

# Detecting Fraud Apps Using Sentiment Analysis

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**Abstract-** In Today's world, smart phone are very important in our day to day life. Now a day's everyone use smart phone. Nowadays, there are so many applications available on internet because of that user cannot always get correct or true reviews about the product on internet. There are so many fraud applications on the internet. The growth of apps was increased by 1.6 million at App Store and Google Play. There are many apps from which any app can be fraud, so the identification of true app is needed.

Our fraud app detection application will help user to identify which application is true. Our main target is to detect fraud app because there are huge no of mobile apps. By analyzing admin declare app fraud app and also based on user comment evidence we give rating.

**Keywords**— Mobile Apps, Google Play, Keyword based analysis, User feedback based analysis, Rating, Fraud apps.

## 1. INTRODUCTION

Fraud apps web application basically deals with fake apps. As there are many fraud application available in the market or in app store. As we know that mobile application market is in rise as mobile users are in large quantity, smart phone user uses those features of mobile Apps as entertaining purpose, knowledge purpose and so on. This application will be used to detect fraud product selling online or fraud application on mobile. It will help to take reviews from users for application, and analyze. So the main thing is to identify which app is fraud and here we analyze user comment and give star rating based on that.

## 2. ADMIN MODULE AND USER MODULE

### 2.1. (A) Admin part

There is an admin part. Here admin needs to enter his id and password and after login he can perform various tasks. In these part admin can do various work like he will add application and also can declare which app is fraud. Add.

### (B) User Module (second part)

This is user part. Here user needs to enter his id and password and after login then he can see apps which declared fraud by admin. If there is new user .He has to register for access our application. He has to enter his details.

#### 2.1.1. (a) Admin part

##### (1). New Application:

System allows Admin to add new applications and its details such as Name, Link, Description, Rating, Category, App Image, etc.

##### (2) Detect Fraud Applications:

Admin will check the application details and also read the user comments.

Admin will analyze the ratings and comments which will help him/her to decide whether the app is fraud or not.

##### (3) View Users:

Can view the list of registered users with their details.

##### (4) View Feedback:

Admin can view feedbacks received from the registered users.

### (b) User part

##### (1) Registration / Login:

To view the mobile applications, users need to create an account by filling up basic registration form.

After successfully creating an account, user can login into the system using login credentials.

##### (2) View Applications:

After login, user can view Various mobile applications from different categories.

##### (3) Selected Application Details:

Can view the selected application's details, ratings and comments.

Also can navigate to the respective application download link.

##### (4) Comment on Application:

After using the application, user can give their feedback by commenting his/her views on that application.

##### (5) Write Feedback:

Registered users can write a feedback regarding the system which will be notified to the admin.

## 2.2. related work

In this project, we first analyze application based on admin's analysis he will declared app as fraud or

genuine .An algorithm is a series of unambiguous step required to solve a problem or perform a task. When you sort your email,

Run spell check on document. You are applying a simple algorithm to data. By analyzing admin declare app fraud an also based on user comment evidence we give rating it analyze the keyword and based on that it provide rating. In this way also we comes to know what user think about our application. In this fraud app detection application, admin also give link of respective application which he added to the application from where user when login can see respective application detail and can also see link of that particular application.

In our when admin add app also give link of that from apple store and Google play store. For improving our application we will ask user after they use our application for feedback, using this kind of feedback evidence from user also help us in improving application when user use our application he will directly see all application that are analyze by admin and then that are added by admin. So, user comes to know all information about that application and whether is fraud app or not. If admin declared fraud than its fraud so, it save user time and provide to safety to user.

**2.3. Data Analysis**

Our application basically data analyze through admin and user side. In this main purpose is to data collect and organized so that can drive helpful information.

**2.1.2 Custom algorithm for keyword analysis:**

Customers give comment based on their experience and base on that comment, rating of application on our website is done. It analyzes the user comment.

**Overview**

Our Website simply provide user to do comment functionally which help us to get feedback of application on user experience and based on that star rating is provided. The algorithm is used to analysis keyword or user comment and based on that star rating is given. User can also add a written review. Taking comments from user help us in improving application. When users use our application he can see all information related to that application. It's save user time also and he is also able to give review about application.

