadratic			
71 -7	Quadratic	Linear			
		Quadratic			
	Cubic	Linear			
		Quadratic			
	Order 4	Linear			
		Quadratic			
Visualization * Dataset	Linear		Linear	.255	.076
	Quadratic		Linear	.040	.225
	Cubic		Linear	.703	.009
	Order 4		Linear	.819	.003

Source	Visualization	DataAttributeType	Dataset	Noncent. Parameter	Observed Power ^a
Visualization	Linear			10.494	.863
	Quadratic			19.343	.985
	Cubic			8.280	.774
	Order 4			26.057	.998
Error(Visualization)	Linear				
	Quadratic				
	Cubic				
	Order 4				
DataAttributeType		Linear		.378	.089
		Quadratic		3.446	.418
Error(DataAttributeType)		Linear			
		Quadratic			
Dataset			Linear	2.870	.359
Error(Dataset)			Linear		
Visualization *	Linear	Linear		.119	.062
DataAttributeType		Quadratic		5.049	.563
	Quadratic	Linear		3.485	.421
		Quadratic		.435	.096
	Cubic	Linear		.013	.051
		Quadratic		.129	.063
	Order 4	Linear		.125	.063
		Quadratic		3.606	.433
Error	Linear	Linear			
(Visualization*DataAttribute Type)		Quadratic			
1,400)	Quadratic	Linear			
		Quadratic			
	Cubic	Linear			
		Quadratic			
	Order 4	Linear			
		Quadratic			
Visualization * Dataset	Linear		Linear	1.389	.199
	Quadratic		Linear	4.929	.553
	Cubic		Linear	.150	.065
	Order 4		Linear	.054	.056

Source	Visualization	DataAttributeType	Dataset	Type III Sum of Squares	df
Error(Visualization*Dataset)	Linear		Linear	13712.963	17
	Quadratic		Linear	10059.524	17
	Cubic		Linear	51379.630	17
	Order 4		Linear	20292.328	17
DataAttributeType * Dataset		Linear	Linear	27.778	1
		Quadratic	Linear	4898.148	1
Error		Linear	Linear	15472.222	17
(DataAttributeType*Dataset)		Quadratic	Linear	22935.185	17
Visualization *	Linear	Linear	Linear	222.222	1
DataAttributeType * Dataset		Quadratic	Linear	74.074	1
	Quadratic	Linear	Linear	158.730	1
		Quadratic	Linear	476.190	1
	Cubic	Linear	Linear	7347.222	1
		Quadratic	Linear	2449.074	1
	Order 4	Linear	Linear	160.714	1
		Quadratic	Linear	111.772	1
Error	Linear	Linear	Linear	13777.778	17
(Visualization*DataAttribute Type*Dataset)		Quadratic	Linear	21592.593	17
Type Databoly	Quadratic	Linear	Linear	25555.556	17
		Quadratic	Linear	15476.190	17
	Cubic	Linear	Linear	24902.778	17
		Quadratic	Linear	22967.593	17
	Order 4	Linear	Linear	14875.000	17
		Quadratic	Linear	29852.513	17

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Source	Visualization	DataAttributeType	Dataset	Mean Square	F
Error(Visualization*Dataset)	Linear		Linear	806.645	
	Quadratic		Linear	591.737	
	Cubic		Linear	3022.331	
	Order 4		Linear	1193.666	
DataAttributeType * Dataset		Linear	Linear	27.778	.031
		Quadratic	Linear	4898.148	3.631
Error		Linear	Linear	910.131	
(DataAttributeType*Dataset)		Quadratic	Linear	1349.129	
Visualization *	Linear	Linear	Linear	222.222	.274
DataAttributeType * Dataset		Quadratic	Linear	74.074	.058
	Quadratic	Linear	Linear	158.730	.106
		Quadratic	Linear	476.190	.523
	Cubic	Linear	Linear	7347.222	5.016
		Quadratic	Linear	2449.074	1.813
	Order 4	Linear	Linear	160.714	.184
		Quadratic	Linear	111.772	.064
Error	Linear	Linear	Linear	810.458	
(Visualization*DataAttribute Type*Dataset)		Quadratic	Linear	1270.153	
. ypo Dalaooiy	Quadratic	Linear	Linear	1503.268	
		Quadratic	Linear	910.364	
	Cubic	Linear	Linear	1464.869	
		Quadratic	Linear	1351.035	
	Order 4	Linear	Linear	875.000	
		Quadratic	Linear	1756.030	

