```
 GET
  FILE='C:\Users\Bahador\Desktop\SPSS-Analysis\Cluster\Cluster_Time.sav'.
DATASET NAME DataSet1 WINDOW=FRONT.
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=Visualizations 5 Polynomial Datasets 2 Polynomial Attributes 3 Polynomial
  /METHOD=SSTYPE(3)
  /EMMEANS=TABLES(OVERALL)
  /EMMEANS=TABLES(Visualizations) COMPARE ADJ(BONFERRONI)
  /EMMEANS=TABLES(Datasets) COMPARE ADJ(BONFERRONI)
  /EMMEANS=TABLES(Attributes) COMPARE ADJ(BONFERRONI)
  /EMMEANS=TABLES(Visualizations*Datasets)
  /EMMEANS=TABLES(Visualizations*Attributes)
  /EMMEANS=TABLES(Datasets*Attributes)
  /PRINT=DESCRIPTIVE ETASQ OPOWER HOMOGENEITY
  /CRITERIA=ALPHA(.05)
  /WSDESIGN=Visualizations Datasets Attributes Visualizations*Datasets Visualizations*Attributes
    Datasets*Attributes Visualizations*Datasets*Attributes.
```

General Linear Model

Notes

Output Created		24-MAR-2017 13:20:43
Comments		
Input	Data	C:\Users\Bahador\Desktop\SPSS-Analysis\Cluster\Cluster_Time.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=Visualizations 5 Polynomial Datasets 2 Polynomial Attributes 3 Polynomial /METHOD=SSTYPE(3) /EMMEANS=TABLES (OVERALL) /EMMEANS=TABLES (Visualizations) COMPARE ADJ (BONFERRONI) /EMMEANS=TABLES (Datasets) COMPARE ADJ(BONFERRONI) /EMMEANS=TABLES (Attributes) COMPARE ADJ(BONFERRONI) /EMMEANS=TABLES (Visualizations*Datasets) /EMMEANS=TABLES (Visualizations*Attributes) /EMMEANS=TABLES (Datasets*Attributes) /PRINT=DESCRIPTIVE ETASQ OPOWER HOMOGENEITY /CRITERIA=ALPHA(.05) /WSDESIGN=Visualizations Datasets Attributes

Notes

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

[DataSet1] C:\Users\Bahador\Desktop\SPSS-Analysis\Cluster\Cluster_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

Visualizations	Datasets	Attributes	Dependent Variable
1	1	1	Bar_Nom_Num_Car
		2	Bar_Nom_Num_Movie
		3	Bar_Num_Num_Car
	2	1	Bar_Num_Num_Movie
		2	Bar_Ord_Num_Car
		3	Bar_Ord_Num_Movie
2	1	1	Line_Nom_Num_Car
		2	Line_Nom_Num_Movie
		3	Line_Num_Num_Car
	2	1	Line_Num_Num_Movie
		2	Line_Ord_Num_Car
		3	Line_Ord_Num_Movie

Within-Subjects Factors

Measure: MEASURE_1

Visualizations	Datasets	Attributes	Dependent Variable
3	1	1	Pie_Nom_Num_Car
		2	Pie_Nom_Num_Movie
		3	Pie_Num_Num_Car
	2	1	Pie_Num_Num_Movie
		2	Pie_Ord_Num_Car
		3	Pie_Ord_Num_Movie
4	1	1	Scatter_Nom_Num_Car
		2	Scatter_Nom_Num_Movie
		3	Scatter_Num_Num_Car
	2	1	Scatter_Num_Num_Movie
		2	Scatter_Ord_Num_Car
		3	Scatter_Ord_Num_Movie
5	1	1	Table_Nom_Num_Car
		2	Table_Nom_Num_Movie
		3	Table_Num_Num_Car
	2	1	Table_Num_Num_Movie
		2	Table_Ord_Num_Car
		3	Table_Ord_Num_Movie

Descriptive Statistics

	Mean	Std. Deviation	N
Bar_Nom_Num_Car	.8255	.34966	18
Bar_Nom_Num_Movie	1.0149	.19436	18
Bar_Num_Num_Car	1.3114	.17401	18
Bar_Num_Num_Movie	1.2637	.15983	18
Bar_Ord_Num_Car	1.0137	.16658	18
Bar_Ord_Num_Movie	1.0308	.15291	18
Line_Nom_Num_Car	1.0502	.24966	18
Line_Nom_Num_Movie	1.0253	.21727	18
Line_Num_Num_Car	1.4118	.21061	18
Line_Num_Num_Movie	1.3913	.22482	18
Line_Ord_Num_Car	1.0873	.37830	18
Line_Ord_Num_Movie	1.0909	.25608	18
Pie_Nom_Num_Car	.9067	.24608	18
Pie_Nom_Num_Movie	.9558	.23771	18
Pie_Num_Num_Car	1.2147	.17377	18
Pie_Num_Num_Movie	1.2547	.20500	18
Pie_Ord_Num_Car	.9130	.18733	18
Pie_Ord_Num_Movie	.8510	.31882	18
Scatter_Nom_Num_Car	.9435	.21259	18
Scatter_Nom_Num_Movie	1.0075	.24439	18
Scatter_Num_Num_Car	1.3662	.26983	18
Scatter_Num_Num_Movie	1.3187	.25758	18
Scatter_Ord_Num_Car	.9454	.33280	18
Scatter_Ord_Num_Movie	.8841	.37521	18
Table_Nom_Num_Car	1.1423	.32395	18
Table_Nom_Num_Movie	1.0593	.39984	18
Table_Num_Num_Car	1.4451	.20924	18
Table_Num_Num_Movie	1.3217	.18281	18
Table_Ord_Num_Car	.9015	.21397	18
Table_Ord_Num_Movie	.9133	.21024	18

