

Univariate Analysis of Variance - RoBERTa

[DataSet1] C:\Users\Student\OneDrive - University of Kent\URSS\Experiment 1 - Spell or No Spell\Statistical Analysis\Final\_All\_Results.sav

Between-Subjects Factors		Value Label	N
Pre_Processed	0	False	3067099
	1	True	3067099
Spell_Checked	None		876314
	Symspell		876314
	Symspell_Compound		876314
	Symspell_Compound_Urban		876314
	Symspell_Urban		876314
	TextBlob		876314
	TextBlob_Urban		876314

## Descriptive Statistics

Dependent Variable: Roberta\_Result

Pre_Processed	Spell_Checked	Mean	Std. Deviation	N
False	None	.7537918460	.2249107464	438157
	Symspell	.7397033314	.2278943036	438157
	Symspell_Compound	.7410651824	.2251223290	438157
	Symspell_Compound_Urban	.7421701959	.2256372541	438157
	Symspell_Urban	.7422141240	.2283167214	438157
	TextBlob	.7216557573	.2335286355	438157
	TextBlob_Urban	.7359691694	.2337210244	438157
	Total	.7395099438	.2286463176	3067099
True	None	.7346031691	.2330289454	438157
	Symspell	.7131526613	.2373248245	438157
	Symspell_Compound	.7147458466	.2347529064	438157
	Symspell_Compound_Urban	.7157517519	.2353170889	438157
	Symspell_Urban	.7171265685	.2376513504	438157
	TextBlob	.7016309622	.2400025215	438157
	TextBlob_Urban	.7158151005	.2408056576	438157
	Total	.7161180086	.2371672365	3067099
Total	None	.7441975076	.2292065842	876314
	Symspell	.7264279964	.2330356538	876314
	Symspell_Compound	.7279055145	.2303640851	876314
	Symspell_Compound_Urban	.7289609739	.2309059863	876314
	Symspell_Urban	.7296703463	.2333680128	876314
	TextBlob	.7116433597	.2369991586	876314
	TextBlob_Urban	.7258921350	.2375035231	876314
	Total	.7278139762	.2332391587	6134198

## Tests of Between-Subjects Effects

Dependent Variable: Roberta\_Result

Source	Type III Sum of Squares	df	Mean Square	F	Sig.
Corrected Model	1327.949 <sup>a</sup>	13	102.150	1885.237	.000
Intercept	3249365.553	1	3249365.553	59968945.44	.000
Pre_Processed	839.132	1	839.132	15486.666	.000
Spell_Checked	473.467	6	78.911	1456.351	.000
Pre_Processed * Spell_Checked	15.351	6	2.559	47.219	<.001
Error	332375.466	6134184	.054		
Total	3583068.969	6134198			
Corrected Total	333703.415	6134197			

a. R Squared = .004 (Adjusted R Squared = .004)

## Estimated Marginal Means

### Pre\_Processed \* Spell\_Checked

Dependent Variable: Roberta\_Result

Pre_Processed	Spell_Checked	Mean	Std. Error	95% Confidence Interval	
				Lower Bound	Upper Bound
False	None	.754	.000	.753	.754
	Symspell	.740	.000	.739	.740
	Symspell_Compound	.741	.000	.740	.742
	Symspell_Compound_Urban	.742	.000	.741	.743
	Symspell_Urban	.742	.000	.742	.743
	TextBlob	.722	.000	.721	.722
	TextBlob_Urban	.736	.000	.735	.737
True	None	.735	.000	.734	.735
	Symspell	.713	.000	.712	.714
	Symspell_Compound	.715	.000	.714	.715
	Symspell_Compound_Urban	.716	.000	.715	.716

## Pre\_Processed \* Spell\_Checked

Dependent Variable: Roberta\_Result

Pre_Processed	Spell_Checked	Mean	Std. Error	95% Confidence Interval	
				Lower Bound	Upper Bound
	Symspell_Urban	.717	.000	.716	.718
	TextBlob	.702	.000	.701	.702
	TextBlob_Urban	.716	.000	.715	.717