_					Partial Eta
Source	Visualization	DataAttributeType	Dataset	Sig.	Squared
Error(Visualization*Dataset)	Linear		Linear		
	Quadratic		Linear		
	Cubic		Linear		
	Order 4		Linear		
DataAttributeType * Dataset		Linear	Linear	.863	.002
		Quadratic	Linear	.074	.176
Error		Linear	Linear		
(DataAttributeType*Dataset)		Quadratic	Linear		
Visualization *	Linear	Linear	Linear	.607	.016
DataAttributeType * Dataset		Quadratic	Linear	.812	.003
	Quadratic	Linear	Linear	.749	.006
		Quadratic	Linear	.479	.030
	Cubic	Linear	Linear	.039	.228
		Quadratic	Linear	.196	.096
	Order 4	Linear	Linear	.674	.011
		Quadratic	Linear	.804	.004
Error	Linear	Linear	Linear		
(Visualization*DataAttribute Type*Dataset)		Quadratic	Linear		
Type Databoly	Quadratic	Linear	Linear		
		Quadratic	Linear		
	Cubic	Linear	Linear		
		Quadratic	Linear		
	Order 4	Linear	Linear		
		Quadratic	Linear		

Source	Visualization	DataAttributeType	Dataset	Noncent. Parameter	Observed Power ^a
Error(Visualization*Dataset)	Linear		Linear		
	Quadratic		Linear		
	Cubic		Linear		
	Order 4		Linear		
DataAttributeType * Dataset		Linear	Linear	.031	.053
		Quadratic	Linear	3.631	.436
Error		Linear	Linear		
(DataAttributeType*Dataset)		Quadratic	Linear		
Visualization *	Linear	Linear	Linear	.274	.078
DataAttributeType * Dataset		Quadratic	Linear	.058	.056
	Quadratic	Linear	Linear	.106	.061
		Quadratic	Linear	.523	.105
	Cubic	Linear	Linear	5.016	.561
		Quadratic	Linear	1.813	.246
	Order 4	Linear	Linear	.184	.069
		Quadratic	Linear	.064	.057
Error	Linear	Linear	Linear		
(Visualization*DataAttribute Type*Dataset)		Quadratic	Linear		
. ypo Dalaosiy	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	3867574.074	1	3867574.074	938.027	.000	.982
Error	70092.593	17	4123.094			

Tests of Between-Subjects Effects

Measure: MEASURE_1

Transformed Variable: Average

Source	Noncent. Parameter	Observed Power ^a
Intercept	938.027	1.000
Error		

a. Computed using alpha = .05

Estimated Marginal Means

1. Grand Mean

Measure: MEASURE_1

		95% Confidence Interval			
Mean	Std. Error	Lower Bound	Upper Bound		
84.630	2.763	78.800	90.460		

2. Visualization

Estimates

			95% Confidence Interval		
Visualization	Mean	Std. Error	Lower Bound	Upper Bound	
1	90.741	4.092	82.108	99.374	
2	66.667	3.300	59.703	73.630	
3	89.815	4.497	80.327	99.303	
4	82.407	3.683	74.636	90.178	
5	93.519	2.387	88.482	98.555	

Pairwise Comparisons

ivieasure. IVILAC	JONE_1	Mean			95% Confidence ^b
(I) Visualization	(J) Visualization	Difference (I-J)	Std. Error	Sig. ^b	Lower Bound
1	2	24.074*	4.711	.001	8.894
	3	.926	3.152	1.000	-9.231
	4	8.333	3.087	.152	-1.615
	5	-2.778	3.628	1.000	-14.469
2	1	-24.074 [*]	4.711	.001	-39.254
	3	-23.148 [*]	5.067	.003	-39.475
	4	-15.741 [*]	3.922	.009	-28.379
	5	-26.852 [*]	3.600	.000	-38.453
3	1	926	3.152	1.000	-11.083
	2	23.148*	5.067	.003	6.822
	4	7.407	2.769	.160	-1.515
	5	-3.704	3.941	1.000	-16.404
4	1	-8.333	3.087	.152	-18.282
	2	15.741 [*]	3.922	.009	3.102
	3	-7.407	2.769	.160	-16.329
	5	-11.111	3.565	.063	-22.599
5	1	2.778	3.628	1.000	-8.913
	2	26.852 [*]	3.600	.000	15.251
	3	3.704	3.941	1.000	-8.997
	4	11.111	3.565	.063	377

Pairwise Comparisons

Measure: MEASURE_1

95% Confidence Interval for ^b...

