A Real Time Tracking and Analyzing: Apps to Track the Vehicular Movement

M. Ramamoorthy, N. Ayyanathan, M. Padma Usha

Received: 20 Jan 2018 • Revised: 25 March 2018 • Accepted: 18 April 2018

Abstract: The aim of this project is to develop an application for selling products and tracking their location accurately. The developments of mobiles applications have attracted a lot of attention and interest in industry communities. At present buyers are buying and selling goods from the online shopping and there is no ideal application for selling and tracking location and also no accurate tracking location with the help of map but tracking location of the product available in web search. The project is developed to assist commerce applications for next level. Any type of information pertaining to the user will be available when needed and also to ensure immediate storage of customer details. Analyzing the shortest path from multiple paths and grouped together by using K means clustering algorithm. Again filtering the shortest path, the best path is provided. It also provides the user and vendor stability applications and the user can track the delivery time and location.

Keywords: Scheduling, SMS, DataMining, E-Commerce, Product Ordering.

INTRODUCTION

E-Commerce is a shopping cart application for customers and delivery boy. The main aim of the project is to provide service smart security to the customers. This system provides good and efficient information and thus making the service smarter. It is an interface for customers to browse the catalogue and order the products online. Using the power of Internet multiple interest parties and customers can order with complete security and control. This system maintains and processes all sort of information pertaining to the order type options control the life cycle of an order. It provides an end to end solution to selling and manage the delivery service. By following this new approach the information can be accessed from anywhere just with a tap. This helps the users by saving lot of time and providing the user with up to date information. The application helps to improve the services of Customers and vendors. In this application we can track and manage the locations as well as accuracy. It can help to tracking their details to the vendor. The central concept of the application is to allow the customer to shop virtually using the Internet and allow customers to buy the items and articles of their desire from the store. Through our GPS system every data can be easily manipulated through centralized server. The Server process the customers and items are shipped to the address submitted by them. This application is also help us to track location. E-commerce is fast gaining ground as an accepted and used business paradigm. It is reasonable to say that the process of shopping on the web is becoming common place and continuous services.

This project is mainly focused on e-commerce customers to organize through single cart and delivery boy also use the particular application that can be accessing the cart it can be evaluated and access through centralized server. We can easily organize through single data. We can order a product through cart that will be easily sustainable and manage the respective locations. A location can be split through latitude and longitude. A delivery person can organize pickup, delivery and both location also that is to very easy to organize.

M. Ramamoorthy, Assistant Professor, Department of Computer Science and Engineering, BIST, BIHER, Bharath Institute of Higher Education & Research, Selaiyur, Chennai. E-mail: saimoorthy123@gmail.com

N. Ayyanathan, Associate Professor, Master of Computer Applications, B.S. Abdur Rahman Crescent Institute of Science & Technology, Chennai, India. E-mail: n.ayyanathan@crescent.education

M. Padma Usha, Assistant Professor, Electronics and Communication Engineering, B.S. Abdur Rahman Crescent Institute of Science & Technology, Chennai, India. E-mail: padmausha@crescent.education

E-Commerce project help us to develop one step advanced application for both customer and vendors. Because organizing application is very good user interface while the time of communicating. Similar products are organizing in to same functionalities with the help of location accuracy. We can track and summarizing the respective locations that is easily updated.

RELATED WORKS

[1] Multichannel is the set of activities used for selling and servicing to the customer through more than one channel. The transaction was completed electronically and the customer needs are fulfilled. The activity used here is differed from multimedia marketing. The constraints such as consumer access to broad band internet service, operational difficulties of integration and cost of multichannel

[2] Dual-channel supply chain with price and service competition is prevalent in reality. Considering there price and service competition between dual channels, they derive the equilibrium prices under centralized and decentralized supply chains with consumer returns. The total supply chain's profit under decentralized supply chain is less than the centralized supply chain, they forwarded a new contract to coordinate the decentralized supply chain and gain the win-win outcome.

[3] Many manufacture engaging in direct sales in online face channel competition and conflict with tradition retailers. They distributed the standard product conventional retailer. Modeling the firms discussion offered the customization. by considering the two-stage supply chain in which the manufacture distributed the standard products through retailer and sells the spectrum customized. Impact the customization on firms marketing strategy.