Multivariate Tests[a]

Effect		Value	F	Hypothesis df	Error df
Visualizations	Pillai's Trace	.554	4.343[b]	4.000	14.000
	Wilks' Lambda	.446	4.343[b]	4.000	14.000
	Hotelling's Trace	1.241	4.343[b]	4.000	14.000
	Roy's Largest Root	1.241	4.343[b]	4.000	14.000
Datasets	Pillai's Trace	.142	2.806[b]	1.000	17.000
	Wilks' Lambda	.858	2.806[b]	1.000	17.000
	Hotelling's Trace	.165	2.806[b]	1.000	17.000
	Roy's Largest Root	.165	2.806[b]	1.000	17.000
Attributes	Pillai's Trace	.779	28.141[b]	2.000	16.000
	Wilks' Lambda	.221	28.141[b]	2.000	16.000
	Hotelling's Trace	3.518	28.141[b]	2.000	16.000
	Roy's Largest Root	3.518	28.141[b]	2.000	16.000
Visualizations * Datasets	Pillai's Trace	.697	8.057[b]	4.000	14.000
	Wilks' Lambda	.303	8.057[b]	4.000	14.000
	Hotelling's Trace	2.302	8.057[b]	4.000	14.000
	Roy's Largest Root	2.302	8.057[b]	4.000	14.000
Visualizations * Attributes	Pillai's Trace	.616	2.004[b]	8.000	10.000
	Wilks' Lambda	.384	2.004[b]	8.000	10.000
	Hotelling's Trace	1.604	2.004[b]	8.000	10.000
	Roy's Largest Root	1.604	2.004[b]	8.000	10.000
Datasets * Attributes	Pillai's Trace	.934	113.056[b]	2.000	16.000
	Wilks' Lambda	.066	113.056[b]	2.000	16.000
	Hotelling's Trace	14.132	113.056[b]	2.000	16.000
	Roy's Largest Root	14.132	113.056[b]	2.000	16.000
Visualizations * Datasets * Attributes	Pillai's Trace	.276	.476[b]	8.000	10.000
	Wilks' Lambda	.724	.476[b]	8.000	10.000
	Hotelling's Trace	.381	.476[b]	8.000	10.000
	Roy's Largest Root	.381	.476[b]	8.000	10.000

Multivariate Tests[a]

Effect		Sig.	Partial Eta Squared	Noncent. Parameter
Visualizations	Pillai's Trace	.017	.554	17.370
	Wilks' Lambda	.017	.554	17.370
	Hotelling's Trace	.017	.554	17.370
	Roy's Largest Root	.017	.554	17.370
Datasets	Pillai's Trace	.112	.142	2.806
	Wilks' Lambda	.112	.142	2.806
	Hotelling's Trace	.112	.142	2.806
	Roy's Largest Root	.112	.142	2.806
Attributes	Pillai's Trace	.000	.779	56.282
	Wilks' Lambda	.000	.779	56.282
	Hotelling's Trace	.000	.779	56.282
	Roy's Largest Root	.000	.779	56.282
Visualizations * Datasets	Pillai's Trace	.001	.697	32.229
	Wilks' Lambda	.001	.697	32.229
	Hotelling's Trace	.001	.697	32.229
	Roy's Largest Root	.001	.697	32.229
Visualizations * Attributes	Pillai's Trace	.150	.616	16.035
	Wilks' Lambda	.150	.616	16.035
	Hotelling's Trace	.150	.616	16.035
	Roy's Largest Root	.150	.616	16.035
Datasets * Attributes	Pillai's Trace	.000	.934	226.111
	Wilks' Lambda	.000	.934	226.111
	Hotelling's Trace	.000	.934	226.111
	Roy's Largest Root	.000	.934	226.111
Visualizations * Datasets * Attributes	Pillai's Trace	.847	.276	3.808
	Wilks' Lambda	.847	.276	3.808
	Hotelling's Trace	.847	.276	3.808
	Roy's Largest Root	.847	.276	3.808

