

Android Application for Orphanage Management using Data Mining Techniques

Dr.K.Kasturi

Assistant Professor, Department of I.T,
kasturi.scs@velsuniv.ac.in,
VISTAS, Chennai, Tamil Nadu.

M.Nisha

PG Student, Department of I.T,
manikantnisha23@gmail.com,
VISTAS, Chennai, Tamil Nadu

ABSTRACT

A protocol, which creates so many difficulties and needless delays for the applicants, has to go through a long process of many social structures. Information management has the benefit of reducing the inconvenience involved in these processes. The ability to reduce the barriers and hassles associated with the adoption procedure has been shown. The aim of this paper is to support orphans in different orphanages by people who wish to contribute children and adopt children online through our android application. The proposed research work intends to shorten the time needed to find a suitable kid. Instead of seeking a suitable orphan manually, data mining methods are deployed on a centralized data repository in which substantially decreases the amount of time involved in the adoption process. Rather of identifying a suitable orphan manually, the data mining classification can be applied on centralized data repository to reduce the time involved considerably in finding a suitable child for an Adaptive Parent. The proposed android application is beneficial for both the orphans and the adopters.

Keywords:Orphanage, Android Application, Data Mining, PAP, SVM Classifier,Prediction.

1. INTRODUCTION

Nowadays smartphones have become essential personal devices to support our activities in virtually every area of our lives. The enormous developments of smartphone technology, platforms and individual developers, countless mobile applications have been developed to serve a wide variety of uses, making our everyday life a productive one[1][2]. This paper focuses on proposing an mobile applicationfor orphanage management which could be a better option for the Prospective Adaptive Parent(PAP) and the orphanages[3].Not only does this android application participate in the process of adopting the orphans and providing shelter, it also impels their lives by contributing food, clothing and money. With that as well, the users are given several possibilities to support the children. The users are instructed to login in and use their contact number for specific authentication and avoid confusion.Practically many of the parents come forward to adopt the kids, but they are not redirected to

the right way of adopting these kids. By statistical analysis suitable parents can be identified for the orphans[5]. Mostly Data mining classifiers like Naïve Bayes, SVM has been implemented in most of the datasets for classification prediction [6][7][8] .

2. EXISTING SYSTEM

In the existing system method of adoption & donation, the donors have experienced much manual process. The PAP need to register with an approved entity. “Home study and the child , Filling of the petition, acceptance of the child Pre-adoption foster care, referral of the child, Court hearing, Court order , Follow up and so..on” [9][10][11]. Major disadvantage of the procedure is that the selection for the adopter is inadequate. The delay of adoption increases and it is time-consuming. Since such a prolonged process, numerous eager parents also will drop their interest in adopting.

3. PROPOSED SYSTEM

The main aim of the paper is to remove the drawback of the existing applications so as to help the orphan management to the full extent. For this, an android application has been proposed.

Software Requirements:

- FRONT END: Java
- BACK END: MySQL
- SERVER: PHP
- VERSION: JDK8
- PLATFORM: WINDOWS 10
- IDE: ANDROID STUDIO 3.5.2
- SQL TOOL: PHPMyAdmin

For data mining classification technique the algorithm ‘Support Vector Machine’ Classifier has been applied for the orphanage dataset for predicting the best match of the ‘PAP-Child’ pairs.

3.1 SYSTEM DESCRIPTION

The First step of the application is the login and it can be done in many ways such as user login, donor login and the admin login. The admin login is specific to the orphanage.