[4] Dealing in goods & services through the electronic media and internet. The customer from the portal using a shopping basket system or digital cart and allows payment through debit card, credit card or electronic fund transfer payments. The retailer will transform the product order by the customer. E-commerce is growing wide range in India.

[5]In this paper the delivery time is tracked by the customer and the accurate path is provided to the delivery boy. By using k-means clustering Algorithm the shortest path is provided. The customer can track the location of their product. The message is send to the customer once the delivery boy starts travelling.

PROPOSED SYSTEM

E-commerce application used more than other application but it has no ideal application for selling and tracking a pickup and delivery location and also has no communication between vendor and customer.



Figure 1: Architecture Diagram

No more accurate tracking with the help of map while the time of pickup and delivery. They can't deliver the product on time of scheduled because of location inaccuracy. In order to solve this problem we introduce a new type of E-commerce developed to assist commerce applications for next level. Applications can arrange in a single browser and a variety of products is applicable. Any type of information pertaining to the user will be available when needed and also to ensure immediate storage of customer details. This application provides that can organize multiple users and delivery boy. It also provides the user and vendor stability applications. To use this application the customer should create an account by providing their valid email id and password. The category list will be appeared then the customer can select according to their product. The products are added to the cart. The customer can select their payment mode. The message is send to the customer. The delivery boy. The message is send to the customer.

We can track the location in the form of scheduled dates and respective orders. A delivery person also tracks both pickup and delivery orders get in the form of overall summary only. This is difficult way to delivery/ pickup the product on the time. By the way of user's location and locating places we can't find. This is one of the major problem finds in while the time of using application.

The process used in Figure 2 is placing an order by the customer through an mobile application. The customer can order their product and the product is added to the cart.



Figure 2: Diagram for product ordering

Scheduling contain the main process of this application by shortest job scheduling algorithm but it not visible to the user and managed by server.

The shortest job first scheduling method is used to schedule the orders these orders can be scheduled according to the place and time. They used Preemptive and Non-Preemptive method but most of the application using the non-preemptive method because the orders scheduled by priority of the user placing their order into the application. But we use preemptive method because many order placed in some same location then that delivery by the shortest path between these orders not by the priority manner. After that message will be send to user once order can update through database that also into scheduling the total shipment.

Using K-means Clustering Algorithm, for analyzing shortest path in the delivery location that paths are taken from the multiple path to the delivery location and they are grouped and optimizing the shortest path the best path is provided to the delivery boy. The clustering algorithm provides the best way to the delivery person automatically then delivery person finds the best path and travels accordingly. This application used by both customer as well as delivery person mainly concentrate on delivering the product quickly and easily user can track product location accurately both departure and arrival time of product.

EXPERIMENTAL RESEARCH AND VALIDATION

The implementation of "REAL TIME ORDER TRACKING THE VECHICULAR MOVEMENT " the web based system is developed by using **HTML**, **CSS**, **JAVASCRIPT** as the front-end tool and while **SQL and JAVA** as the back end tool and **SQL** helps in supporting the system as server side language. The process of this developed system also includes a major coding activity which has been used to enhance the performance for performing better scheduling and rescheduling of the product. Home page of the application contains the category list helps the customer to order the product. Customer as well as the delivery boy login in to the application for further proceedings.



E-commerce application is used for shopping through internet This system allows the customer create a account and fill in the necessary details which will be stored in the database such that the customer need not have to do the signup process every time. Then the customer can login to the system whenever required, the product is order by the customer. The product is added to the cart and the information is stored in the user database. The customer can be able to cancel the order which will be verified by the server and then the rescheduled slots will be showed up as in the process. The message is send to the customer and the delivery person.

Name		
Email		
÷		
Dob		
Gender 🧕) Male 🔿 Female	
	SIGNUP	
ALREADY	HAVE AN ACCOUNT	LOGIN !!

Figure 4: Authentication diagram

Ordering the product by the customer then customer can order various product that are added to the cart the payment mode also be selected by the customer the duration mode given then these product details are stored to the server and the message is send to the delivery person.



