

The Insights of the Popular Game Apps from the Reviews Analytic

Chaochang Chiu¹ Hsin-Min Hsiao ¹

Chi-I Hsu²

¹ Yuan Ze University, Chungli Dist., Taoyuan City 32003, Taiwan, R.O.C.;

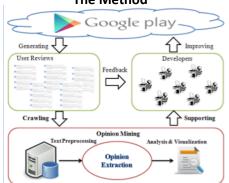
² Kainan University, Luzhu Dist, Taoyuan City 3385<u>7, Taiwan, R.O.C.</u>



Introduction

This research aims to investigate the review analytics of Android games using a proposed text analysis A heuristic n-phrase rule technique to extract user's reviews of game apps according to reviewer's gender, star ratings, game types (arcade & action, casual, brain & puzzle, cards & casino, sports, racing), and game attributes (gameplay, aesthetics, musicality, stability, developer).

The Method



Heuristic N-Phrase Rule

A heuristic n-phrase rule is proposed to identify the opinion polarity of an attribute in review sentences. An n-phrase is a contiguous slice of n words or phrases of a longer sentence. An n-phrase of size 2 is referred to as a bi-phrase; size 3 is a tri-phrase; size 4 is a four-phrase, and so on.

No. Of Apps	No. of Devel- opers	No. Of Reviews		Gen	der			Opinion			
							Gender				
			Men	Women	Un- known	M/ W	Positive	Nega- tive	F		
1,1 59	519	78,501	55,616	16,853	6,032	3.3	62,486	16,015			
1,235	557	77,578	37,986	32,444	7,148	1.2	55,984	21,594			
852	472	28,432	13,472	12,715	2,245	1.1	18,024	10,408			
428	224	9,891	5,979	3,339	573	1.8	7,229	2,662			
268	177	8,190	6,711	938	541	7.2	6,554	1,636	4.0		
326	232	4,456	3,472	610	374	5.7	2,261	2,195	1.0		
4,268	2,181	207,048	123,236	66,899	16,913	1.8	152,538	54,510	2.8		
	1,235 852 428 268 326	1,235 557 852 472 428 224 268 177 326 232	1,235 557 77,578 852 472 28,432 428 224 9,891 268 177 8,190 326 232 4,456	1,235 557 77,578 37,986 852 472 28,432 13,472 428 224 9,891 5,979 268 177 8,190 6,711 326 232 4,456 3,472	1,235 557 77,578 37,986 32,444 852 472 28,432 13,472 12,715 428 224 9,891 5,979 3,339 268 177 8,190 6,711 938 326 232 4,456 3,472 610	1,1 59 519 78,501 55,616 16,853 6,032 1,235 557 77,578 37,986 32,444 7,148 852 472 28,432 13,472 12,715 2,245 428 224 9,891 5,979 3,339 573 268 177 8,190 6,711 938 541 326 232 4,456 3,472 610 374	1,1 59 519 78,501 55,616 16,853 6,032 3.3 1,235 557 77,578 37,986 32,444 7,148 1.2 852 472 28,432 13,472 12,715 2,245 1.1 428 224 9,891 5,979 3,339 573 1.8 268 177 8,190 6,711 938 541 7.2 326 232 4,456 3,472 610 374 5.7	1.1 59 519 78.501 55.616 16.853 6.032 3.3 62.486 1.235 557 77.578 37.986 32.444 7,148 1.2 55.984 852 472 28.432 13,472 12,15 2.245 1.1 18,024 428 224 9,891 5,979 3,339 573 1.8 7,229 268 177 8,190 6,711 938 541 7.2 6,554 326 232 4,456 3,472 610 374 5.7 2,661	1,159 519 78,501 55,616 16,853 6,032 3.3 62,486 16,015 1,235 557 77,578 37,986 32,444 7,148 1.2 55,984 21,594 852 472 28,432 13,472 12,715 2,245 1.1 18,024 10,408 428 224 9,891 5,979 3,339 573 1.8 7,229 2,662 268 177 8,190 6,711 938 541 7.2 6,554 1,636 326 232 4,456 3,472 610 374 5.7 2,610 2,995		

The Findings and Discussions

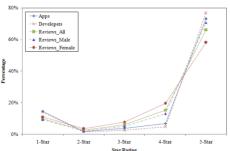
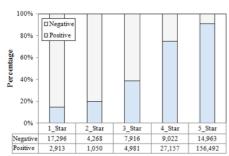


Fig2. Distribution of Star Rating Reviews by Game, Developer, and Gender



Star Rating
Figure 3. Distribution of Sentiments among the Ratings

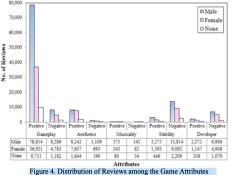


Figure 5. Distribution of Sentiments among the Game Attributes

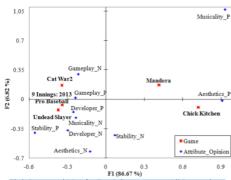
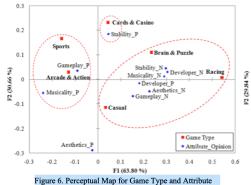


Fig8. Perceptual Map for Top 5 Games among All Respondents



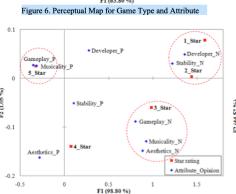


Figure 7. Perceptual Map for Star Rating and Attribute

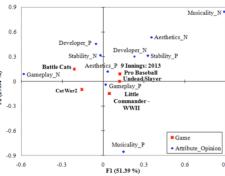


Figure 9. Perceptual Map for Top 5 Games among Males

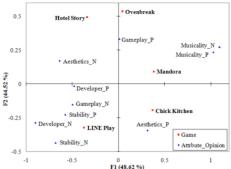


Fig10. Perceptual Map for Top 5 Games among Females

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