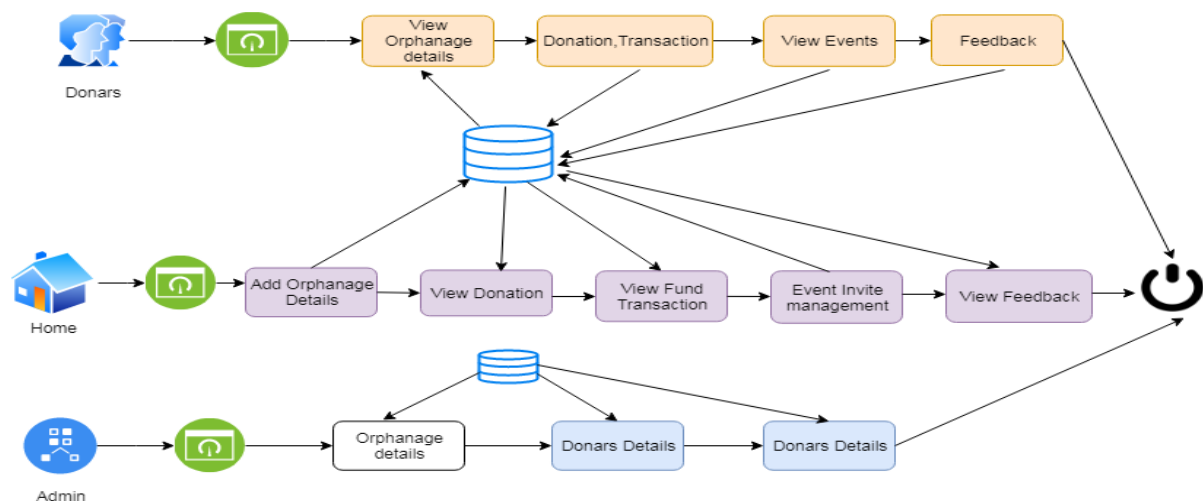


Fig 1: System Architecture

In the case of donor login, they will be having three options; they are donation, adoption and orphanage details. By selecting the particular category they can reach their required page.

In the donation category, they can donate food, clothes, and money to the particular orphanage they wish. In the adoption category, they will get a list of orphans and their details of different orphanages. And if there is any shortage of food, cloth or money they can give a notification to the registered user's phone numbers. Each person who login into the application has to undergo authentication with their phone number and they will become a member of this application and they will be given a unique ID which reduces chaos.

Once admin puts a notification message and it is displayed as a message to the donor side. Often connected with this then the list of orphanages area wise and their bank information have been given. Information about the child and where they belong are given. On the registration page, the users should fill the registration form by giving their name, phone number, email_ID, and password. The admin of the orphanage will have a separate registration form and they should fill it by giving the orphanage name, phone number, address, email_ID, bank details, strength, and proof.

3.2 SYSTEM DESIGN

The UML diagram shows the design of the system. The Use-Case diagram is depicting the interaction between the Administrator, Donors, Orphanages and the software.



Fig 2: Use-Case Diagram

This diagram shows the sequence of processes that are involved in the orphanages and the donors. The process of donor includes viewing the orphanage details, Donating to orphanages, fund transacting, adopting children and giving feedback.

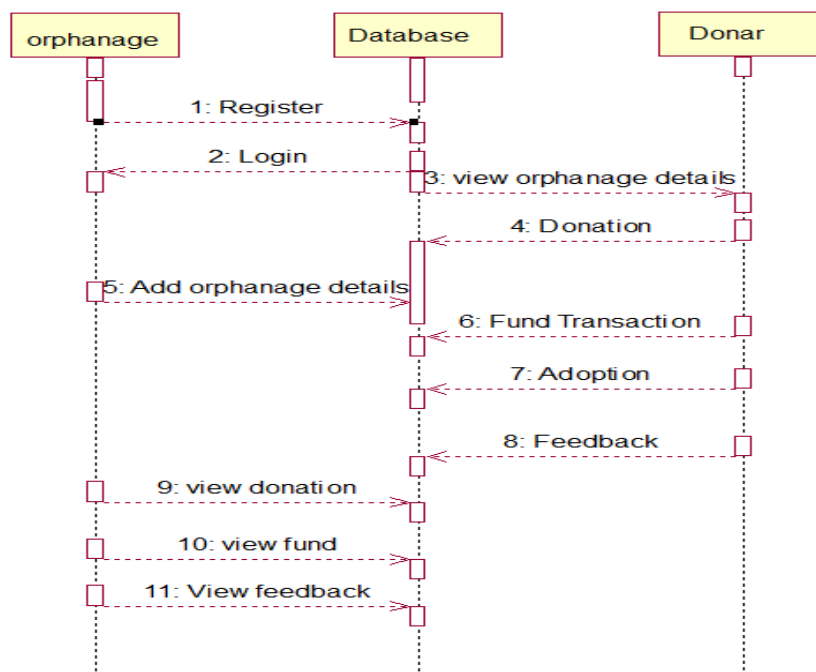
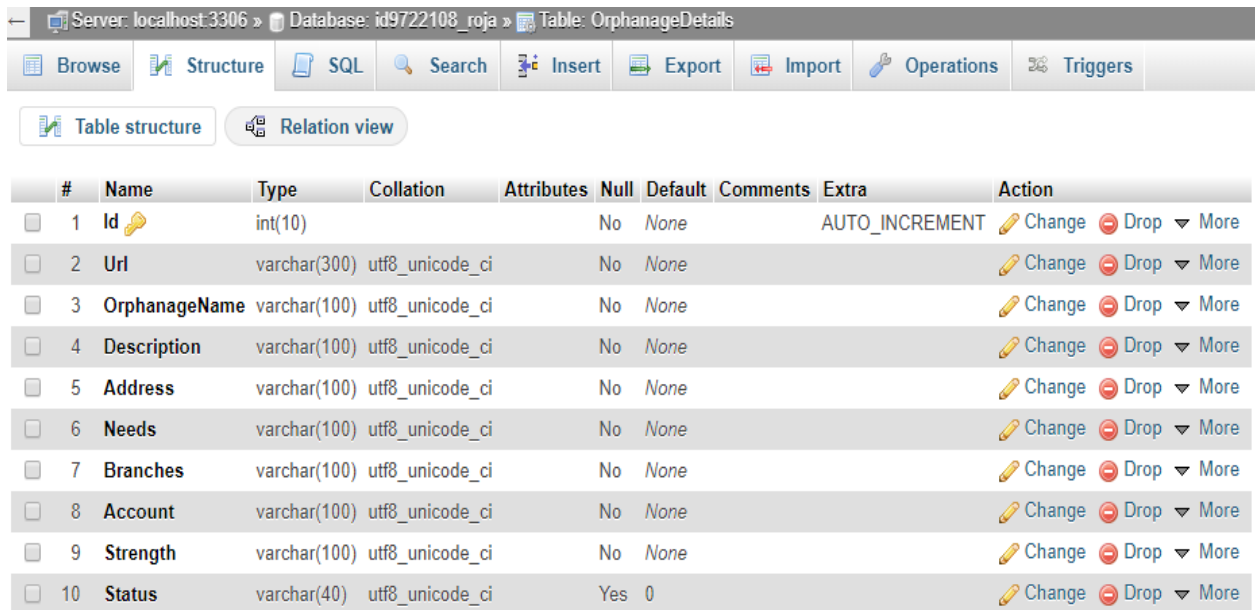