## Post Hoc Tests

### Spell\_Checked

## Multiple Comparisons

Dependent Variable: Roberta\_Result

Tukey HSD

(I) Spell_Checked	(J) Spell_Checked	Mean Difference (I-J)	Std. Error	Sig.	95% Confidence Interval	
					Lower Bound	Upper Bound
None	Symspell	.01776951 <sup>*</sup>	.0003516586	.000	.0167327089	.0188063135
	Symspell_Compound	.016291993 <sup>*</sup>	.0003516586	.000	.0152551907	.0173287954
	Symspell_Compound_Urban	.015236534 <sup>*</sup>	.0003516586	.000	.0141997313	.0162733360
	Symspell_Urban	.014527161 <sup>*</sup>	.0003516586	.000	.0134903590	.0155639636
	TextBlob	.032554148 <sup>*</sup>	.0003516586	.000	.0315173455	.0335909501
	TextBlob_Urban	.018305373 <sup>*</sup>	.0003516586	.000	.0172685703	.0193421749
Symspell	None	-.017769511 <sup>*</sup>	.0003516586	.000	-.018806314	-.016732709
	Symspell_Compound	-.001477518 <sup>*</sup>	.0003516586	<.001	-.002514320	-.000440716
	Symspell_Compound_Urban	-.002532978 <sup>*</sup>	.0003516586	.000	-.003569780	-.001496175
	Symspell_Urban	-.003242350 <sup>*</sup>	.0003516586	.000	-.004279152	-.002205548
	TextBlob	.014784637 <sup>*</sup>	.0003516586	.000	.0137478343	.0158214389
	TextBlob_Urban	.0005358614	.0003516586	.731	-.000500941	.0015726637
Symspell_Compound	None	-.016291993 <sup>*</sup>	.0003516586	.000	-.017328795	-.015255191
	Symspell	.001477518 <sup>*</sup>	.0003516586	<.001	.0004407158	.0025143205

## Multiple Comparisons

Dependent Variable: Roberta\_Result

Tukey HSD

(I) Spell_Checked	(J) Spell_Checked	Mean Difference (I-J)	Std. Error	Sig.	95% Confidence Interval	
					Lower Bound	Upper Bound
	Symspell_Compound_Urban	-.001055459 <sup>*</sup>	.0003516586	.043	-.002092262	-.000018657
	Symspell_Urban	-.001764832 <sup>*</sup>	.0003516586	<.001	-.002801634	-.000728029
	TextBlob	.016262155 <sup>*</sup>	.0003516586	.000	.0152253524	.0172989571
	TextBlob_Urban	.002013380 <sup>*</sup>	.0003516586	<.001	.0009765772	.0030501819
Symspell_Compound_Urban	None	-.015236534 <sup>*</sup>	.0003516586	.000	-.016273336	-.014199731
	Symspell	.002532978 <sup>*</sup>	.0003516586	.000	.0014961752	.0035697799
	Symspell_Compound	.001055459 <sup>*</sup>	.0003516586	.043	.0000186571	.0020922618
	Symspell_Urban	-.000709372	.0003516586	.404	-.001746175	.0003274300
	TextBlob	.017317614 <sup>*</sup>	.0003516586	.000	.0162808118	.0183544165
	TextBlob_Urban	.003068839 <sup>*</sup>	.0003516586	.000	.0020320366	.0041056413
Symspell_Urban	None	-.014527161 <sup>*</sup>	.0003516586	.000	-.015563964	-.013490359
	Symspell	.003242350 <sup>*</sup>	.0003516586	.000	.0022055476	.0042791522
	Symspell_Compound	.001764832 <sup>*</sup>	.0003516586	<.001	.0007280295	.0028016341
	Symspell_Compound_Urban	.0007093723	.0003516586	.404	-.000327430	.0017461747
	TextBlob	.018026987 <sup>*</sup>	.0003516586	.000	.0169901842	.0190637889
	TextBlob_Urban	.003778211 <sup>*</sup>	.0003516586	.000	.0027414090	.0048150136
TextBlob	None	-.032554148 <sup>*</sup>	.0003516586	.000	-.033590950	-.031517345
	Symspell	-.014784637 <sup>*</sup>	.0003516586	.000	-.015821439	-.013747834
	Symspell_Compound	-.016262155 <sup>*</sup>	.0003516586	.000	-.017298957	-.015225352
	Symspell_Compound_Urban	-.017317614 <sup>*</sup>	.0003516586	.000	-.018354417	-.016280812
	Symspell_Urban	-.018026987 <sup>*</sup>	.0003516586	.000	-.019063789	-.016990184
	TextBlob_Urban	-.014248775 <sup>*</sup>	.0003516586	.000	-.015285578	-.013211973

## Multiple Comparisons

Dependent Variable: Roberta\_Result

Tukey HSD

(I) Spell_Checked	(J) Spell_Checked	Mean Difference (I-J)	Std. Error	Sig.	95% Confidence Interval	
					Lower Bound	Upper Bound
TextBlob_Urban	None	-.018305373 <sup>*</sup>	.0003516586	.000	-.019342175	-.017268570
	Symspell	-.000535861	.0003516586	.731	-.001572664	.0005009409
	Symspell_Compound	-.002013380 <sup>*</sup>	.0003516586	<.001	-.003050182	-.000976577
	Symspell_Compound_Urban	-.003068839 <sup>*</sup>	.0003516586	.000	-.004105641	-.002032037
	Symspell_Urban	-.003778211 <sup>*</sup>	.0003516586	.000	-.004815014	-.002741409
	TextBlob	.014248775 <sup>*</sup>	.0003516586	.000	.0132119729	.0152855775

Based on observed means.