DELIVERY PERSON

The sever sends a message to the delivery person regarding the product then the order is taken and using this application the person will find the shortest path. Once the person starts travelling the message is send to the customer and according to the k-means algorithm the shortest best path is provided to the delivery person, both in pick uping and delivering the product. Hence this will be more useful for finding the shortest path by the delivery person.



CONCLUSION AND FUTURE WORK

In this application, we can monitor the E-commerce system and the delivery service. At present the delivery service is not in effective manner. We used k- means clustering algorithm to provide a shortest path to delivery person. The user can also track the arrival and departure time and location of the delivery without delay and provide secure purchasing product and delivery through this application.

The future enhancement is focused on improving the system in a better way by providing the map facility in order to find the customer location easily to reach quickly without getting delayed to the destination.

E-commerce application used by many people now a days and its providing service to the user. With most of the application provides a good service in product purchasing but not in a delivery service.

The future implementation also includes that the user will track their product by each and every seconds from starting point to the destination.

REFERENCES

- ^[1] Udayakumar, R., Khanaa, V., & Saravanan, T. (2013). Analysis of polarization mode dispersion in fibers and its mitigation using an optical compensation technique. *Indian Journal of Science and Technology*, 6(6), 4767-4771.
- ^[2] Udayakumar, R., Kumaravel, A., & Rangarajan, K. (2013). Introducing an efficient programming paradigm for object-oriented distributed systems. *Indian Journal of Science and Technology*, 6(5S), 4596-4603.
- ^[3] Mageswaran, S.U., & Sekhar, N.G. (2013). Reactive power contribution of multiple STATCOM using particle swarm optimization. *International Journal of Engineering & Technology*, 5(1), 122-126.
- ^[4] Giri, R.K., & Saikia, M. (2013). Multipath routing for admission control and load balancing in wireless mesh networks. *International Review on Computers and Software*, *8*(3), 779-785.
- ^[5] Padmapriya, G., Manikandan, A., Krishnasamy, V., Jaganathan, S.K., & Antony, S.A. (2016). Spinel NixZn1− xFe2O4 (0.0≤ x≤ 1.0) nano-photocatalysts: synthesis, characterization and photocatalytic degradation of methylene blue dye. *Journal of Molecular Structure*, *1119*, 39-47.
- ^[6] Vijayaragavan, S.P., Karthik, B., Kiran Kumar, T.V.U., & Sundar Raj, M. (2013). Analysis of chaotic DC-DC converter using wavelet transform. *Middle-East Journal of Scientific Research*, *16*(12), 1813-1819.
- [7] Lokesh, K., Kavitha, G., Manikandan, E., Mani, G.K., Kaviyarasu, K., Rayappan, J.B.B., ... & Maaza, M. (2016). Effective ammonia detection using n-ZnO/p-NiO heterostructured nanofibers. *IEEE Sensors Journal*, *16*(8), 2477-2483.
- ^[8] Abraham, A.G., Manikandan, A., Manikandan, E., Vadivel, S., Jaganathan, S.K., Baykal, A., & Renganathan, P.S. (2018). Enhanced magneto-optical and photo-catalytic properties of transition metal cobalt (Co2+ ions) doped spinel MgFe2O4 ferrite nanocomposites. *Journal of Magnetism and Magnetic Materials*, *452*, 380-388.
- ^[9] Kennedy, J., Fang, F., Futter, J., Leveneur, J., Murmu, P.P., Panin, G.N., & Manikandan, E. (2017). Synthesis and enhanced field emission of zinc oxide incorporated carbon nanotubes. *Diamond and Related Materials*, *71*, 79-84.
- ^[10] Teresita, V.M., Manikandan, A., Josephine, B.A., Sujatha, S., & Antony, S.A. (2016). Electromagnetic properties and humidity-sensing studies of magnetically recoverable LaMg x Fe 1– x O 3– δ perovskites nano-photocatalysts by sol-gel route. *Journal of Superconductivity and Novel Magnetism*, 29(6), 1691-1701.
- ^[11] Caroline, M.L., & Vasudevan, S. (2009). Growth and characterization of pure and doped bis thiourea zinc acetate: Semiorganic nonlinear optical single crystals. *Current applied physics*, *9*(5), 1054-1061.
- ^[12] Jayalakshmi, V., & Gunasekar, N.O. (2013). Implementation of discrete PWM control scheme on Dynamic Voltage Restorer for the mitigation of voltage sag/swell. *International Conference on Energy Efficient Technologies for Sustainability*, 1036-1040.
- ^[13] Udayakumar, R., Khanaa, V., & Kaliyamurthie, K.P. (2013). Optical ring architecture performance evaluation using ordinary receiver. *Indian Journal of Science and Technology*, 6(6), 4742-4747.
- ^[14] Udayakumar, R., Khanaa, V., & Kaliyamurthie, K.P. (2013). Performance analysis of resilient ftth architecture with protection mechanism. *Indian Journal of Science and Technology*, 6(6), 4737-4741.
- ^[15] Saravanan, T., Srinivasan, V., & Sandiya, V.P. (2013). A two stage DC-DC converter with isolation for renewable energy applications. *Indian Journal of Science and Technology*, 6(6), 4824-4830.
- ^[16] Sundarraj, M. (2013). Study of compact ventilator. *Middle-East Journal of Scientific Research*, *16*(12), 1741-1743.
- ^[17] Thema, F.T., Manikandan, E., Gurib-Fakim, A., & Maaza, M. (2016). Single phase Bunsenite NiO nanoparticles green synthesis by Agathosma betulina natural extract. *Journal of alloys and compounds*, *657*, 655-661.

