DATA DRIVEN SMART CLIENT

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ABSTRACT

When a company employs a "data-driven" approach, it means it makes strategic decisions based on data analysis and interpretation. This approach allows companies/industries to examine and organize their data with the objective of improvisation in serving their customers and consumers. By using data with the purpose to drive its actions, an organization can contextualize and/or personalize its feature of sending SMS to its clients and customers to achieve more customer centric approach. The use of machine learning is becoming the most used technology in day to day life. By using this technology, we are implementing data driven smart client. By using this we can recommend and guide customers while shopping in malls. By using machine learning we can know the customers last shopping experience and through the data received we can recommend them the perfect store. By doing this the customer can have a smart shopping experience which will help them save money and time. Hence, saving all the data of customers and analyzing it. Machine learning (ML) is the study of computer algorithms that improve automatically through experience. It is seen as a subset of artificial intelligence. Machine learning algorithms is used to create a model based on the data acquired from the sample, it is called as "training data", to make either predictions or decisions without programmed to do so. Machine learning algorithms are used in various types of applications like email filtering and computer vision, where it is found difficult to create conventional algorithms needed to perform the tasks.

I. INTRODUCTION

One of the major multinational technology company Amazon combines its customer centric approach with Data Driven decision making to create and capture value in victorious cycle involving increasing customers and transactions in order to create more data that'll be used for further improvements and will attract more customers.

Amazon also manages a marketplace platform that leverages extensive amount of customer data generated using customer service interaction like ALEXA and ECHO.

ML technology is used in Amazon by its product recommendation team which helps to improve the product forecasts, and those insights are then shared with the company. ALEXA and Amazon Recommendation Engine are the popular Machine Learning Powers.

Google : Data driven Attribution.

On various websites on google there many advertisements present like in forms of surveys, Data driven attribution gives credit for the interaction between the people and the various ads of yours based on which people will decide to become your customers. You can use data-driven attribution for websites, online stores, and from Search Network Campaigns.

II. METHODOLOGY

- Saving the customers experience of shopping helps them to recommend shops useful for them.
- When customer will go for shopping, he will give his preferences.
- From the given preferences the system will recommend the shops to the customers.
- When the customer is done shopping, system will analyze where the customer has been, what shopping he has done and from that data, the system will recommend shops when the customer has to visit next time.
- Machine learning will be used to analyzing the data and python will be used for coding.
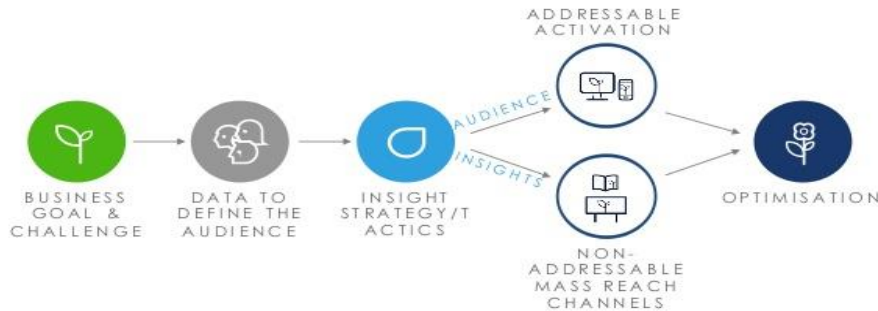
Fig 1: Data driven approach.

III.   BLOCK DIAGRAM AND FLOW CHART

Fig 2 is the block diagram of the project in which the diagram is divided into three parts which are smart user (Customer), machine learning and smart user (Store).

In Smart user (Customer) data of customer is received to analyse and recommend him store.

In Smart user (Store) data of store is stored which will be used to recommend customers. In machine learning received data from both the ends are analysed for recommending the customer.
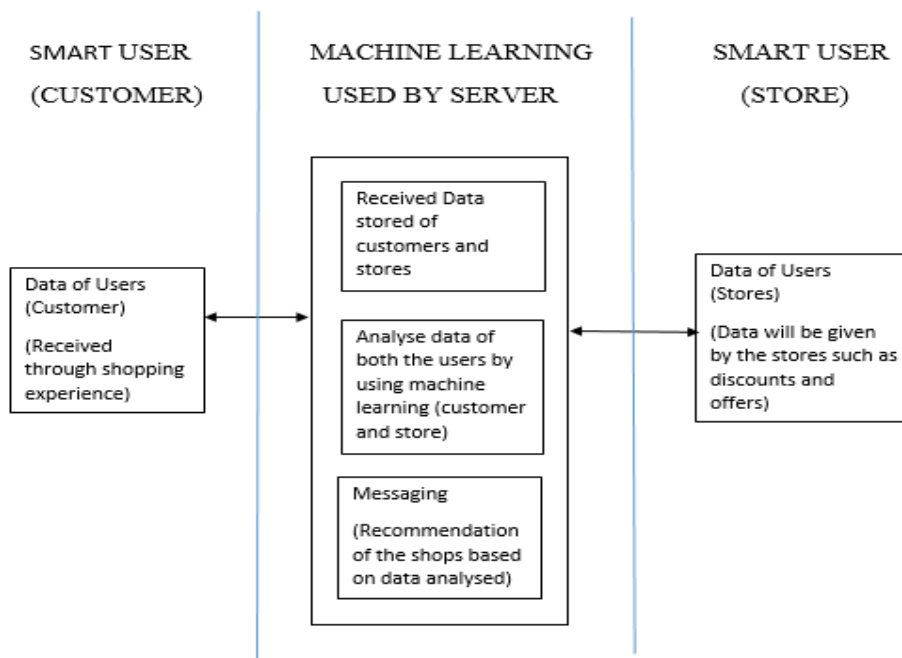

