LOGISTIC VEHICLE TRANSFORMATION SYSTEM USING ADVANCED TECHNOLOGY

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Abstract : The Logistic management system have risen as of late with the improvement of Global Positioning System (GPS), portable correspondence advancements, sensor and remote systems administration innovations. The logistics management system are vital as they can add to a few advantages, for example, proposing right places for getting clients, expanding income of truck drivers, diminishing holding up time, car influxes and in addition limiting fuel utilization and henceforth expanding the quantity of treks the drivers can perform. The principle motivation behind this framework would supply required vehicles that would be utilized to meet client requests through the arranging, control and usage of the powerful development and capacity of related data and administrations from birthplace to goal. We need to give end to end security to client and supplier information by utilizing QR code idea. We are suggestion of closest best specialist organization as indicated by client intrigue and identify spam specialist co-op. Coordination's administration alludes to the duty and administration of plan and direct frameworks to control the development and land situating of crude materials, work-in-process, and completed inventories at the most minimal aggregate expense. Collaborations incorporates the organization of demand planning, stock, transportation, and the mix of warehousing, materials managing, and packaging, all joined all through an arrangement of workplaces.

Keywords- Logistic system, Vehicle routing, Request allocation, Intelligent transportation, QR Code

I. INTRODUCTION

To settle the issues of conventional movers and packers frameworks, an electronic arrangement has been suggested that will permit both the clients and the specialist organizations to track the vehicles while transportation and furthermore gives best administrations to the clients at most minimal expense by prescribing just accessible specialist organizations at favored expense. In Logistic frameworks concentrated degree on open transportation administrations have been contemplated broadly. For the most part, these strategic administration frameworks can be partitioned generally into two classifications. The primary class demonstrating vehicles as indicated by the dynamic solicitations. The second classification indicating vehicles as per notable directions of the portability examples of clients utilizing GPS.

According to the logistical characters, logistics information management systems include modules such as system management, resources management, customer management, contract management, exceptional management, storage management, transaction management and invoicing management. Each subsystem has different functionality and the logistical information systems are the thread that links logistics activities into an integrated process. Logistical information systems initiate activities and track information regarding processes, and assist in decision making.

Each sub system has particular helpfulness and the determined information structures are the string that joins collaborations practices into a fused technique. The crucial principle of this system is proposition of vehicle as shown by provider advantage. Proposition is used to find customer interest and give related event. We are proposition of nearest best pro association as shown by customer interest and recognize spam authority centre. Customer Advice is a term which is used in the sense to energy mining. One can give direction for the issue or can simply give an answer. Direction , is apparently a supposition with course or control and even control.

II. RELATED WORK

J. Q. Yu and A. Y. S. Lam [1] "Autonomous vehicle logistic system" : Joint routing and charging strategy. Principle point of this framework to roll out the unavoidable improvements more substantial. Begin from the general agreement that the business is changing and go further to indicate and measure the extent of progress. Inside a more perplexing and expanded versatility industry scene, occupant players will be compelled to at the same time contend on different fronts and participate with organization. City compose will supplant nation or district as the most significant division measurement that decides versatility conduct.

R. A. Vasco and R. Morabito [2] "The dynamic vehicle allocation problem with application in trucking companies in Brazil": This paper manages the dynamic vehicle assignment issue (DVAP) in street transportation of full truckloads between terminals. The DVAP includes multi-period asset allotment and comprises of characterizing the developments of an armada of vehicles that vehicle products between terminals with a wide land circulation. The consequences of a useful approval of the model and arrangement strategies proposed, isn't plainly specified.

L. C. Coelho, J. Renaud and G. Laporte [3] "Road- based goods transportation" : This paper gives a review of the fundamental genuine utilizations of street based merchandise transportation over the previous 15 years. It audits papers in the territories of oil, gas and fuel transportation, retail, squander gathering and administration, mail and bundle conveyance and nourishment circulation. Take care of Integration of steering issues with different parts of the store network. Another promising zone of research is the reconciliation of vehicle directing with other transportation modes, for example, ships and prepares isn't say.

S. Erdo.gan and E. Miller-Hooks [4] "A green vehicle routing problem" : G-VRP techniques seek a set of vehicle tours that minimize total distance traveled to serve a set of customers while incorporating stops at AFSs in route plans so as to eliminate the risk of running out of fuel. Give information about tool to support institutions in reducing their carbon footprint given currently available vehicle technologies.

Alberta Awajan [5] "Automated Taxi Booking and Scheduling System": This proposed structure displays an Automated Taxi Booking and Scheduling System with safe booking. The system gives an invaluable, ensured and safe holding for the two taxi drivers and enrolled customers through PDAs. For more customers are the in the time are arrived then issues occurred, there are no taxi parkings, central working environments or a booking structure for the generous number of taxis.

