

Fraud Application Detection

Akash Devdhar, Abhilash Sonar, Shivam Phokmare & Deven Govind
Department Of Computer Engineering, Savitribai Phule Pune University, Pune, Maharashtra,
India

Abstract: Most of us use android phones these days and also use the play store facility frequently. Play store provides huge number of applications but unfortunately few of those applications are fraud. Such applications can do damage to phone and also cause data thefts. Hence such applications must be found, so that they will be recognizable for play store users. So we are proposing an Android application which will process the information, comments and the reviews of the application with natural language processing to give results in the form of number of positive and negative reviews. So it will be easier to decide which application is fraud or not.

Keywords—Mobile Apps; Evidence Aggregation; Fraud Detection; Historical Records;

1. Introduction

Android phones have become very popular these days and also users use the play store facility frequently. The review section of every application on the play store is a great way to analyze an application. Fraud applications may cause damage to phone and also possibly data thefts. Hence such applications must be marked, so that they will be avoided by the play store users. With use of this application the users will never be victims of privacy theft any more.

Key features which makes our system better:

- All the reviews are sorted out as positive and negative reviews unlike the existing systems.
- The application provides a summarized result making it very easy to understand for the user.
- The most important feature of this system is that it provides protection from fraud applications.

2. Design and Implementation of the System

A. System Architecture

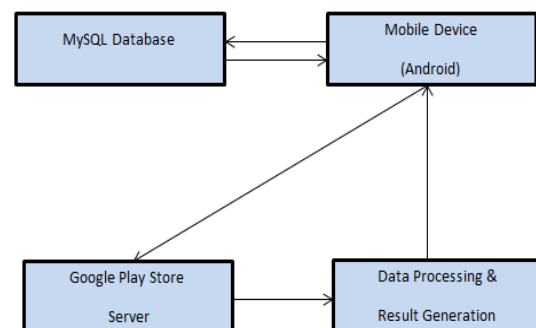


Figure 1: Architecture Diagram

The main idea behind the project is to develop an Android application which will help users to identify fraud applications. The application can be controlled by the buttons on the User Interface and can give input to application.

The system takes input as name of the application, tries to match with the keyword and fetch the information about application. App store like Google play store provides information about the applications progress over the past few weeks. This information will be processed using NLP using MySQL database. This retrieved information will be analyzed on the basis of reviews, ratings and rankings.

B. Mathematical Equations

Sentimental Analysis is the process of determining whether a piece of writing is positive, negative and neutral. It's also known as opinion making, deriving the opinion.

Sentimental Analysis refers to the use of natural language processing text analysis and computational linguistics to identify and extract subjective information in source materials. Sentimental analysis is widely applied to reviews and social media for variety of applications ranging from marketing to customer service.

C. The Implementation of the System

The System has developed using multiple edge cutting technology like Android, Jsoup Parser, and java and MySQL. Android Studio is used for developing mobile application which forwards the request to database and database provides data to the user. The mobile application enables the facility to search for the apps using different categories. It also provides the functionalities like segregation of reviews and segregation into positive and negative review.

Mobile application is also provided with functionalities such as searching the application using its name. Mobile application implemented collection of algorithms to provide service to admin and multiple users. Most pre-dominant algorithm is Sentimental Analysis algorithm. User first provides name for the application and after that based on negative and positive word datasets the system segregates the reviews and shows the count of positive and negative reviews.

3. Results and Discussions

By the use of Fraud Application Detection user will be able to know that how many reviews are in favor of the application, the number of positive reviews suggest user whether to install the application or not. This will ultimately protect the privacy of the user from fraud application and lead to enhancement of the overall system performance. Currently, this software has limited applicability. But in the near future, it can be implemented on a large scale.

Data and Text Mining is a famous area of research in Computer Science. There are a number of algorithms used in Text mining among which sentimental analysis.

In the future, we will try to improve the performance of this system. Also, we will try to implement this project on a larger scale with a larger database incorporated. Thus, it will improve the future fraud application detection undertaken by the huge organizations.

4. Conclusion

As the technology advances so the thinking of people there may be fraud in some applications. Privacy of the user is the main issue while delivering services to the user such application might be malwares or data theft there must be some kind of helping hand to guide user about any new application. This application not only suggests but also provides security to the user in a better way.

5. Acknowledgements

The authors wish to thank the support by Prof Swapneel C. Mhatre (Department of Computer Engineering, Singhad College of Engineering) for this which is nothing but a corollary of his motivation.

6. References

- [1] Hengshu Zhu, Hui Xiong, Yong Ge, Enhong Chen, "Discovery of Ranking Fraud for Mobile Apps" IEEE TRANSACTIONS ON KNOWLEDGE AND DATA ENGINEERING, VOL. 27, NO. 1, JANUARY 2015.
- [2] Muhammad Arif and Amil Roohani Dar, "Survey on Fraud Detection Techniques Using Data Mining" INTERNATIONAL JOURNAL OF U- AND E-SERVICE, SCIENCE AND TECHNOLOGY VOL.8, NO.3 (2015), PP.163-170.
- [3] Prajakta Gayke1, prof. Sanjay Thakre, "Detection of Ranking Fraud for Mobile App", IOSR JOURNAL OF COMPUTER ENGINEERING (IOSR-JCE) E-ISSN: 2278-0661, P-ISSN: 2278-8727 PP 68-71.
- [4] Jeevanandam Jotheeswaran, Loganathan R. and Madhu Sudhanan B. " Feature Reduction using Principal Component Analysis for Opinion Mining", INTERNATIONAL JOURNAL OF COMPUTER SCIENCE AND ELECOMMUNICATIONS VOLUME 3, ISSUE 5, MAY 2012.
- [5] Raghuvveer Dagade, Prof. Lomesh Ahire "Review: A Ranking Fraud Detection System for Mobile Apps", INTERNATIONAL JOURNAL OF INNOVATIVE RESEARCH IN COMPUTER AND COMMUNICATION ENGINEERING, VOLUME 3, ISSUE 11, NOVEMBER 2015.