- ^[18] Sathyaseelan, B., Manikandan, E., Sivakumar, K., Kennedy, J., & Maaza, M. (2015). Enhanced visible photoluminescent and structural properties of ZnO/KIT-6 nanoporous materials for white light emitting diode (w-LED) application. *Journal of Alloys and Compounds*, 651, 479-482.
- ^[19] Zain, Z. (2019). High Speed and Low Power GDI based Full Adder. *Journal of VLSI Circuits and Systems*, 1(1), 5-9.
- ^[20] Udupa, P., & Vishwakarma, S. (2016). A Survey of MRI Segmentation Techniques for Brain Tumor Studies. *Bonfring International Journal of Advances in Image Processing*, 6(3), 22-27.
- ^[21] Jacob, L., & Quinn, S. (2018). Finding of Frequent Itemset with Two Mask Searches. *Journal of Computational Information Systems*, 14(2), 36-43.
- ^[22] Manjula, S., & Dr. Banu, R., (2014). An Efficient Compound Scoring Gene Selection Technique (CSGS) for Cancer Classification using Microarrays. *International Journal of Advances in Engineering and Emerging Technology*, 5(5), 234-247.
- ^[23] Saravanan, G., and Dr.Gopalakrishnan, V. (2014). Resource Allocation for Multimedia Communication on Grid Computing Environment using Hybrid ABC. *Excel International Journal of Technology, Engineering and Management,* 1(2), 36-41.
- ^[24] Dr. John, E.T., Skaria, B., & Shajan, P.X. (2016). An Overview of Web Content Mining Tools. *Bonfring International Journal of Data Mining*, 6(1), 01-03.
- ^[25] Alviri, F., & Habibi, S.F. (2015). Reviewing Self-Adaptation Frameworks for the Implementation of Enterprise Resource Planning Systems. *International Academic Journal of Innovative Research*, 2(4), 1-10.
- ^[26] Soni, K., Kumar, U., & Dosodia, P. (2014). A Various Biometric Application for Authentication and Identification. *International Journal of Communication and Computer Technologies*, *2*(1), 6-10.
- ^[27] Dr.Sebasthirani, K., and Mahalingam, G. (2018). Design of Shunt Active Power Filter with Fuzzy Logic Control for Mitigating Harmonics. *Bonfring International Journal of Industrial Engineering and Management Science*, 8(2), 26-30.
- ^[28] Asgarnezhad, R., & Mohebbi, K. (2015). A Comparative Classification of Approaches and Applications in Opinion Mining. *International Academic Journal of Science and Engineering*, *2*(5), 1-13.
- ^[29] Gopalakrishnan, K., Prem Jeya Kumar, M., Sundeep Aanand, J., & Udayakumar, R. (2013). Analysis of static and dynamic load on hydrostatic bearing with variable viscosity and pressure. *Indian Journal of Science and Technology*, 6(6), 4783-4788.
- ^[30] Prabhu, M.R., Reji, V., & Sivabalan, A. (2012). Improved radiation and bandwidth of triangular and star patch antenna. *Research Journal of Applied Sciences, Engineering and Technology*, 4(12), 1740-1747.
- [31] Arumugam, S. and Ramareddy, S. (2012). Simulation comparison of class D/ Class E inverter fed induction heating. *Journal of Electrical Engineering*, 12(2), 71-76.
- ^[32] Udayakumar, R., Khanaa, V., & Kaliyamurthie, K.P. (2013). High data rate for coherent optical wired communication using DSP. *Indian Journal of Science and Technology*, 6(6), 4772-4776.
- ^[33] Nagarajan, C., & Madheswaran, M. (2012). Experimental Study and Steady State Stability Analysis of CLL-T Series Parallel Resonant Converter with Fuzzy Controller using State Space Analysis. *Iranian Journal of Electrical and Electronic Engineering*, 8(3): 259-267.
- ^[34] Gopalakrishnan, K., PremJeya Kumar, M., SundeepAanand, J., & Udayakumar, R. (2013). Thermal properties of doped azopolyester and its application. *Indian Journal of Science and Technology*, 6(6), 4722-4725.
- ^[35] Kumaravel A., Meetei O.N. (2013). An application of non-uniform cellular automata for efficient cryptography. *Indian Journal of Science and Technology*, 6(5): 4560-4566.
- ^[36] Kumaravel, A., & Pradeepa, R. (2013). Layered approach for predicting protein subcellular localization in yeast microarray data. *Indian Journal of Science and Technology*, 6(5S), 4567-4571.
- ^[37] Kaviyarasu, K., Manikandan, E., Kennedy, J., & Maaza, M. (2016). Synthesis and analytical applications of photoluminescent carbon nanosheet by exfoliation of graphite oxide without purification. *Journal of Materials Science: Materials in Electronics*, *27*(12), 13080-13085.
- ^[38] Mathubala, G., Manikandan, A., Antony, S.A., & Ramar, P. (2016). Photocatalytic degradation of methylene blue dye and magneto-optical studies of magnetically recyclable spinel NixMn1xFe2O4 (x= 0.0–1.0) nanoparticles. *Journal of Molecular Structure*, *1113*, 79-87.