How the System Work

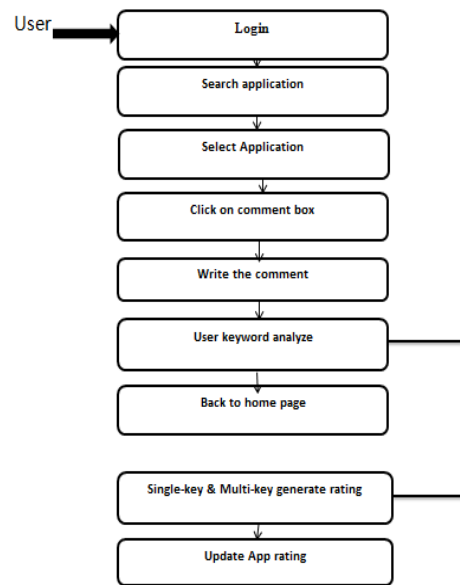


Fig.2.1. Custom algorithm for keyword analysis

**2.4. Custom Algorithm For User Feedback Analysis:**

Customers provide ratings and reviews of application on our website to give feedback on their experience with an app and help others decide which apps they'd like to try.

**Overview**

Our Website simply uses Q&A functionally which help us to get feedback of application on user experience which helps other user to decide which app they'd like to try. The secret algorithm is used to analysis Q&A functionally which rate the app on scale of 1 to 5 stars. User can also add a written review. To give users an easy way to provide feedback we are using Q&A functionally in which user have to answer the question which are related to application performance, user friendliness, ease of use etc...

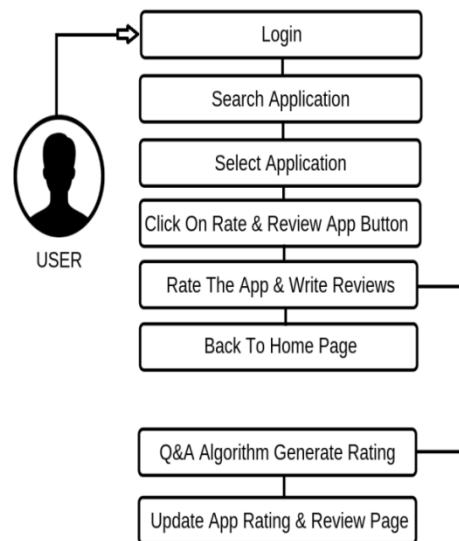


Fig.2.2. Custom algorithm for user feedback analysis

### 2.5. Decision Tree Algorithm

A decision tree is a structure that includes a root node, branches, and leaf nodes. Each internal node denotes a test on an attribute, each branch denotes the outcome of a test, and each leaf node holds a class label. The topmost node in the tree is the root node.

The general motive of using Decision Tree is to create a training model which can use to predict class or value of target variables by **learning decision rules** inferred from prior data (training data). The understanding level of Decision Trees algorithm is so easy compared with other classification algorithms. The decision tree algorithm tries to solve the problem, by using tree representation. Each **internal node** of the tree corresponds to an attribute, and each **leaf node** corresponds to a class label. The next algorithm which we are going to use is based on decision tree algorithm. In this algorithm, we are going to use points like user friendly, designed, speedy, help and meet the user expectation to find out what user think about particular application in terms of all these parameter. All these kind of features help us to find out average user rating for particular app. We find average rating based on all these parameter and these is useful for other user.

### 3. PROPOSED SYSTEM

Our purpose of the application is to provide safety to user and save time of user by telling them information about the fraud app.

The working of the system is divided into six major phases.

Phase 1 – First page is home page.

This is our application home page. These home pages consist of two module, user login and admin login. When you click on admin login then admin page comes where admin need to enter his id and password and then can perform further task.

When you click on user login then user page comes where user need to enter his id and password and then can see which app add by admin and declared fraud by admin.

Phase 2 – Second page is admin page.

This is our application admin page. Admin page consists of id and password by using id and password admin login into system. After admin enter his id and password he can able to perform various activities like he can add application and after find that application is fraud he can declared application as fraud and can view users and view user feedback also.

Phase 3 – Third page is admin add application detail.