Multivariate Tests[a]

Effect		Observed Power[c]
Visualizations	Pillai's Trace	.818
	Wilks' Lambda	.818
	Hotelling's Trace	.818
	Roy's Largest Root	.818
Datasets	Pillai's Trace	.352
	Wilks' Lambda	.352
	Hotelling's Trace	.352
	Roy's Largest Root	.352
Attributes	Pillai's Trace	1.000
	Wilks' Lambda	1.000
	Hotelling's Trace	1.000
	Roy's Largest Root	1.000
Visualizations * Datasets	Pillai's Trace	.981
	Wilks' Lambda	.981
	Hotelling's Trace	.981
	Roy's Largest Root	.981
Visualizations * Attributes	Pillai's Trace	.501
	Wilks' Lambda	.501
	Hotelling's Trace	.501
	Roy's Largest Root	.501
Datasets * Attributes	Pillai's Trace	1.000
	Wilks' Lambda	1.000
	Hotelling's Trace	1.000
	Roy's Largest Root	1.000
Visualizations * Datasets * Attributes	Pillai's Trace	.135
	Wilks' Lambda	.135
	Hotelling's Trace	.135
	Roy's Largest Root	.135

a. Design: Intercept
Within Subjects Design: Visualizations + Datasets + Attributes + Visualizations * Datasets + Visualizations * Attributes + Datasets * Attributes + Visualizations * Datasets * Attributes

b. Exact statistic

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
Visualizations	.644	6.793	9	.661	.795
Datasets	1.000	.000	0	.	1.000
Attributes	.932	1.132	2	.568	.936
Visualizations * Datasets	.246	21.598	9	.011	.622
Visualizations * Attributes	.007	69.347	35	.001	.542
Datasets * Attributes	.885	1.955	2	.376	.897
Visualizations * Datasets * Attributes	.044	43.965	35	.163	.599

Mauchly's Test of Sphericity[a]

Measure: MEASURE_1

Within Subjects Effect	Epsilon[b] Huynh-Feldt	Lower-bound
Visualizations	.999	.250
Datasets	1.000	1.000
Attributes	1.000	.500
Visualizations * Datasets	.737	.250
Visualizations * Attributes	.750	.125
Datasets * Attributes	.996	.500
Visualizations * Datasets * Attributes	.863	.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: Visualizations + Datasets + Attributes + Visualizations * Datasets + Visualizations * Attributes + Datasets * Attributes + Visualizations * Datasets * Attributes

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
Visualizations	Sphericity Assumed	1.590	4	.398	6.966
	Greenhouse-Geisser	1.590	3.178	.500	6.966
	Huynh-Feldt	1.590	3.994	.398	6.966
	Lower-bound	1.590	1.000	1.590	6.966
Error(Visualizations)	Sphericity Assumed	3.881	68	.057	
	Greenhouse-Geisser	3.881	54.029	.072	
	Huynh-Feldt	3.881	67.901	.057	
	Lower-bound	3.881	17.000	.228	
Datasets	Sphericity Assumed	.149	1	.149	2.806
	Greenhouse-Geisser	.149	1.000	.149	2.806
	Huynh-Feldt	.149	1.000	.149	2.806
	Lower-bound	.149	1.000	.149	2.806
Error(Datasets)	Sphericity Assumed	.904	17	.053	
	Greenhouse-Geisser	.904	17.000	.053	
	Huynh-Feldt	.904	17.000	.053	
	Lower-bound	.904	17.000	.053	
Attributes	Sphericity Assumed	2.873	2	1.437	24.254
	Greenhouse-Geisser	2.873	1.872	1.535	24.254
	Huynh-Feldt	2.873	2.000	1.437	24.254
	Lower-bound	2.873	1.000	2.873	24.254
Error(Attributes)	Sphericity Assumed	2.014	34	.059	
	Greenhouse-Geisser	2.014	31.826	.063	
	Huynh-Feldt	2.014	34.000	.059	
	Lower-bound	2.014	17.000	.118	
Visualizations * Datasets	Sphericity Assumed	.821	4	.205	3.508
	Greenhouse-Geisser	.821	2.487	.330	3.508
	Huynh-Feldt	.821	2.947	.279	3.508
	Lower-bound	.821	1.000	.821	3.508
Error (Visualizations*Datasets)	Sphericity Assumed	3.979	68	.059	
	Greenhouse-Geisser	3.979	42.286	.094	
	Huynh-Feldt	3.979	50.104	.079	
	Lower-bound	3.979	17.000	.234	
Visualizations * Attributes	Sphericity Assumed	.637	8	.080	1.330
	Greenhouse-Geisser	.637	4.335	.147	1.330