Charles Tian, Yan Huang, Zhi Liu, Favyen Bastani [6] "Noah : A Dynamic Ridesharing System Conference Paper June 2014" : The system analyzer will show the system performance including average waiting time, average detour percentage, average response time, and average level of sharing.

III. MOTIVATION

The Transportation logistic systems have emerged recently with the development of Global Positioning System (GPS), mobile communication technologies and wireless networking technologies. These are very important as they can contribute to several benefits such as suggesting right places for getting customer, increasing revenue to drivers, reducing waiting time hence increasing the number of trips the drivers can perform. The main purpose of this system is to supply transportation vehicles that are used to meet customer demands through the planning, control and implementation of the effective movement and storage of related information and services from origin to destination and also maintain information of user in the form of QR code. The proposed system focuses on delivery of goods, raw materials, shifting home appliances, furniture while relocation.

IV. MATH MATICAL MODEL

Let us consider S as a system for automatically recommends vehicle to customer

S = {F, I, O, E}

- **INPUT:** Identify the inputs F= f1, f2, f3 .., FN. F as set of functions to execute commands.
- **I** = i1, i2, i3 Sets of inputs to the function set.
- **O** = o1, o2, o3 Set of outputs from the function sets.
- **E** = End of the program.

S1 = {I, F, O}

- I = Query submitted by the Customer, i.e. query.
- O= Output of desired query, i.e. vehicle recommendation.
- F = Functions implemented to get the output, i.e. collaborative filtering.

V. METHODOLOGY

In the existing system for logistic management system, customers need to search for providers and the required vehicles to make transportation successful. This leads to increase in waiting time for customer and also the customer is unable to trace out the current location of transported material. The primary concern in our framework is, we need to give end to end security to client and supplier information by utilizing QR code concept. In QR code parallel picture we need to shroud client and supplier information. Just approved client can see information. For customer interest mining we used collaborative filtering method. The fundamental rule of this strategy is suggestion of vehicle as per supplier benefit. Proposal is utilized to discover client intrigue and give related occasion. Client Advice is a term which is utilized in the sense to enthusiasm mining. One can give direction for the issue or can basically give an answer. Direction, is apparently a supposition with request or control and even control. Suggestion takes after, a customer energy opening about organization is used for new customer to use authority association vehicle. We need to give end to end security to client and supplier information by utilizing QR code idea. Detection of spam service provider and best service provider.

1. Euclidean distance:-

Euclidean distance is the straight-line distance between two points. Euclidean space becomes a metric space. This algorithm is used for finding optimal distance on map.

2. Stop-word-removal: -

A stop word removal is a search engine has been programmed to ignore, both when indexing entries for searching and when retrieving them as the result of a search query. This algorithm is used in search engine for Natural language processing.

3. QR Code: -

Quick Response Code is a type of 2D barcode that is used to provide easy access to information through a smart phone. It also provides security to the customers details.

4. Collaborative Filtering: -

This algorithm is used to filter the stored records according to user's request query.