In this page admin will add app by filling all details related

to applications. Here admin when add app he will enter

Name of the application and description about that application and also mention star for that respective application and that application comes under which

type whether its entertainment, business and admin will also give Google play store and apple app store link.

Phase 4 – Fourth page is user page.

User page consists of id and password. By using id and password user can login into the system. After user enter his id and password he enter into application he can see all application that are added by admin and also see the details of application and can see which app declared fraud by admin and user also able to write feedback for application.

Phase 5 – Fifth page is new user sign up.

This is our application new user sign up. When user is new he has to enter his basic information like his has to enter his name and mobile number, his email id and user name and password. After filling all this details he have to click on register button and in this way he is able to successfully register as new user and after that with id and password he can enter into our application.

Phase 6 – Sixth page is keyword analysis algorithm.

This is the first algorithm name as keyword analysis algorithm. Using this algorithm keyword is analysis based on user comments .This algorithm based on user comment. Below application detail will provide user comment box, he can write his comments. Here we analysis the user comments and give star rating based on that.

### 4. RESULTS AND DISCUSSIONS

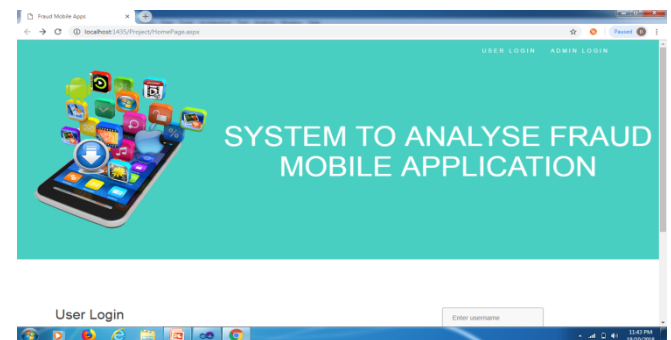


Fig.4.1. Home Page

This is our Home Page. It consists of the two modules one is admin module and second is user module.

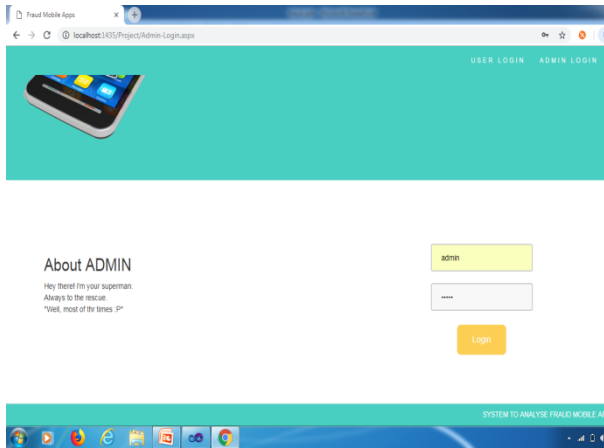


Fig.4.2. Admin Module

There is admin part. Here admin needs to enter his id and password and after login he can perform various tasks.

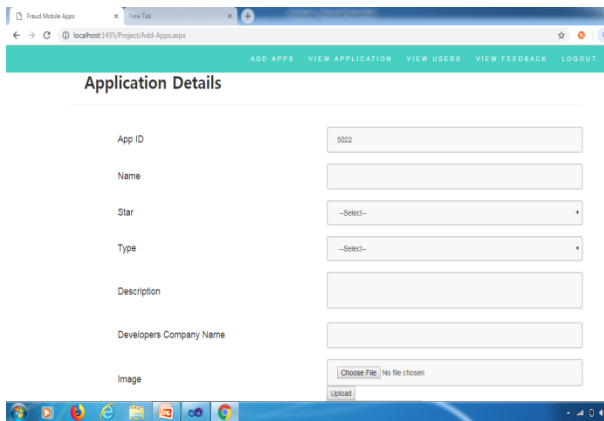


Fig. 4.3. Admin Add Application Details

In these part admin can do various work like he will add application and also can declare which app is fraud.