Tests of Within-Subjects Effects

Measure: MEASURE_1

Source		Sig.	Partial Eta Squared	Noncent. Parameter
Visualizations	Sphericity Assumed	.000	.291	27.866
	Greenhouse-Geisser	.000	.291	22.140
	Huynh-Feldt	.000	.291	27.825
	Lower-bound	.017	.291	6.966
Error(Visualizations)	Sphericity Assumed			
	Greenhouse-Geisser			
	Huynh-Feldt			
	Lower-bound			
Datasets	Sphericity Assumed	.112	.142	2.806
	Greenhouse-Geisser	.112	.142	2.806
	Huynh-Feldt	.112	.142	2.806
	Lower-bound	.112	.142	2.806
Error(Datasets)	Sphericity Assumed			
	Greenhouse-Geisser			
	Huynh-Feldt			
	Lower-bound			
Attributes	Sphericity Assumed	.000	.588	48.509
	Greenhouse-Geisser	.000	.588	45.407
	Huynh-Feldt	.000	.588	48.509
	Lower-bound	.000	.588	24.254
Error(Attributes)	Sphericity Assumed			
	Greenhouse-Geisser			
	Huynh-Feldt			
	Lower-bound			
Visualizations * Datasets	Sphericity Assumed	.012	.171	14.031
	Greenhouse-Geisser	.030	.171	8.725
	Huynh-Feldt	.022	.171	10.339
	Lower-bound	.078	.171	3.508
Error (Visualizations*Datasets)	Sphericity Assumed			
	Greenhouse-Geisser			
	Huynh-Feldt			
	Lower-bound			
Visualizations * Attributes	Sphericity Assumed	.234	.073	10.637
	Greenhouse-Geisser	.265	.073	5.763

Tests of Within-Subjects Effects

Measure: MEASURE_1

Source		Observed Power[a]
Visualizations	Sphericity Assumed	.992
	Greenhouse-Geisser	.976
	Huynh-Feldt	.992
	Lower-bound	.701
Error(Visualizations)	Sphericity Assumed	
	Greenhouse-Geisser	
	Huynh-Feldt	
	Lower-bound	
Datasets	Sphericity Assumed	.352
	Greenhouse-Geisser	.352
	Huynh-Feldt	.352
	Lower-bound	.352
Error(Datasets)	Sphericity Assumed	
	Greenhouse-Geisser	
	Huynh-Feldt	
	Lower-bound	
Attributes	Sphericity Assumed	1.000
	Greenhouse-Geisser	1.000
	Huynh-Feldt	1.000
	Lower-bound	.996
Error(Attributes)	Sphericity Assumed	
	Greenhouse-Geisser	
	Huynh-Feldt	
	Lower-bound	
Visualizations * Datasets	Sphericity Assumed	.840
	Greenhouse-Geisser	.687
	Huynh-Feldt	.743
	Lower-bound	.424
Error (Visualizations*Datasets)	Sphericity Assumed	
	Greenhouse-Geisser	
	Huynh-Feldt	
	Lower-bound	
Visualizations * Attributes	Sphericity Assumed	.591
	Greenhouse-Geisser	.413

Tests of Within-Subjects Effects

Measure: MEASURE_1

Source		Type III Sum of Squares	df	Mean Square	F
	Huynh-Feldt	.637	6.002	.106	1.330
	Lower-bound	.637	1.000	.637	1.330
Error (Visualizations*Attributes)	Sphericity Assumed	8.144	136	.060	
	Greenhouse-Geisser	8.144	73.687	.111	
	Huynh-Feldt	8.144	102.039	.080	
	Lower-bound	8.144	17.000	.479	
Datasets * Attributes	Sphericity Assumed	12.066	2	6.033	79.573
	Greenhouse-Geisser	12.066	1.794	6.727	79.573
	Huynh-Feldt	12.066	1.992	6.058	79.573
	Lower-bound	12.066	1.000	12.066	79.573
Error(Datasets*Attributes)	Sphericity Assumed	2.578	34	.076	
	Greenhouse-Geisser	2.578	30.492	.085	
	Huynh-Feldt	2.578	33.858	.076	
	Lower-bound	2.578	17.000	.152	
Visualizations * Datasets * Attributes	Sphericity Assumed	.158	8	.020	.369
	Greenhouse-Geisser	.158	4.793	.033	.369
	Huynh-Feldt	.158	6.905	.023	.369
	Lower-bound	.158	1.000	.158	.369
Error (Visualizations*Datasets*Attributes)	Sphericity Assumed	7.297	136	.054	
	Greenhouse-Geisser	7.297	81.489	.090	
	Huynh-Feldt	7.297	117.379	.062	
	Lower-bound	7.297	17.000	.429	