Fig 3: Sequence Diagram

4. SYSTEM IMPLEMENTATION



#	Name	Type	Collation	Attributes	Null	Default	Comments	Extra	Action
☐ 1	Id	int(10)			No	None		AUTO_INCREMENT	Change Drop More
☐ 2	Url	varchar(300)	utf8_unicode_ci		No	None			Change Drop More
☐ 3	OrphanageName	varchar(100)	utf8_unicode_ci		No	None			Change Drop More
☐ 4	Description	varchar(100)	utf8_unicode_ci		No	None			Change Drop More
☐ 5	Address	varchar(100)	utf8_unicode_ci		No	None			Change Drop More
☐ 6	Needs	varchar(100)	utf8_unicode_ci		No	None			Change Drop More
☐ 7	Branches	varchar(100)	utf8_unicode_ci		No	None			Change Drop More
☐ 8	Account	varchar(100)	utf8_unicode_ci		No	None			Change Drop More
☐ 9	Strength	varchar(100)	utf8_unicode_ci		No	None			Change Drop More
☐ 10	Status	varchar(40)	utf8_unicode_ci		Yes	0			Change Drop More

Table 1: Orphanage Details

The Fig 4 shows the sample screenshots of admin login ,donor login and the need of food from Guindy orphanage for 12 children.

4.1 DATA MINING PREDICTION

From the orphan database the matching of the child record and the parent record is done based on the prediction technique of data mining. Here the Support Vector Machine classification algorithm has been applied explicitly for the proposed research work. The algorithm is responsible for determining the retrospective significance of the outcomes and decides whether the outcomes are desirable or not, thereby encouraging the Adaptive Parent to refine their expectations to obtain more desirable outcomes that makes them to select the orphan as their child.

This algorithm operates on real time and as its training set uses the entire Orphan Dataset. The SVM Classifier is chosen as the basis for the algorithm because of the above stated purpose. SVM is well known for its ease of training and can easily adjust to the size of the dataset. The algorithm's inputs include one main parameter (match) around which the

algorithm conducts its analysis and two secondary parameters which make the search more precise and efficient (age group, sex).

