

Distinguish uncategorized Applications by Utilizing Advanced FRAC Model

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Abstract— In day today life a smart phone becomes one of important necessity of smart life. In the fast growing application market is hard to maintain application categories. While registration, application developers have to select category for their application also provides short description and long description too. Although of selecting the right category, the approach leaves on Google play store or Apple play store. Periodically application open in another category. It has been observed that the mismatch between the description of the application and category belong to, continue to exist. It is common mechanism for application, now days there is a complaint driven process or manual checking process exist. This is time consuming and decreasing the popularity of application. Whereas the application developers struggle to get visibility for their product. To avoid this uncategorization, we introduced the advanced FRAC: (FR)amework for Application Categorization based on probabilistic modeling is proposed that utilizes app descriptions as normalized vectors in the space of words and categorize and detect uncategorized apps accurately.

Key words: Advanced FRAC, App Category, Uncategorized Application

I. INTRODUCTION

The important factor in application market is visibility of application. In this racing world categorization is one of problem that's need to be addressed. This problem is potentially introduced during while registration of application. Application developers are free to choose to select category for an application is inherently ambiguous and also opens up the possibility of deliberate gaming order to avoid competition and improving the rank of the application. The practice is attracting the attention of app market managers and is being discouraged and in some cases forbidden. Another reason for developers to register their apps under a less appropriate category is to avoid scrutiny. For example, the chances of a low quality personal health information app being able to remain in the app market without drawing significant attention to it, is not to categorize it under Medical category. An example of uncategorization taken from Google Play Store and an Apple play store where a number puzzle app is categorized under the Words category.

The current methods of policy violation detection (including uncategorization detection) are either manual or complaint-driven. For example, APPLE appears to manually check the app metadata and decide whether it is allowed to be published in the market or not. While this method works and identifies uncategorized apps correctly, it will increase the length of time to get an approval for an app. On the other hand, GOOGLE seems to use a complaint-driven strategy. An app will be removed from the GOOGLE Play Store if there are many complaints from the users. Apart from this

information, most companies would use their own proprietary approaches to deal with uncategorization problems. In this paper, we propose an automated general method to perform app categorization and detect uncategorization. We compared our method with baseline methods and as well as against human judgement. We make the following contributions.

- 1) To suggest the categories appropriate for the app automatically
- 2) To categorize and detect accurately than the word count based generic models.

II. RELATED WORK

Design and implementation of app store optimization tool for an app market [1] The process of optimizing mobile apps at a high level in search results of the ASO App Store is that your app is more in search results of the app store, which is more visible to potential customers, translating into more traffic to your app's page in the increasingly visible App Store. ASO's aim is to drive more traffic to your app's page in the app store, so that the locator can perform certain actions: downloading your app. Also, an important aspect of your target customer needs to do in the ASO process. Search apps as well as your potential customers. When you learn more about which keyword is being used, you know the language of your potential customers - an important part of any marketing plan - and you can take your keyword choices. Google Play Store is an Android Market site specifically for the Google App Store. It is automatically pulled from the Google Play website and displays the top chart and new releases of the game. It provides detailed information and reviews of applications with related apps. App store optimization (ASO) app store is a process of improving the visibility of the mobile app.

Detection of the App in Google Play by Categorization method[2] A current challenge within the quickly evolving app market scheme is to take care of the integrity of app classes. At the time of registration, app developers need to choose, what they believe, is that the most acceptable class for his or her apps. Besides the inherent ambiguity of choosing the correct class, the approach leaves open the likelihood of misuse and potential recreation by the registrant. Sporadically the app store can refine the list of classes offered and doubtless designate the apps. However, it's been observed that the couple between the outline of the app and therefore the class it belongs to continues to persist. Though some common mechanisms (e.g. a complaint-driven or manual checking) exist, they limit the latent period to discover uncategorized apps and still open the challenge on categorization. We tend to introduce FRAC+: Framework for App Categorization. FRAC+ has the following salient features: (i) it's supported a data-driven topic model and mechanically suggests the classes acceptable for the app store, and (ii) it will discover

uncategorized apps. In depth experiments attest to the performance of FRAC+. Experiments on GOOGLE Play shows that FRAC+'s topics are a lot of aligned with GOOGLE's new classes and zero.35%-1.10% game apps are detected to be uncategorized.

Fu et al. [3] A continuous test in the quickly advancing application advertise biological system is to keep up the honesty of application classifications. At the time of enlistment, application designers need to choose, what they accept, is the most proper classification for their applications. Other than the intrinsic uncertainty of choosing the correct classification, the approach leaves open the likelihood of abuse and potential gaming by the registrant. Intermittently the application store will refine the rundown of classes accessible and possibly reassign the applications. In any case, it has been watched that the jumble between the depiction of the application and the class it has a place with, keeps on holding on. Albeit a few regular systems exist, they restrict the reaction time to identify un categorized applications what's more, still open the test on arrangement.