Tests of Within-Subjects Effects

Measure: MEASURE_1

Source		Sig.	Partial Eta Squared	Noncent. Parameter
	Huynh-Feldt	.251	.073	7.981
	Lower-bound	.265	.073	1.330
Error (Visualizations*Attributes)	Sphericity Assumed			
	Greenhouse-Geisser			
	Huynh-Feldt			
	Lower-bound			
Datasets * Attributes	Sphericity Assumed	.000	.824	159.145
	Greenhouse-Geisser	.000	.824	142.726
	Huynh-Feldt	.000	.824	158.482
	Lower-bound	.000	.824	79.573
Error(Datasets*Attributes)	Sphericity Assumed			
	Greenhouse-Geisser			
	Huynh-Feldt			
	Lower-bound			
Visualizations * Datasets * Attributes	Sphericity Assumed	.935	.021	2.951
	Greenhouse-Geisser	.862	.021	1.768
	Huynh-Feldt	.917	.021	2.547
	Lower-bound	.552	.021	.369
Error (Visualizations*Datasets*Attributes)	Sphericity Assumed			
	Greenhouse-Geisser			
	Huynh-Feldt			
	Lower-bound			

Tests of Within-Subjects Effects

Measure: MEASURE_1

Source		Observed Power[a]
	Huynh-Feldt	.500
	Lower-bound	.193
Error (Visualizations*Attributes)	Sphericity Assumed	
	Greenhouse-Geisser	
	Huynh-Feldt	
	Lower-bound	
Datasets * Attributes	Sphericity Assumed	1.000
	Greenhouse-Geisser	1.000
	Huynh-Feldt	1.000
	Lower-bound	1.000
Error(Datasets*Attributes)	Sphericity Assumed	
	Greenhouse-Geisser	
	Huynh-Feldt	
	Lower-bound	
Visualizations * Datasets * Attributes	Sphericity Assumed	.171
	Greenhouse-Geisser	.138
	Huynh-Feldt	.160
	Lower-bound	.088
Error (Visualizations*Datasets*Attributes)	Sphericity Assumed	
	Greenhouse-Geisser	
	Huynh-Feldt	
	Lower-bound	

a. Computed using alpha = .05

Tests of Within-Subjects Contrasts

Measure: MEASURE_1

Source	Visualizations	Datasets	Attributes	Type III Sum of Squares	df
Visualizations	Linear			.001	1
	Quadratic			.128	1
	Cubic			.680	1
	Order 4			.781	1
Error(Visualizations)	Linear			.582	17
	Quadratic			.779	17
	Cubic			1.644	17
	Order 4			.877	17
Datasets		Linear		.149	1
Error(Datasets)		Linear		.904	17
Attributes			Linear	.009	1
			Quadratic	2.864	1
Error(Attributes)			Linear	1.131	17
			Quadratic	.883	17
Visualizations * Datasets	Linear	Linear		.753	1
	Quadratic	Linear		.054	1
	Cubic	Linear		.008	1
	Order 4	Linear		.005	1
Error (Visualizations*Datasets)	Linear	Linear		.450	17
	Quadratic	Linear		.742	17
	Cubic	Linear		1.998	17
	Order 4	Linear		.789	17
Visualizations * Attributes	Linear		Linear	.281	1
			Quadratic	.133	1
	Quadratic		Linear	.061	1
			Quadratic	.006	1
	Cubic		Linear	.020	1
			Quadratic	.084	1
	Order 4		Linear	.025	1
			Quadratic	.025	1
Error (Visualizations*Attributes)	Linear		Linear	1.160	17
			Quadratic	.846	17
	Quadratic		Linear	.762	17
			Quadratic	1.138	17

Tests of Within-Subjects Contrasts

Measure: MEASURE_1

Source	Visualizations	Datasets	Attributes	Mean Square	F
Visualizations	Linear			.001	.027
	Quadratic			.128	2.791
	Cubic			.680	7.035
	Order 4			.781	15.153
Error(Visualizations)	Linear			.034	
	Quadratic			.046	
	Cubic			.097	
	Order 4			.052	
Datasets		Linear		.149	2.806
Error(Datasets)		Linear		.053	
Attributes			Linear	.009	.138
			Quadratic	2.864	55.158
Error(Attributes)			Linear	.067	
			Quadratic	.052	
Visualizations * Datasets	Linear	Linear		.753	28.476
	Quadratic	Linear		.054	1.246
	Cubic	Linear		.008	.069
	Order 4	Linear		.005	.118
Error (Visualizations*Datasets)	Linear	Linear		.026	
	Quadratic	Linear		.044	
	Cubic	Linear		.118	
	Order 4	Linear		.046	
Visualizations * Attributes	Linear		Linear	.281	4.121
			Quadratic	.133	2.668
	Quadratic		Linear	.061	1.369
			Quadratic	.006	.097
	Cubic		Linear	.020	.891
			Quadratic	.084	.772
	Order 4		Linear	.025	.963
			Quadratic	.025	.279
Error (Visualizations*Attributes)	Linear		Linear	.068	
			Quadratic	.050	
	Quadratic		Linear	.045	
			Quadratic	.067	