VI. SYSTEM ARCHITECTURE

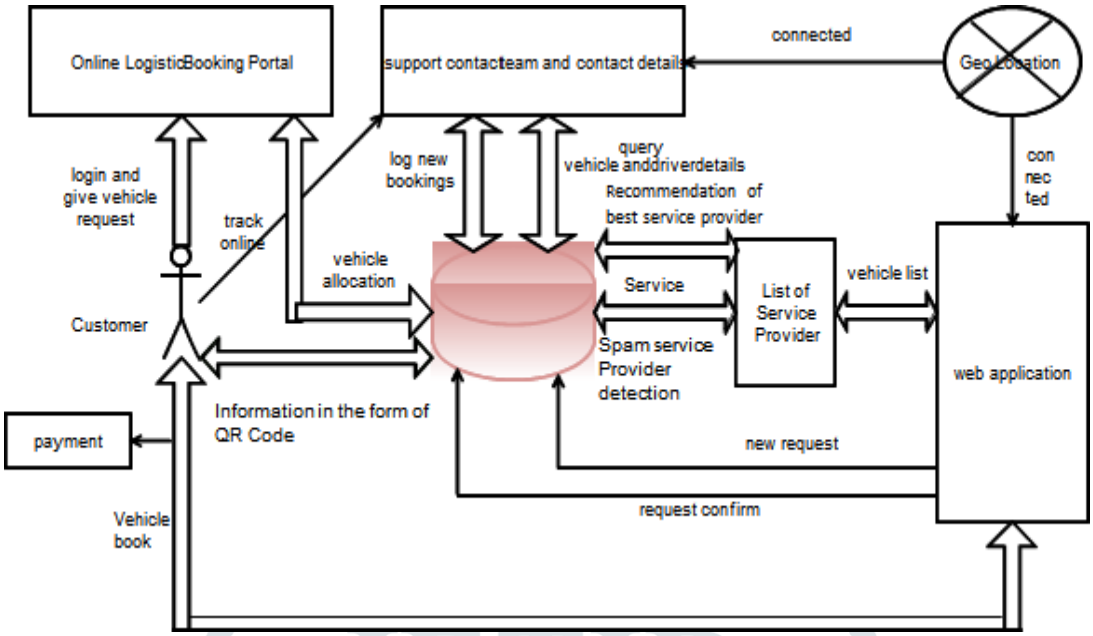

Fig.1 System Architecture

In the traditional system for movers and packers, customers need to search for providers and the required vehicles to make transportation successful. This leads to increase in waiting time for customer and also the customer is unable to trace out the current location of transported material. The main thing in our system is, we have to provide end to end security for customer and provider data by using QR code concept. In QR code binary image we have to hide customer and provider data. only authorized customer can view data. For customer interest mining we used collaborative filtering method. The main principle of this method is recommendation of vehicle according to provider service. Recommendation is used to find user interest and provide related event. Customer Advice is a term which is used in the sense to interest mining. One can give advice for the problem or can simply give a solution. Advice, seems to be an opinion with command or control and even manipulation. Suggestion is like, a customer interest opening about service is used for new user to use service provider vehicle. We have to provide end to end security for customer and provider data by using QR code concept.

VII. RESULTS AND DISCUSSION

System modules are as follows: -

- **Admin: -**

In this system admin have to provide authentication permission to provider and can view vehicle, customer, provider, Spam service provider detection as well as ranking of service provider.

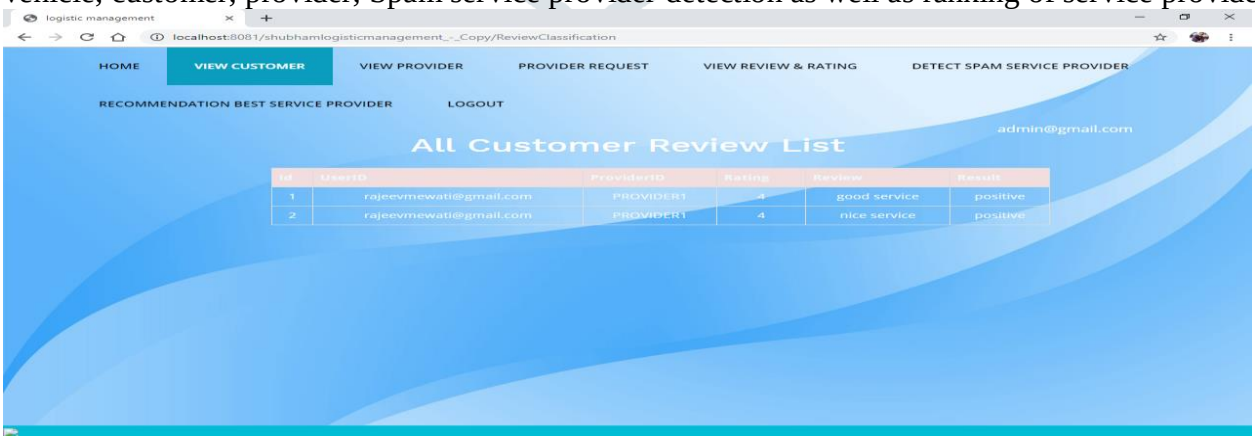

Fig 2: All Customers Review List

- **Service Provider: -**

In this system provider can add vehicle and driver, also view customer request and send notification to driver. Provider can view schedule vehicle as well as history.

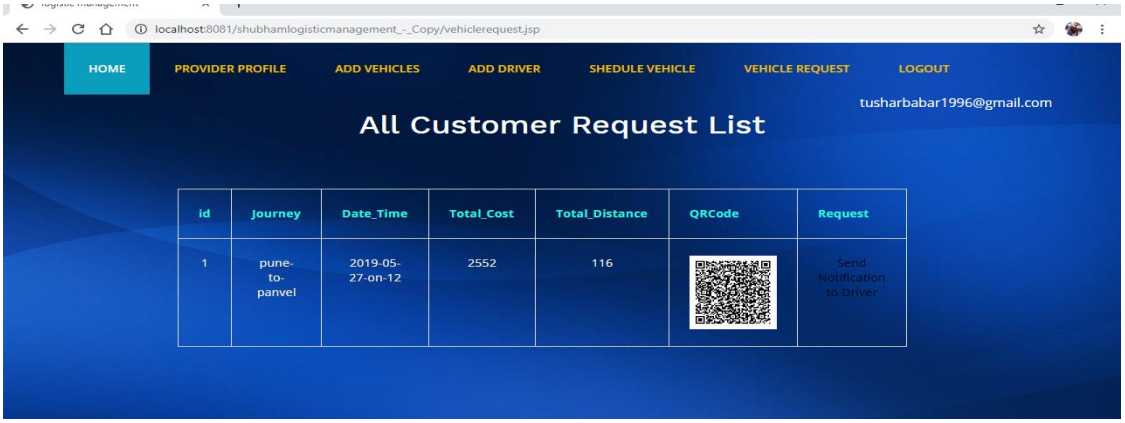

Fig 3: All Customer Request List

- **Customer: -**

In this system customer can view vehicle and search vehicle, customer can request vehicle and track vehicle on map, Payment to service provider. Customer can review on the system. View or send information in form of QR code.