Fig 2: Block diagram

As seen in fig 3, first we collect the data from the customer's bill. After collecting the data as much as possible, the data will be analyzed and through that offers which are available in stores near them will be sent. The offers which will be sent are according to their shopping experience.
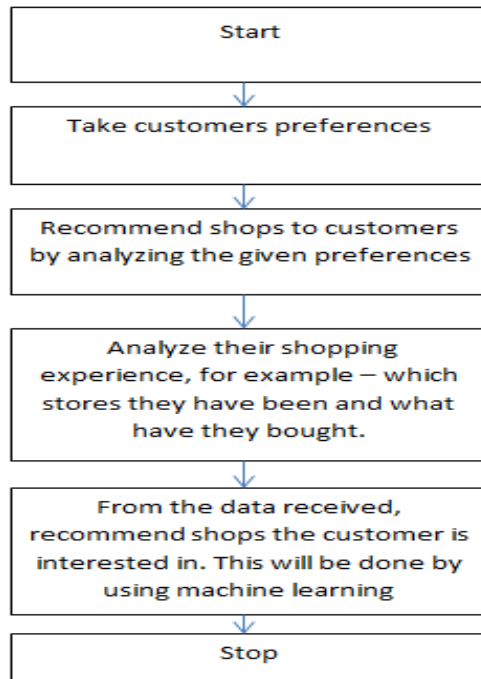
Fig 3: Flow chart
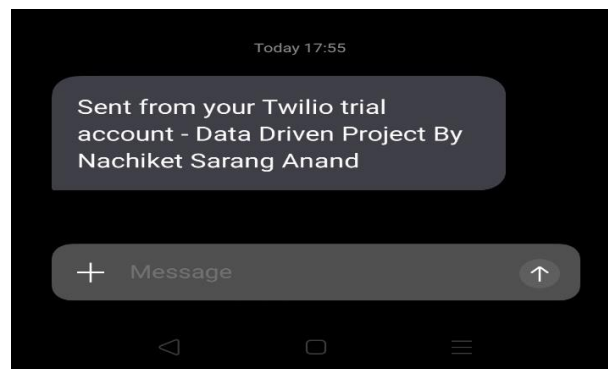
IV.   RESULTS

Fig 4: Twilio message

In the above result Twilio is used to send message to the customer. In the current image the message has been sent from a trail account.

Fig 5: End result

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----------------Training Data---------------------
[(['cricket'], 'sports'), (['bat'], 'sports'), (['ball'], 'sports'), (['stumps']
, 'sports'), (['rice'], 'grosary'), (['wheat'], 'grosary'), (['sugar'], 'grosary
'), (['jowar'], 'grosary'), (['salt'], 'grosary'), (['shirt'], 'clothing'), (['p
ant'], 'clothing'), (['t-shirt'], 'clothing'), (['cap'], 'clothing'), (['methi']
, 'vegetables'), (['bean'], 'vegetables'), (['green', 'pea'], 'vegetables'), (['
palak'], 'vegetables'), (['dhaniya'], 'vegetables'), (['palak'], 'vegetables')]
------------------------------All Words--------------------------
['cricket', 'bat', 'ball', 'stumps', 'rice', 'wheat', 'sugar', 'jowar', 'salt',
'shirt', 'pant', 't-shirt', 'cap', 'methi', 'bean', 'green', 'pea', 'palak', 'dh
aniya', 'palak']
-------------------------------Word Features--------------------------------------
-
dict_keys(['cricket', 'bat', 'ball', 'stumps', 'rice', 'wheat', 'sugar', 'jowar'
, 'salt', 'shirt', 'pant', 't-shirt', 'cap', 'methi', 'bean', 'green', 'pea', 'p
alak', 'dhaniya'])
>>>
```

Fig 6: Data-set

We have created our own dataset. In the above image various items can be seen. The dataset required as it will help to categorize. User's bill will have various types of things which will be in different types of categories. Therefore dataset will help to decide which item belongs in which category and after knowing that, user's preferences would be recognized.

V.   CONCLUSION

This project will help customers mostly in Grocery/Commercial Mall's by recommending them products as per their need or behaviour, to connect customer to shop using Smart System and guide them while shopping. It aims to solve the problems faced by the customer's like waiting in line, and not able to find their required product with good discounts. The system collects Customers data like what they shop, eat, etc. and then recommend them products as per their data collected.. The deployment of this project will be in local grocery stores and commercial mall.This project will help to connect customer to shop using Smart System and guide them while shopping

VI.   REFERENCES

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