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## Life invader E-commerce hub

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### ABSTRACT

*E-commerce stands for Electronic Commerce is the activity of buying or selling products over the Internet which allows customers to overcome geographical barriers and allows them to purchase products anytime and from anywhere. Many customers prefer online markets if the products can be delivered quickly at a relatively low price. Problems faced by local retailers include logistics, understanding the customer behavior, ever-increasing demands of the customer and adoption of technology. This project will be useful for all those shopkeepers who sell their products offline and will help them to connect to the customers and show the quality of their service and the products they sell. This will save time for the customers and increase the sales rate for retailers. The ANN Algorithm and Apriori Algorithm are used here for optimization and frequency detection of items respectively.*

**Keywords**— E-marketing, Retail industries, Consumer satisfaction, Customization

### 1. INTRODUCTION

E-commerce brings convenience for customers as they do not have to leave home and only need to browse website online, especially for buying the products which are not sold in nearby shops. It could help customers buy a wider range of products and save customers' time. Consumers also gain power through online shopping. Offline Merchants or shopkeepers face challenges since they have a low marketing budget, plus their target is always in the vicinity - those customers who are in the drive distance and drive time proximity. In short, it's difficult for an offline merchant to compete with eCommerce marketplace with virtual product catalogue, packed and home-delivered product with robust return policies. On top of it, most of these eCommerce players are heavily funded and they burn the marketing budget with Customer Acquisition cost to meet their GMV targets. Many shopkeepers do not know how to use the digital space for more productivity and to connect with the large number of customers. Through Life Invader the sales of shopkeeper will increase and time consumption of customer will be reduced. In our proposed system the shopkeepers and other

service providers provide documentation of availability of products or services they own. The customers give their requirements and the percentage of items they require upon which they will be redirected to their respective service providers displaying the map locations with optimal machine learning suggestions. The database stores the information about individual shops like the shop name, distance and geographic coordinates using the Google Maps API. The optimal result is based on the number of items found in the shop and the distance between the customer current location and the shop. This bridges the gap between the Customers and Offline Merchants by facilitating the latter to gain more productivity through digital space and also ease the former by finding the closest match shops which in turn saves money and time.

### 2. METHODS

This Project is conceived to establish business transaction link between Local Merchants and Customers. This is more appropriate in the current world of e-market where the digital transaction is the norm of the day. The idea became a hit in India after advancements in Digitalization from the year 2014.

Today's smart phones are widely used across all sections of society. We planned to introduce a portal to facilitate both the parties (seller and buyer) by incorporating Machine Learning techniques (Apriori and ANN Algorithm). Using this portal we ensured the consumer will save time and money by looking for the availability of his requirements sitting at his place. This also facilitated the shopkeeper (seller) to market his products beyond the boundaries of shops vicinity and thereby improving his business profitability. Those shopkeepers who didn't opt for a change in transaction modalities, in the beginning, felt left behind. An opportunity for them has been provided in the portal by registering themselves. We surveyed several stores and identified the limitations of the stores in expanding their business/improving the profitability even after having the required resources.

To explain further the Consumer will be given a template where he can add the items required to be purchased after login. Our Modified ANN Algorithm starts processing and identifies the

nearest shops and the availability of required items at that particular store. An Optimal solution is provided to the Customer through a list of shops where he can buy the required items. Along with the Customer, the shopkeeper will also get forehand in marketing on the online platform which improves his sales and profitability. The advancement in business through the projects Market Basket Analysis helps the retailers to identify the relationship between the items that people buy to improve the effectiveness of marketing and sales tactics using the customer data collected during sales transactions.

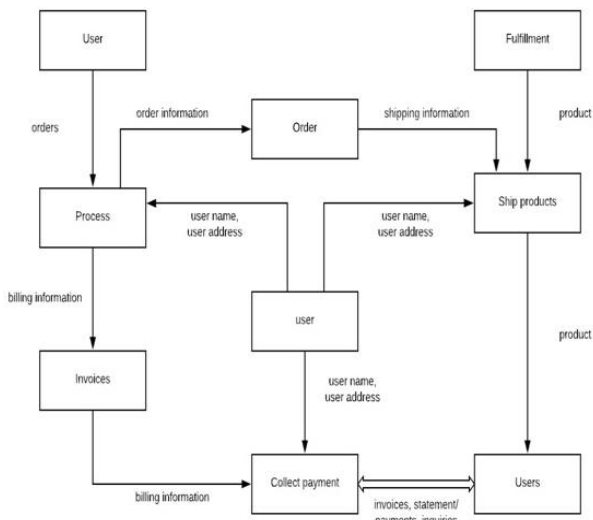


Fig. 1: Business transaction flow chart

### 3. SYSTEM ARCHITECTURE

In the proposed method the Stock Entry lets to document the movement of items from a Warehouse, to a Warehouse and between Warehouses. It is recorded for several purposes like a material issue, Receipt, Transfer, Manufacture, Repack and Subcontract. As part of the Brokerage System, specific commodities in the Warehouse are assigned to a particular agent for which they are to manage the trading. The Broker or the agent gets the stock details, quotes prices and matches and execute the order. If the distance and the number of items meets the Customer requirement then the order will be placed by the Customer else he will wait until he is satisfied with the result. Once the order is placed the shopkeeper will be notified. After which he packs the items which can be delivered to the home by the shopkeeper or the Customer can pick up the order from Shop.

