

# Generation of Donor List from Internet Based Shopping Using Machine Learning Approach

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**Abstract**— The present research relates to a method for providing online donation services comprises the steps of requesting identification details from a customer for fetching ordered history data from shopping platform. This study analyzing ordered time period of products in the data to prompt the donator to select one or more product, storing details of the selected product and verifying the products in accordance to several parameters. For this purpose registering one or more charity organization securely to present details of the product and prompting the organization to select product, allotting a delivery customer for pickup and delivery service of the selected product to the organization. This paper relates to a method for providing donation services that solves the problem of traveling to the charity organizations for donation purpose and also eliminating the need of door to door publicity for charity. This Android based app find the needy persons through registered organization based on their current GPS location and locate the donors as per availability with the help of machine learning approach.

**Keywords:** Google Maps, Donor, Organization, Android, Donator, History

## I. INTRODUCTION

According to an embodiment of the present invention, an online donation service providing method comprises the steps of, requesting identification details from a customer for fetching ordered history data from shopping platform used by that customer by the help of aforementioned details, analyzing ordered time period of products in the data to prompt the donator to select one or more product from the data, storing details of the selected product and verifying the products in accordance to several quality standards of the donation that are provided by the organization, registering that is collecting and verifying the authentication details as well as certificates of one or more charity organization securely to analyze details of the product and prompting the organization to shortlist said selected product as per the requirements, allotting a delivery customer for pickup and delivery service of the selected product, and transferring data along with image to the donating customer related to the donation upon completion of the service.

## II. BACKGROUND-LITERATURE REVIEW

Hvass, k *et al.* (2014) have proposed the reuse and recycling of garments from the fashion industry's perspective. The author has also provides multiple case studies the paper maps the emerging organizational field of post-retail responsibility of garments, describing how and why several fashion companies have engaged with reuse and recycling practices and which opportunities and challenges they face. Schetgen, L. *et al.* (2020) also proposed the value of Facebook data in predicting first-time donation behavior. More specifically, we provide evidence that Facebook data can be used as a valuable data source for nonprofit organizations in acquiring new donors.

## III. BACKGROUND OF THE APPROACH

The background work is based on a method for providing donation services that solves the problem of traveling to the charity organizations for donation and also eliminating the need of door to door publicity for charity.

Donation serves as a gift for charity, humanity and for the benefit of cause. There are various forms of giving and hence receiving donations wherein donations are given as relief funds, as essential goods and as non-essential products. As a part of relief funds, an amount of money is given to a specific person in need to a charity organization dealing to people with a cause. As a part of essential commodities, goods such as clothes, toys, food, vehicles and fruits are provided to the needy people as a whole by proving thereof to the charity organization taking care of them. Some other non-essential goods include beauty products for women, toys for kids and educational items for people of all ages. For fulfilling the aforementioned sake, various charity organizations have been set up globally that benefit people with different causes. These charity organizations are nonprofit organizations whose main objective is philanthropy as well as social well-being. The type and objectives of the charitable organizations vary from area to area and from country to country. Names

of some of the charitable organizations that are working at their best to fulfil the objective of their organization are GiveIndia, Save the children, noble nonprofits, Action against hunger, Charitable, spare change supply, East meets west, Dream center, Safe kids worldwide, smile charities and UNICEF. However, all the aforementioned charity organizations tackle to serve their purpose offline. They mostly go door to door or visit areas of interest in order to accomplish their objective. Though our shopping platforms like various E-commerce platforms such as Amazon, Flipkart, Myntra have completely automated the process of online shopping, this comfortable way of doing things online at home has not been achieved while giving donations to charity organizations. Conventionally, though some of the aforementioned charity organizations provide a way of giving online donations but they do not provide a platform that assists them in navigating from the history section of their online bought essential/non-essential goods and serve them as a donation to the charity organizations.

This charity based contribution system facilitates individuals to provide interface for donation services for organizations. A central database is available for all types of donation activities which contributes towards empowerment to weak societies in the political marketplace. By providing civic information to the citizens through a central location by a system called "Civic Marketplace". The main benefit is provided to the registered users which can help them for the safety problems. A method and apparatus for increasing charitable donations by providing instantaneous donor recognition wherein Charitable donations are increased by automatically providing immediate on-line recognition of on-line donors.

The donors list is maintained in online webpage portal that includes the name of the donor and some additional details about them. The filter can be applied to the publishes and unpublished contents available on the web. The proper sorting arrangements on the donor list can be managed by the size of the donation where donor can also compete for position on the list. A systematic approach by providing a healthcare charity expenses communication network in which a third party software and computing system can track all the records such as payment system etc. To indicate the membership of the group, the people can be motivated to donate as a group members.

The following steps are required for profile verification on online web portal.

1. Online consumer profile verification includes financial and personal data for a potential donor.

2. A healthcare expense donation networks with all records of the patient and provider need to be updated.
3. All verified records must be made available to potential donor by providing ability to make secure transaction of the donation for the patient expenses.
4. The data is acknowledged by the organization that makes the customers 100% assured of the fact that the product have reached the destined address and is safe there for the needful people. Moreover, the acknowledgement from the organization itself represent as a note of thanks for the customers who have contributed their products as a donation for needy sections of the society.

Several works have been done to promote and ease down the system of giving donations but most of these works focus on improvising the way in which the donations are given by the charity organizations. New and improved ways of receiving and supplying the donations have been implemented but no such work has yet been implemented that collaborates online E-commerce platforms with the charity organizations in order to boost up the donation system through indirect ways. In order to overcome the aforementioned drawbacks, there exists a need to propose an online donation providing method that allows interested customers to donate by just landing on the history section of the E-commerce platforms on which they have already registered, and donating their already bought products any time in the future, thereby providing a trustworthy and rewarding (by providing reward points) way of giving donations that also promotes the branding of the 5 charitable organizations and the E-commerce platforms linked thereof.