Tests of Within-Subjects Contrasts

Measure: MEASURE_1

Source	Visualizations	Datasets	Attributes	Sig.	Partial Eta Squared
Visualizations	Linear			.872	.002
	Quadratic			.113	.141
	Cubic			.017	.293
	Order 4			.001	.471
Error(Visualizations)	Linear				
	Quadratic				
	Cubic				
	Order 4				
Datasets		Linear		.112	.142
Error(Datasets)		Linear			
Attributes			Linear	.715	.008
			Quadratic	.000	.764
Error(Attributes)			Linear		
			Quadratic		
Visualizations * Datasets	Linear	Linear		.000	.626
	Quadratic	Linear		.280	.068
	Cubic	Linear		.796	.004
	Order 4	Linear		.736	.007
Error (Visualizations*Datasets)	Linear	Linear			
	Quadratic	Linear			
	Cubic	Linear			
	Order 4	Linear			
Visualizations * Attributes	Linear		Linear	.058	.195
			Quadratic	.121	.136
	Quadratic		Linear	.258	.075
			Quadratic	.759	.006
	Cubic		Linear	.358	.050
			Quadratic	.392	.043
	Order 4		Linear	.340	.054
			Quadratic	.604	.016
Error (Visualizations*Attributes)	Linear		Linear		
			Quadratic		
	Quadratic		Linear		
			Quadratic		

Tests of Within-Subjects Contrasts

Measure: MEASURE_1

Source	Visualizations	Datasets	Attributes	Noncent. Parameter	Observed Power[a]
Visualizations	Linear			.027	.053
	Quadratic			2.791	.351
	Cubic			7.035	.706
	Order 4			15.153	.956
Error(Visualizations)	Linear				
	Quadratic				
	Cubic				
	Order 4				
Datasets		Linear		2.806	.352
Error(Datasets)		Linear			
Attributes			Linear	.138	.064
			Quadratic	55.158	1.000
Error(Attributes)			Linear		
			Quadratic		
Visualizations * Datasets	Linear	Linear		28.476	.999
	Quadratic	Linear		1.246	.184
	Cubic	Linear		.069	.057
	Order 4	Linear		.118	.062
Error (Visualizations*Datasets)	Linear	Linear			
	Quadratic	Linear			
	Cubic	Linear			
	Order 4	Linear			
Visualizations * Attributes	Linear		Linear	4.121	.482
			Quadratic	2.668	.338
	Quadratic		Linear	1.369	.197
			Quadratic	.097	.060
	Cubic		Linear	.891	.145
			Quadratic	.772	.132
	Order 4		Linear	.963	.153
			Quadratic	.279	.079
Error (Visualizations*Attributes)	Linear		Linear		
			Quadratic		
	Quadratic		Linear		
			Quadratic		

Tests of Within-Subjects Contrasts

Measure: MEASURE_1

Source	Visualizations	Datasets	Attributes	Type III Sum of Squares	df
	Cubic		Linear	.387	17
			Quadratic	1.860	17
	Order 4		Linear	.442	17
			Quadratic	1.550	17
Datasets * Attributes		Linear	Linear	12.063	1
			Quadratic	.003	1
Error(Datasets*Attributes)		Linear	Linear	.854	17
			Quadratic	1.724	17
Visualizations * Datasets * Attributes	Linear	Linear	Linear	.015	1
			Quadratic	.011	1
	Quadratic	Linear	Linear	.002	1
			Quadratic	.004	1
	Cubic	Linear	Linear	.071	1
			Quadratic	.029	1
	Order 4	Linear	Linear	.009	1
			Quadratic	.017	1
Error (Visualizations*Datasets*Attributes)	Linear	Linear	Linear	.575	17
			Quadratic	1.045	17
	Quadratic	Linear	Linear	1.045	17
			Quadratic	.828	17
	Cubic	Linear	Linear	.834	17
			Quadratic	1.686	17
	Order 4	Linear	Linear	.705	17
			Quadratic	.580	17

Tests of Within-Subjects Contrasts

Measure: MEASURE_1

Source	Visualizations	Datasets	Attributes	Mean Square	F
	Cubic		Linear	.023	
			Quadratic	.109	
	Order 4		Linear	.026	
			Quadratic	.091	
Datasets * Attributes		Linear	Linear	12.063	240.082
			Quadratic	.003	.034
Error(Datasets*Attributes)		Linear	Linear	.050	
			Quadratic	.101	
Visualizations * Datasets * Attributes	Linear	Linear	Linear	.015	.431
			Quadratic	.011	.182
	Quadratic	Linear	Linear	.002	.036
			Quadratic	.004	.082
	Cubic	Linear	Linear	.071	1.457
			Quadratic	.029	.292
	Order 4	Linear	Linear	.009	.220
			Quadratic	.017	.495
Error (Visualizations*Datasets*Attributes)	Linear	Linear	Linear	.034	
			Quadratic	.061	
	Quadratic	Linear	Linear	.061	
			Quadratic	.049	
	Cubic	Linear	Linear	.049	
			Quadratic	.099	
	Order 4	Linear	Linear	.041	
			Quadratic	.034	

