# Inconsistent and Unreliable Maturity Ratings on Mobile Platforms

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## Background

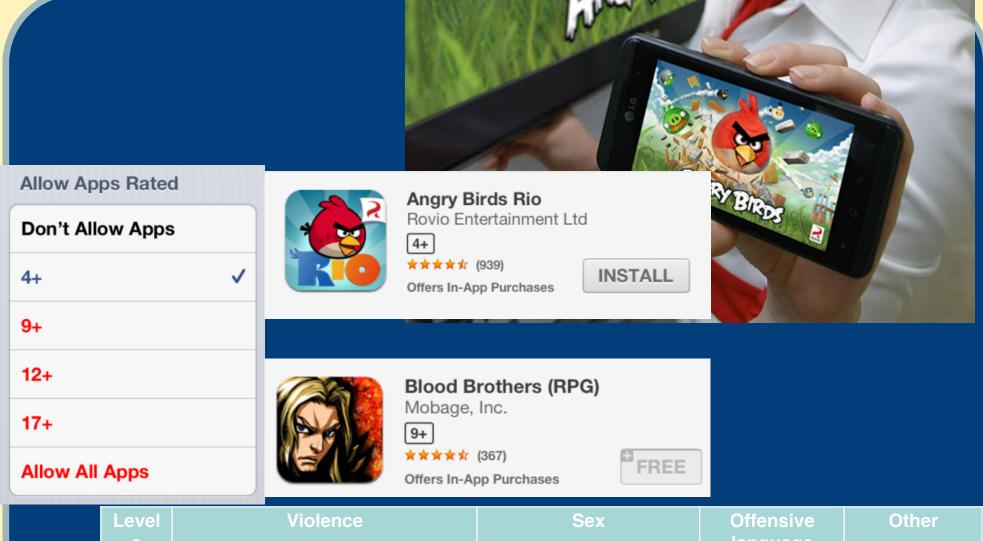
Smartphones, tablets, and mobile apps, they are increasingly becoming part of children's daily life. However, there is a rising concern among parents who have experienced unreliable content maturity ratings for mobile apps that result in inappropriate risk exposure for children.

# **Project Goals**

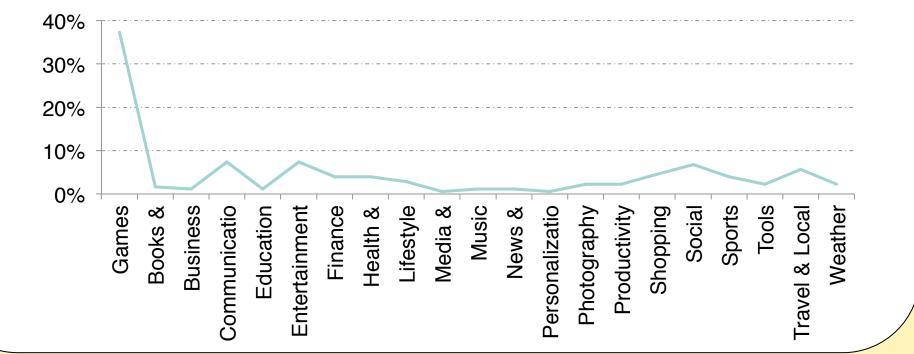
To examine the reliability of Apps' maturity rating, we

1) design an experiment to understand the gap between app users' perceived maturating rating of apps and the published maturity rating on iOS platform.

2) analyze app maturity rating policy and extract maturity rating related ontology. 3) investigates the possible reasons behind the inaccurate ratings.



	Level s	Violence	Sex		Offensive language	Other	
	4+	-		-		-	-
	9+	Mild/infrequent cartoon, fantasy (A1) or realistic violence (B1), or infrequent/mild horror themes (C1)		Infrequent/mild mature, suggestive themes (D1)		-	
	12+	Frequent/intense cartoon, fantasy (A2) or realistic violence (B2)		Mild/infrequent mature or suggestive themes (D1)		Infrequent mild language (F1)	Simulated gambling (H1,H2)
	17+	Frequent/intense cartoon, fantasy (A2) or realistic violence (B2), Frequent/intense horror themes (C2)		Frequent/intense mature and suggestive themes (D2), Sexual content, nudity (E1,E2)		Frequent/ intense offensive language (F2)	Alcohol, tobacco, drugs (G1,G2)
y, de y co pect ived mat	ntrc tive.			Rating Policy Categories Violence Offensive Sex Others rug, gamble, etc)	R Pei R R	True ating rceived True ating Gap blished ating	App Meta Data Description Developer Version Review
Dist	tribu	ution of Inc	consi	stent A	App F	Rating	



## Approach

- Policy coding and decomposing
- 2. App data collection and text analytics (policy, de meta data, developer grouping)
- 3. Repeated experiments on MTurk with quality co derive perceived true ratings from user perspect
- 4. Discover the gap between app users' perceived maturating rating of apps and the published mat rating on iOS platform.

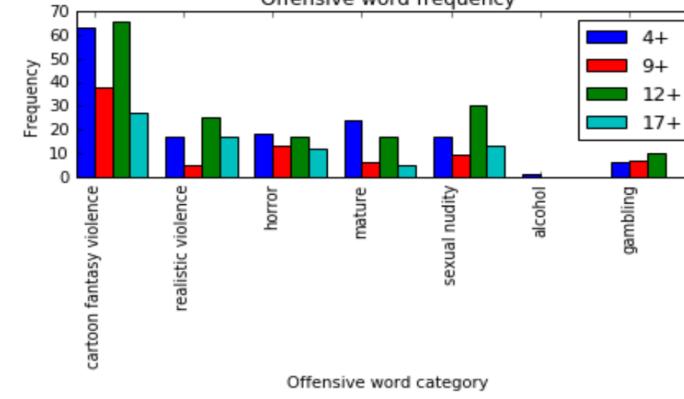
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## Dataset

A total of over 100,000 app meta data were downloaded from iOS and Google Play.

Information contain app name, description, version, developer, top reviews, icon, screenshot, and their published maturity rating.

#### Offensive word frequency Gaps between True Rating and Published Rating RATING GAPS BETWEEN WORKS Popular games tend to overrate **IOS MTURK AND TRUE** AND IOS 40 **RATING COMPARISON** Difference = -13 Difference = 30 Difference = -5 Difference = -Unpopular games tend to underrate overrated equal underrated 20 10 = 5 Difference = 8 Level difference v.s. Popularity 12,000,000 matur TIOL 10,000,000 8,000,000 6,000,000 4,000,000



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