### III. METHODOLOGY AND DETAILED WORKING

#### *Entities Description*

The main objective of this research is to overcome the limitations of prior art by inventing the new approach to donate.

#### *Process Steps*

Open the mobile app such as Amazon, Flipkart, Swiggy, Uber Eats, Zomato, Myntra. Open the order history and search for various items from previous order which can be used for donation purpose. The user can have the option to donate any product from order history at any time. This donated product data will be linked with proposed app where charitable organization can request for desired items for donation purpose after registration on the app. Order history data can be shared by using the API and when customer go to mobile app for donation then API of that product will link with proposed app. Charitable societies can register them as per license and can generate the request for product, food and ride according to needy people. After when charitable societies receive the products, clothes and items, then they

can distribute to needy person and share their photograph and story on app. AI approach can be used to make it more intelligent when products in the order history get longer then automatically it will send notification in app to donate and If same items is going to shop by same buyer then Machine learning approach can ask the buyer for the donation of previous item if it is not in use .

**A. Architecture**

The basic structure of the application is to comprised of various activities from user module system and Admin module system.

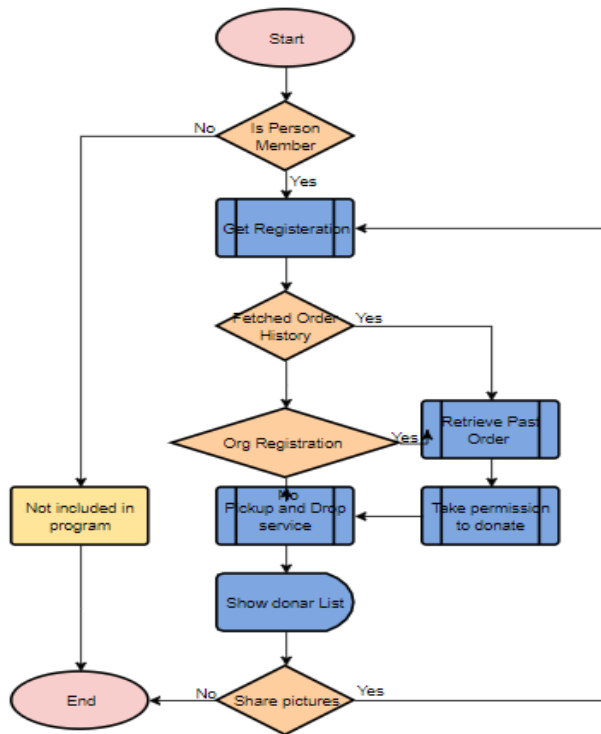


Fig. 1: Flowchart with Login

**B. Google Maps Interface and Places API Google APIs**

A method with API (Application Programming Interfaces) for providing donation services comprises the steps of: a. requesting identification details from a first user for fetching ordered history data from shopping platform used by said first user with the help of said details; b. analysing ordered time period of products in said data to prompt said first user to select one or more product from said data according to said time period for donation[2]; c. storing details of said selected product and verifying said products as per the quality standards of

said donation services; d. registering one or more charity organization securely to analyse details of said product and prompting said organization to shortlist said selected products as per requirements[3]; e. allotting a second user for pickup and delivery service of said selected product from location of said first user to location of said organization thereby eliminating the urge to travel to said organization for said donation; transferring data along with image to said first user related to said donation upon completion of said service, wherein said data and image are provided by said organization; and g. providing a set of reward points to said first user on the basis of said product donated to said organization for encouraging said user thereby increasing the donations.

**C. Implementation of K-NN algorithm**

The K-nearest method is often used to locate the best donor among the available sources by using the classification method. The primarily used method is K-NN which is used for classifying the donors on various locations. For recognised the pattern, K nearest neighbour algorithm(K-NN) which is used for classification and regression purpose. Here, the input consist of K nearest dataset is used and the output depends on which method will be better for classification and regression. Start with classification approach where object is classified by its neighbors, when k= 1, simply the object is assigned to the class of that single nearest neighbor. Basically, three most commonly used distance measuring methodology is used for calculate the distance between point P and its nearest neighbors are represented as below.

**Distance functions**

Euclidean  $\sqrt{\sum_{i=1}^k (x_i - y_i)^2}$

Manhattan  $\sum_{i=1}^k |x_i - y_i|$

Minkowski  $\left( \sum_{i=1}^k (|x_i - y_i|^q) \right)^{1/q}$

Euclidean distance is the most commonly used distance method for the simplifying the distance. Moreover, This approach is highly recommended for best proximity measure for providing the distance between the two points.

### 1. Algorithm to compute K-NN algorithm:

1. Determine parameter K= number of nearest neighbours.
2. Calculate the distance between the query-instance and all the training samples.
3. Sort the distance and determine nearest neighbours based on the K-th minimum distance.
4. Gather the category of the nearest neighbours.
5. Use a simple majority of the category of nearest neighbours as the prediction value of the query.

### IV. CONCLUSIONS

The motivation behind this E-Donation application is to improve the communication with the people indeed of cloths and other branded items and the person and charity organization who have registered them selves witg app The Location based E-Dpnate applications will reduce the communication gap between the donor and charity organization and get into touch with the people with best match .So the research paper objective is to build online app based donation where people are free to donate and needy person get benefited from the same.

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