Tests of Within-Subjects Contrasts

Measure: MEASURE_1

Source	Visualizations	Datasets	Attributes	Sig.	Partial Eta Squared
	Cubic		Linear		
			Quadratic		
	Order 4		Linear		
			Quadratic		
Datasets * Attributes		Linear	Linear	.000	.934
			Quadratic	.856	.002
Error(Datasets*Attributes)		Linear	Linear		
			Quadratic		
Visualizations * Datasets * Attributes	Linear	Linear	Linear	.520	.025
			Quadratic	.675	.011
	Quadratic	Linear	Linear	.852	.002
			Quadratic	.778	.005
	Cubic	Linear	Linear	.244	.079
			Quadratic	.596	.017
	Order 4	Linear	Linear	.645	.013
			Quadratic	.491	.028
Error (Visualizations*Datasets*Attributes)	Linear	Linear	Linear		
			Quadratic		
	Quadratic	Linear	Linear		
			Quadratic		
	Cubic	Linear	Linear		
			Quadratic		
	Order 4	Linear	Linear		
			Quadratic		

Tests of Within-Subjects Contrasts

Measure: MEASURE_1

Source	Visualizations	Datasets	Attributes	Noncent. Parameter	Observed Power[a]
	Cubic		Linear		
			Quadratic		
	Order 4		Linear		
			Quadratic		
Datasets * Attributes		Linear	Linear	240.082	1.000
			Quadratic	.034	.053
Error(Datasets*Attributes)		Linear	Linear		
			Quadratic		
Visualizations * Datasets * Attributes	Linear	Linear	Linear	.431	.095
			Quadratic	.182	.069
	Quadratic	Linear	Linear	.036	.054
			Quadratic	.082	.058
	Cubic	Linear	Linear	1.457	.207
			Quadratic	.292	.080
	Order 4	Linear	Linear	.220	.073
			Quadratic	.495	.102
Error (Visualizations*Datasets*Attributes)	Linear	Linear	Linear		
			Quadratic		
	Quadratic	Linear	Linear		
			Quadratic		
	Cubic	Linear	Linear		
			Quadratic		
	Order 4	Linear	Linear		
			Quadratic		

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	647.923	1	647.923	2702.093	.000	.994
Error	4.076	17	.240			

Tests of Between-Subjects Effects

Measure: MEASURE_1

Transformed Variable: Average

Source	Noncent. Parameter	Observed Power[a]
Intercept	2702.093	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
1.095	.021	1.051	1.140

2. Visualizations

Estimates

Measure: MEASURE_1

			95% Confidence Interval	
Visualizations	Mean	Std. Error	Lower Bound	Upper Bound
1	1.077	.025	1.024	1.130
2	1.176	.033	1.107	1.245
3	1.016	.034	.944	1.088
4	1.078	.028	1.019	1.136
5	1.131	.027	1.074	1.187

Pairwise Comparisons

Measure: MEASURE_1

(I) Visualizations	(J) Visualizations	Mean Difference (I-J)	Std. Error	Sig.[b]	95% Confidence [b]... Lower Bound
1	2	-.099	.040	.224	-.227
	3	.061	.029	.482	-.031
	4	-.001	.025	1.000	-.081
	5	-.054	.029	.829	-.148
2	1	.099	.040	.224	-.028
	3	.160*	.038	.005	.039
	4	.099	.040	.235	-.029
	5	.046	.032	1.000	-.058
3	1	-.061	.029	.482	-.153
	2	-.160*	.038	.005	-.281
	4	-.062	.028	.426	-.152
	5	-.115*	.030	.015	-.212
4	1	.001	.025	1.000	-.079
	2	-.099	.040	.235	-.226
	3	.062	.028	.426	-.029
	5	-.053	.032	1.000	-.155
5	1	.054	.029	.829	-.040
	2	-.046	.032	1.000	-.149
	3	.115*	.030	.015	.017
	4	.053	.032	1.000	-.049

Pairwise Comparisons

Measure: MEASURE_1

(I) Visualizations	(J) Visualizations	95% Confidence Interval for [b]... Upper Bound
1	2	.028
	3	.153
	4	.079
	5	.040
2	1	.227
	3	.281
	4	.226
	5	.149
3	1	.031
	2	-.039
	4	.029
	5	-.017
4	1	.081
	2	.029
	3	.152
	5	.049
5	1	.148
	2	.058
	3	.212
	4	.155

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	.554	4.343[a]	4.000	14.000	.017	.554
Wilks' lambda	.446	4.343[a]	4.000	14.000	.017	.554
Hotelling's trace	1.241	4.343[a]	4.000	14.000	.017	.554
Roy's largest root	1.241	4.343[a]	4.000	14.000	.017	.554