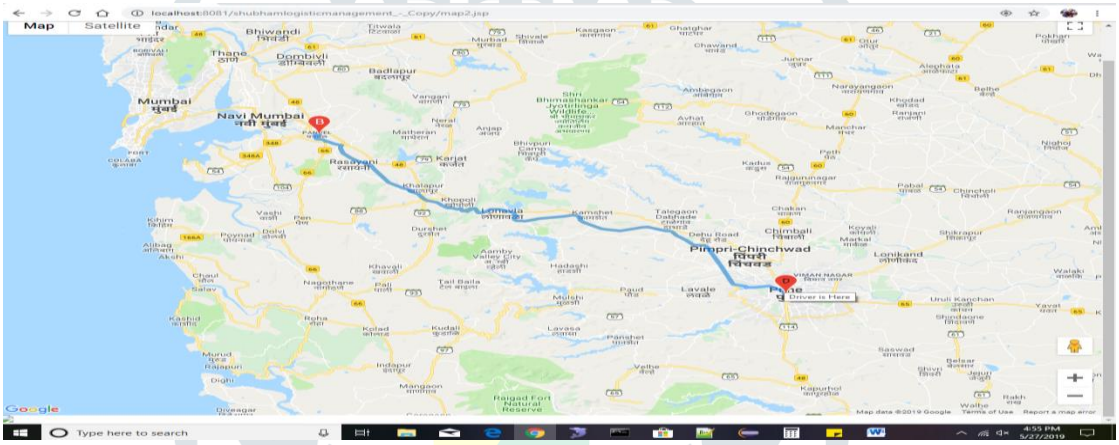

Fig 4: Customer Side Tracking

- **Driver: -**

In this system driver can view request as schedule the vehicle.

Fig 5: Driver Side Confirm request

In our experimental setup, as shown in table, total numbers of positive review was 10 and among negative review are 5 to service provider.

Table1. Number of Review

Sr. No	Category	Number of Review
1	Positive Review	10
2	Negative Review	5

VIII. CONCLUTION

The proposed framework comprises of specialist organization, client and admin, driver where administrator is a standout amongst the most imperative part in framework. Here client will book the vehicle and follow the present area utilizing GPS following. Strategic suggests the obligation to design and manage systems to control improvement and land arranging of rough materials, work-in-process, and finished inventories at any rate total cost. The proposed framework centers around conveyance of products, crude materials ,moving home apparatuses, furniture while migration. It additionally incorporates administration of request preparing, stock, transportation, and the mix of warehousing, materials taking care of, and bundling, all coordinated all through a system of offices. We need to give end to end security to client and supplier information by utilizing QR code idea. We are suggestion of closest best specialist organization as per client intrigue

IX. ACKNOWLEDGMENT

It gives us great pleasure in presenting the preliminary project report on '**Logistic Vehicle Transformation system using advanced technology**' I would like to take this opportunity to thank my internal guide for giving me all the help and guidance I needed I am really grateful to them for their kind support. Their valuable suggestions were very helpful.

X. REFERENCES

1. J. J. Q. Yu and A. Y. S. Lam, "Autonomous vehicle logistic system: Joint routing and charging strategy," IEEE Trans. Intel. Transp. System. to be published. 2016.

2. R. A. Vasco and R. Moabite, "The dynamic vehicle allocation problem with application in trucking companies in Brazil," Compute. Opera. Res., vol. 76, pp. 118–133, Dec. 2016.

3. L. C. Coelho, J. Renaud, and G. Laporte, "Road- based goods transportation: A survey of real-world logistics applications from 2000 to 2015," Inf. Syst. Oper. Res., vol. 54, no. 2, pp. 79–96, 2016.

4. S. Erdo.gan and E. Miller-Hooks, "A green vehicle routing problem,"Transp. Res. E, Logistics Transp. Rev., vol. 48, no. 1, pp. 100–114,2012.

5. Albara Awajan, "An Automated Taxi Booking and Scheduling System",Conference 12 January 2015.

6. Charles Tian, Yan Huang, Zhi Liu, Favyen Bastani" Noah: A Dynamic Ridesharing System"Conference Paper · June 2014