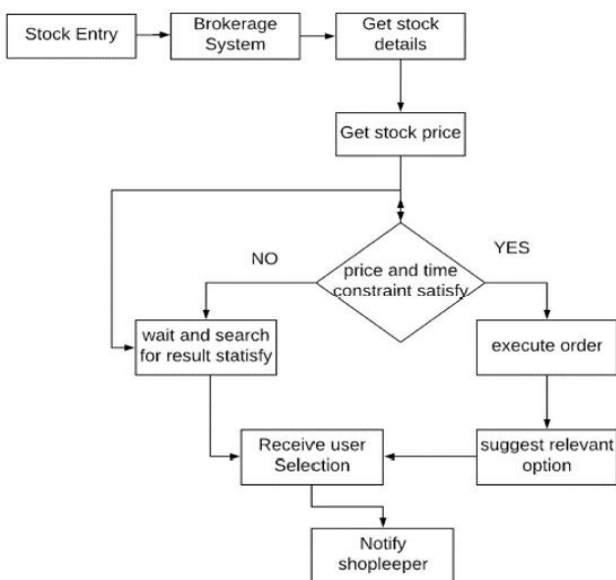


Fig. 2: System architecture

### 4. EXPERIMENTAL RESULT

The project as well as the application of the proposed Life Invader E-Commerce Hub with Machine Learning and Web approach is done successfully. Tested fully developed a system to demonstrate its feasibility and effectiveness. The system locates the product quicker by directing the customer to the nearest shop using the latitude and longitude values through Google API's. The screenshots of the proposed system developed has been presented.

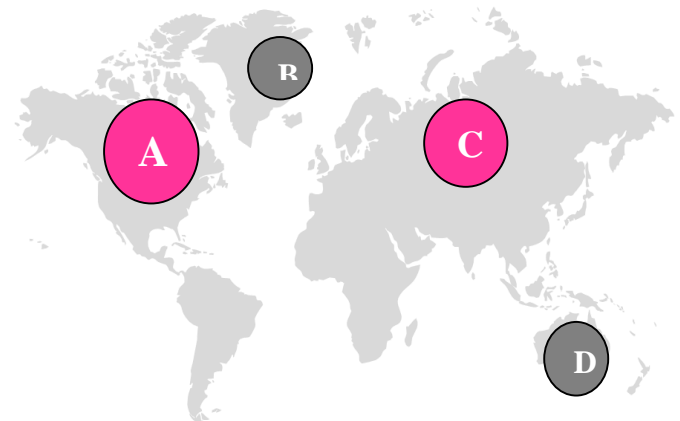


Fig. 3: Results

### 5. CONCLUSION AND FUTURE SCOPE

An implementation of detecting underlying patterns of shopping from the different retail store using Deep Learning has been implemented in this paper. Additionally, some of the most widely used Machine Learning algorithms i.e. ANN and Apriori algorithm have been trained and tested on the same data to draw a comparison as to why we require deep learning methods in critical applications like detecting underlying patterns of shopping. Our Life Invader web app is a portal having several web pages containing different functionalities. Through this app we can overcome the Geographical Limitations because a physical store is only bounded by the area it can service. With the advent of Life Invader, even these local Merchants products are displayed in the digital space which increases their productivity and they are connected to a large number of Customers. One of the most tactile positives of Life Invader is the Lower Cost.

- Advertising and promotions on these Digital World has increased the chances of success of generating transactions to many folds.
- The advent of mobile devices has energized the Internet with mobility. It is now available to the consumer wherever and whenever required.
- It is sufficiently geared to provide customers with secured transaction processing, thereby helping to establish their popularity.

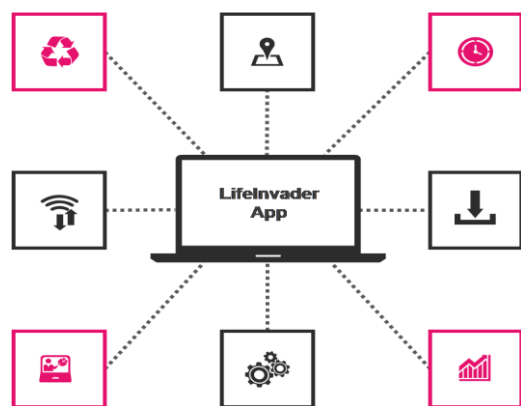


Fig. 4: Life Invader app

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