(I) Visualization	(J) Visualization	Upper Bound
1	2	39.254
	3	11.083
	4	18.282
	5	8.913
2	1	-8.894
	3	-6.822
	4	-3.102
	5	-15.251
3	1	9.231
	2	39.475
	4	16.329
	5	8.997
4	1	1.615
	2	28.379
	3	1.515
	5	.377
5	1	14.469
	2	38.453
	3	16.404
	4	22.599

Based on estimated marginal means

- $^{\star}.$ 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	.767	11.553 ^a	4.000	14.000	.000	.767
Wilks' lambda	.233	11.553 ^a	4.000	14.000	.000	.767
Hotelling's trace	3.301	11.553 ^a	4.000	14.000	.000	.767
Roy's largest root	3.301	11.553 ^a	4.000	14.000	.000	.767

Multivariate Tests

	Noncent. Parameter	Observed Power ^b
Pillai's trace	46.214	.998
Wilks' lambda	46.214	.998
Hotelling's trace	46.214	.998
Roy's largest root	46.214	.998

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. DataAttributeType

Estimates

			95% Confidence Interval		
DataAttributeType	Mean	Std. Error	Lower Bound	Upper Bound	
1	87.222	3.111	80.659	93.785	
2	81.111	4.033	72.602	89.621	
3	85.556	2.455	80.376	90.735	

Pairwise Comparisons

Measure: MEASURE_1

		Mean	O. 1. 5	o. 3	95% Confidence ^a
(I) DataAttributeType	(J) DataAttributeType	Difference (I-J)	Std. Error	Sig. ^a	Lower Bound
1	2	6.111	2.930	.157	-1.669
	3	1.667	2.712	1.000	-5.533
2	1	-6.111	2.930	.157	-13.891
	3	-4.444	3.355	.608	-13.352
3	1	-1.667	2.712	1.000	-8.866
	2	4.444	3.355	.608	-4.463

Pairwise Comparisons

Measure: MEASURE_1

95% Confidence Interval for ^a...

(I) DataAttributeType	(J) DataAttributeType	Upper Bound
1	2	13.891
	3	8.866
2	1	1.669
	3	4.463
3	1	5.533
	2	13.352

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	.204	2.047 ^a	2.000	16.000	.162	.204
Wilks' lambda	.796	2.047 ^a	2.000	16.000	.162	.204
Hotelling's trace	.256	2.047 ^a	2.000	16.000	.162	.204
Roy's largest root	.256	2.047 ^a	2.000	16.000	.162	.204

Multivariate Tests

	Noncent. Parameter	DD	
Pillai's trace	4.093	.359	
Wilks' lambda	4.093	.359	
Hotelling's trace	4.093	.359	
Roy's largest root	4.093	.359	

Each F tests the multivariate effect of DataAttributeType. 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 * DataAttributeType

Measure: MEASURE_1

				95% Confidence Interval	
Visualization	DataAttributeType	Mean	Std. Error	Lower Bound	Upper Bound
1	1	86.111	6.771	71.826	100.396
	2	94.444	3.811	86.404	102.485
	3	91.667	4.519	82.132	101.202
2	1	72.222	6.026	59.509	84.936
	2	61.111	9.528	41.009	81.213
	3	66.667	5.717	54.606	78.728
3	1	91.667	4.519	82.132	101.202
	2	91.667	4.519	82.132	101.202
	3	86.111	6.771	71.826	100.396
4	1	91.667	4.519	82.132	101.202
	2	69.444	7.162	54.335	84.554
	3	86.111	5.432	74.651	97.571
5	1	94.444	3.811	86.404	102.485
	2	88.889	5.042	78.252	99.526
	3	97.222	2.778	91.362	103.083

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