Clustering-based methods group a set of observation points to several groups/clusters. The most common method to group a set of N observation points to k clusters is k-means clustering algorithm. Each cluster is represented by a centroid or a cluster center, which is a mean of all nearest observation points within that cluster. Observation points that have large distance to the cluster center in each cluster are considered to be anomalous. The k-means is widely adopted in many different applications. Domain-based methods separate observations based on a boundary learned from the training data. The de-facto approach to domain-based novelty detection has been one class Support Vector Machines (OC-SVM) [7].

III. ALGORITHM

Advanced FRAC approach:

- 1) for every application $a_i \in A$ do
- 2) apply the average computing by using the previous history of a_i .
- 3) if the a_i has average computation cost is less than threshold value then it is uncategory application.
- 4) else begin
- 5) end if
- 6) end for

IV. SYSTEM ARCHITECTURE

The increase in popularity of mobile apps in play store, various leader boards of different online mobile app stores contain mobile ranking apps. These ranking misguide the app users. Hence, it becomes necessary to discover uncategorized application. This paper proposes a simple and effective system. Fig. 1 shows the system architecture, framework of the uncategorization of application.

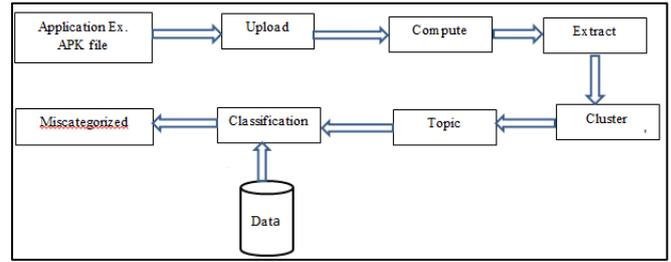


Fig. 1: System architecture, uncategorized for Apps

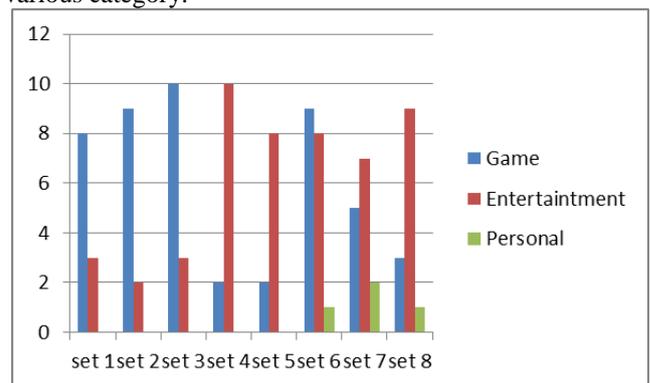
An application server, its location based product that resides in the local host. The new application is adding to this server. It provides application services for customer as well as security, along with storing customer rating. By using FRAC model we remove the uncategorized app and ranking the application based on the user feedback. The reviews are composite of either positive words or negative words. The aggregation and computation of words gives whether given comment if positive or negative for app under consideration. This analysis helps in finding uncategorized apps in a leader board. The proposed new effective algorithm find out fraud ranking in mobile app by aggregating results from above three functions and analysis accordingly.

V. RESULT

Application	Game	Entertainment	Personal
set 1	8	3	0
set 2	9	2	0
set 3	10	3	0
set 4	2	10	0
set 5	2	8	0
set 6	9	8	1
set 7	5	7	2
set 8	3	9	1

Table 1: Result of various application.

Above table contains the Applications such will be the input for the system and system will categorized the apps into various category.



Graph 1:

The above Graph shows the total number of applications gone through the advanced FRAC model then that application categorized into particular category. The total number of application contain the x-axis and y-axis contain categorized application.

VI. CONCLUSION

The Advanced FRAC, framework for App Categorization, to detect uncategorized app. The key ideas include i) to suggest the categories appropriate for the app automatically. ii) To categorize and detect accurately than the word count based generic models. The user blindly uses such uncategorized application because they attracts them with fake promises like mobile recharge, lucky winner to in dollars etc. and this applications demands user profile before they start and redirects to some other site which in unsecure for user. The system will efficiently detects and reports the uncategorized application based users short description and long description by applying generative process of advanced FRAC. The Advanced FRAC model stems further research directions in related to topic modeling. In this work we considered a flat topic structure for apps as it is used in the current app markets.

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