The error term is Mean Square(Error) = .054.

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

## Homogeneous Subsets

## Roberta\_Result

Tukey HSD<sup>a,b</sup>

Spell_Checked	N	Subset				
		1	2	3	4	5
TextBlob	876314	.7116433597				
TextBlob_Urban	876314		.7258921350			
Symspell	876314		.7264279964			
Symspell_Compound	876314			.7279055145		
Symspell_Compound_Urban	876314				.7289609739	
Symspell_Urban	876314				.7296703463	
None	876314					.7441975076
Sig.		1.000	.731	1.000	.404	1.000

Means for groups in homogeneous subsets are displayed.

Based on observed means.

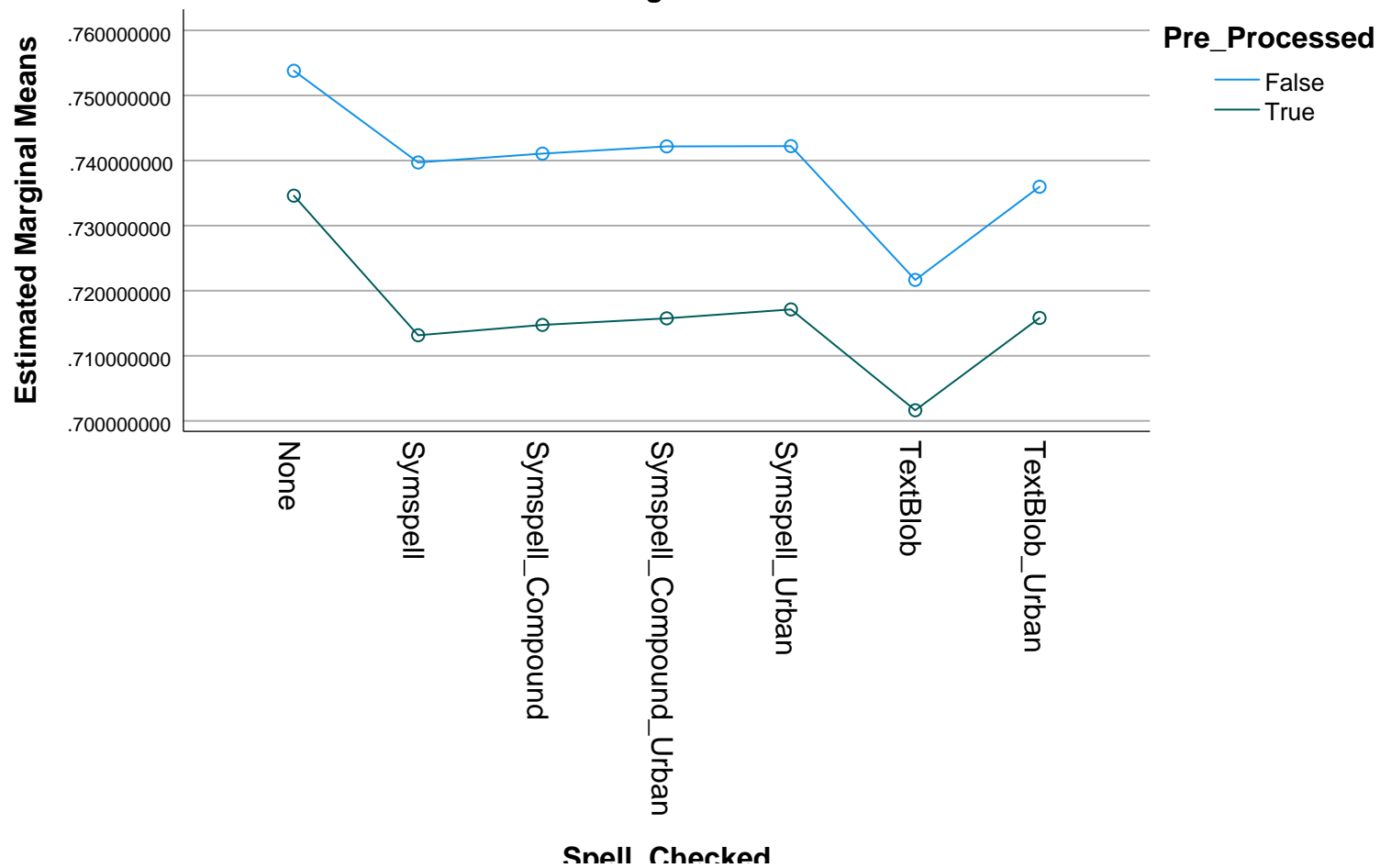
The error term is Mean Square(Error) = .054.

a. Uses Harmonic Mean Sample Size = 876314.000.

b. Alpha = .05.

## Profile Plots

Estimated Marginal Means of Roberta\_Result





Estimated Marginal Means of Roberta\_Result