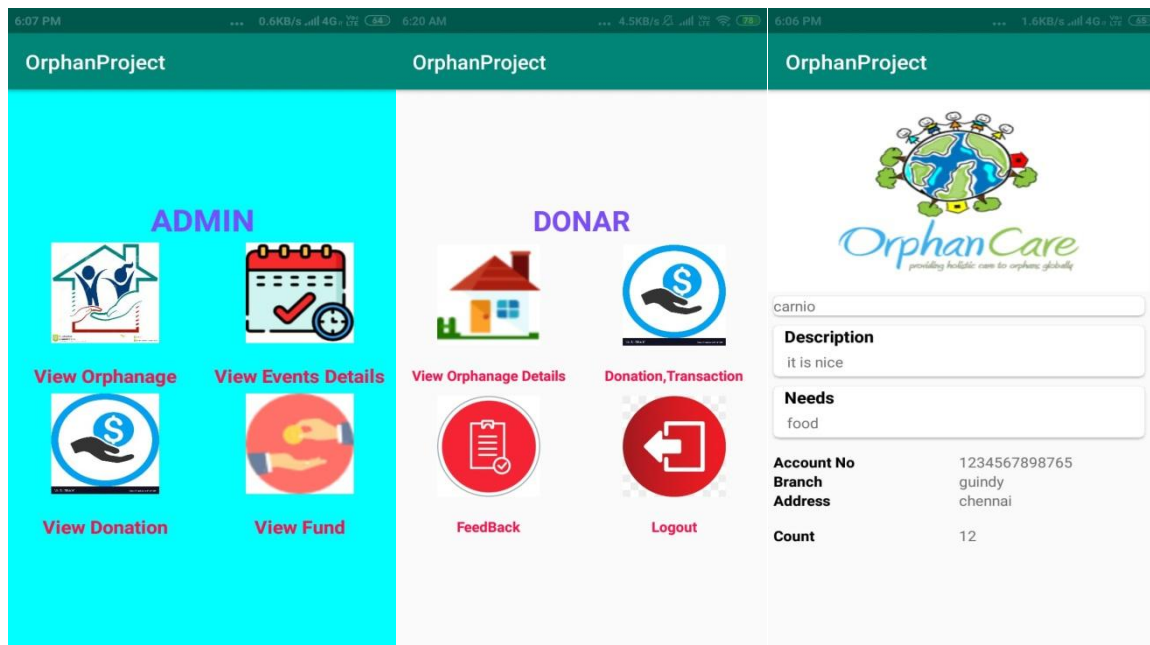


Fig 4: Screenshots

5. CONCLUSION

The implemented application would help in donating food, clothes and funds to the orphanages and it also features without much searching in adopting the children from the orphanages. The orphanage authorities must post a detailed overview of the orphans for adoption facilities and when someone needs to adopt the child they can go through the app and select the best suitable child based on their preferences from the orphanage and the best prediction is detected from the data mining SVM classification technique which makes the adoption process faster.

REFERENCES:

- [1] Jackson, W. (2013). *Learn Android App Development*. Apress.
- [2] Nixon, R. (2014). *Learning PHP, MySQL & JavaScript: With jQuery, CSS & HTML5*. " O'Reilly Media, Inc."

- [3]Joorabchi, M. E., Mesbah, A., & Kruchten, P. (2013, October). Real challenges in mobile app development.In *2013 ACM/IEEE International Symposium on Empirical Software Engineering and Measurement* (pp. 15-24).IEEE.
- [4]SreckoNatek, MotiZwilling (2014) “Student data mining solution–knowledge management system related to higher education institutions” *Expert Systems and its Applications* Vol. 41(14), pp 6400-6407.
- [5]Naren, J., Nikilav, P. V., Kate, A. V., & Mohan, A. (2015). Deduction of orphans and suitable parent candidates using Statistical Modelling. *International Journal of Applied Engineering Research*, 10(22), 42846-42850.
- [6]Kasturi K, Prasanna S. (2018). Implications of Asthma over Gastro Esophageal Reflux Symptoms Using Regression Analysis.*Journal of Advanced Research in Dynamical and Control Systems*.2018[Special Issue]; 11:1066-1072.
- [7]Kasturi, K., & Prasanna, S. (2019). A Hybrid Ensemble Classification Approach to Determine the Impact of Asthma in Association with Gastro Esophageal Reflux Symptoms. *Indian Journal of Public Health Research & Development*, 10(2), 191-196.
- [8]Kasturi, K., & Prasanna, S. (2016). Data Mining Approach of Classification for Managing Asthma in Children. *International Journal of Emerging Technologies in Engineering Research (IJETER)*, 4(7), 2454-6410.
- [9]www.adoptionindia.nic.in/Resources/Adoption-Statistics.html.
- [10]<http://adoptionindia.nic.in/guideline-family/Overview.html>
- [11]<http://adoptionindia.nic.in/guideline-family/Adoption%20Procedure.html>