Multivariate Tests

	Noncent. Parameter	Observed Power[b]
Pillai's trace	17.370	.818
Wilks' lambda	17.370	.818
Hotelling's trace	17.370	.818
Roy's largest root	17.370	.818

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

a. Exact statistic

b. Computed using alpha = .05

3. Datasets

Estimates

Measure: MEASURE_1

			95% Confidence Interval	
Datasets	Mean	Std. Error	Lower Bound	Upper Bound
1	1.112	.023	1.063	1.161
2	1.079	.023	1.030	1.128

Pairwise Comparisons

Measure: MEASURE_1

(I) Datasets	(J) Datasets	Mean Difference (I-J)	Std. Error	Sig.[a]	95% Confidence Interval for Difference[a]	
					Lower Bound	Upper Bound
1	2	.033	.020	.112	-.009	.075
2	1	-.033	.020	.112	-.075	.009

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	.142	2.806[a]	1.000	17.000	.112	.142
Wilks' lambda	.858	2.806[a]	1.000	17.000	.112	.142
Hotelling's trace	.165	2.806[a]	1.000	17.000	.112	.142
Roy's largest root	.165	2.806[a]	1.000	17.000	.112	.142

Multivariate Tests

	Noncent. Parameter	Observed Power[b]
Pillai's trace	2.806	.352
Wilks' lambda	2.806	.352
Hotelling's trace	2.806	.352
Roy's largest root	2.806	.352

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

a. Exact statistic

b. Computed using alpha = .05

4. Attributes

Estimates

Measure: MEASURE_1

Attributes	Mean	Std. Error	95% Confidence Interval	
			Lower Bound	Upper Bound
1	1.142	.025	1.089	1.194
2	.992	.028	.934	1.051
3	1.152	.024	1.100	1.204

Pairwise Comparisons

Measure: MEASURE_1

(I) Attributes	(J) Attributes	Mean Difference (I-J)	Std. Error	Sig.[b]	95% Confidence Interval for Difference[b]	
					Lower Bound	Upper Bound
1	2	.149*	.027	.000	.077	.222
	3	-.010	.027	1.000	-.082	.062
2	1	-.149*	.027	.000	-.222	-.077
	3	-.160*	.022	.000	-.218	-.101
3	1	.010	.027	1.000	-.062	.082
	2	.160*	.022	.000	.101	.218

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	.779	28.141[a]	2.000	16.000	.000	.779
Wilks' lambda	.221	28.141[a]	2.000	16.000	.000	.779
Hotelling's trace	3.518	28.141[a]	2.000	16.000	.000	.779
Roy's largest root	3.518	28.141[a]	2.000	16.000	.000	.779

Multivariate Tests

	Noncent. Parameter	Observed Power[b]
Pillai's trace	56.282	1.000
Wilks' lambda	56.282	1.000
Hotelling's trace	56.282	1.000
Roy's largest root	56.282	1.000

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

a. Exact statistic

b. Computed using alpha = .05

5. Visualizations * Datasets

Measure: MEASURE_1

				95% Confidence Interval	
Visualizations	Datasets	Mean	Std. Error	Lower Bound	Upper Bound
1	1	1.051	.039	.969	1.133
	2	1.103	.021	1.058	1.147
2	1	1.162	.031	1.098	1.227
	2	1.190	.051	1.083	1.297
3	1	1.026	.036	.949	1.102
	2	1.006	.040	.923	1.090
4	1	1.106	.040	1.022	1.190
	2	1.049	.045	.955	1.144
5	1	1.216	.036	1.140	1.291
	2	1.046	.028	.987	1.104

6. Visualizations * Attributes

Measure: MEASURE_1

Visualizations	Attributes	Mean	Std. Error	95% Confidence Interval	
				Lower Bound	Upper Bound
1	1	1.045	.051	.936	1.153
	2	1.014	.036	.939	1.090
	3	1.171	.029	1.111	1.232
2	1	1.221	.044	1.127	1.314
	2	1.056	.053	.944	1.169
	3	1.251	.041	1.165	1.338
3	1	1.081	.049	.978	1.183
	2	.934	.036	.858	1.011
	3	1.033	.049	.930	1.135
4	1	1.131	.032	1.064	1.198
	2	.976	.055	.860	1.093
	3	1.125	.046	1.028	1.223
5	1	1.232	.042	1.143	1.321
	2	.980	.054	.867	1.094
	3	1.179	.038	1.099	1.260

7. Datasets * Attributes

Measure: MEASURE_1

Datasets	Attributes	Mean	Std. Error	95% Confidence Interval	
				Lower Bound	Upper Bound
1	1	.974	.035	.900	1.047
	2	1.013	.033	.944	1.081
	3	1.350	.030	1.287	1.413
2	1	1.310	.025	1.258	1.362
	2	.972	.036	.897	1.048
	3	.954	.035	.881	1.027