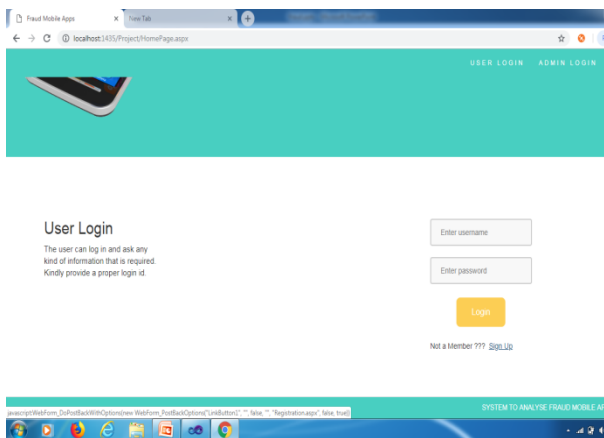


Fig. 4.4. User Module

This is user part. Here user needs to enter his id and password and after login then he can see apps which declared fraud by admin.

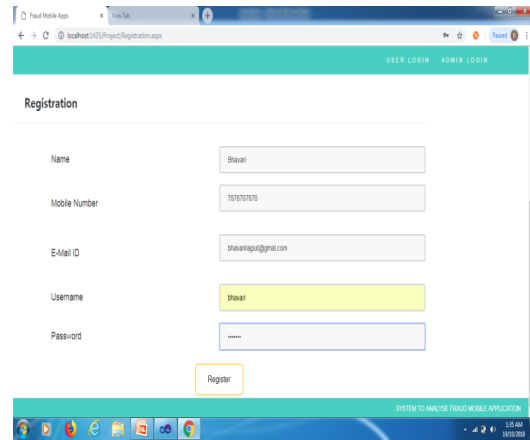


Fig. 4.5. New User Sign up

If there is new user .He has to register for access our application .He has to enter his details.

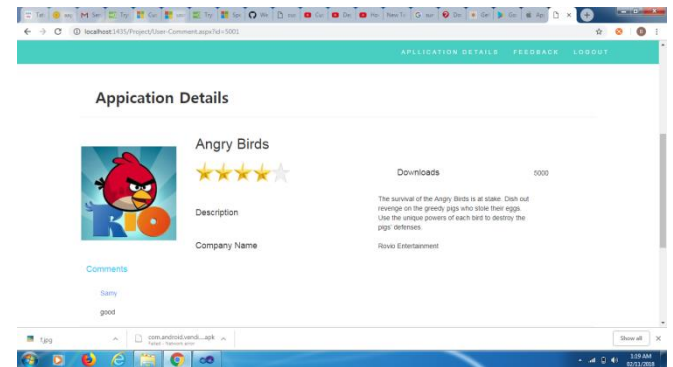


Fig. 4.6. Keyword analysis Algorithm

In this part of algorithm, it will Analyze keyword and give star rating based on keyword.

### USER REVIEW

Q1 : User Friendly  
 Yes  No

Q2 : Design  
 Yes  No

Q3 : Speed  
 Yes  No

Q4 : Helpful  
 Yes  No

Q5 : Meet The User Expectation  
 Yes  No

Fig. 4.7. Decision Tree Algorithm

In this algorithm, we are going to use points like user friendly, designed, speedy, help and meet the user expectation to find out what user think about particular application in terms of all these parameter.

#### **ACKNOWLEDGMENT**

It is matter of great satisfaction and pleasure to present paper on “Detecting fraud apps using sentiments analysis”. I wish to express our sincere thanks and gratitude to our honorable Guide Ms. Linda John, or her constant guidance and motivation .It was for her valuable support and encouragement throughout the preparation of paper report without which the paper would have not been completed. (A.1)

#### **REFERENCES**

- [1] Hengshu Zhu, Hui Xiong, Yong Ge, and Enhong Chen, “Discovery of Ranking Fraud for Mobile Apps”, IEEE Transactions on Knowledge and Data Engineering, Vol.27, No. 1, January 2015
- [2] Monali Zende, Aruna Gupta, “Survey on Fraud Ranking in Mobile Apps”, IJSR Volume 5 Issue 2, February 2016
- [3] Ranjitha R, Mathumitha.K, Meena.S, “Discovery of Ranking of Fraud for Mobile Apps”, IJIREM vol.3 Issue-3, May-2016.
- [4] Mahmudur Rahman, Mizanur Rahman, Bogdan Carbutar and Duen Horng Chau, “FairPlay: Fraud and Malware Detection in Google Play”.