- ^[39] Manikandan, E., Kennedy, J., Kavitha, G., Kaviyarasu, K., Maaza, M., Panigrahi, B.K., & Mudali, U.K. (2015). Hybrid nanostructured thin-films by PLD for enhanced field emission performance for radiation micro-nano dosimetry applications. *Journal of Alloys and Compounds*, 647, 141-145.
- ^[40] Kumaravel, A., & Meetei, O.N. (2013). An application of non-uniform cellular automata for efficient cryptography. *IEEE Conference on Information & Communication Technologies*: 1200-1205.
- ^[41] Langeswaran, K., Gowthamkumar, S., Vijayaprakash, S., Revathy, R., & Balasubramanian, M.P. (2013). Influence of limonin on Wnt signalling molecule in HepG2 cell lines. *Journal of natural science, biology, and medicine,* 4(1), 126-133.
- ^[42] Srinivasan, V., & Saravanan, T. (2013). Analysis of harmonic at educational division using CA 8332. *Middle-East Journal of Scientific Research*, *16*(12), 1768-73.
- ^[43] Josephine, B.A., Manikandan, A., Teresita, V.M., & Antony, S A. (2016). Fundamental study of LaMg x Cr 1-x O $3-\delta$ perovskites nano-photocatalysts: sol-gel synthesis, characterization and humidity sensing. *Korean Journal of Chemical Engineering*, *33*(5), 1590-1598.
- ^[44] Saravanan, T., Saritha, G., & Udayakumar, R. (2013). Robust H-Infinity Two Degree of Freedom Control for Electro Magnetic Suspension System. *Middle-East Journal of Scientific Research*, *18*(12), 1827-1831.
- ^[45] Rajasulochana, P., Dhamotharan, R., Murugakoothan, P., Murugesan, S., & Krishnamoorthy, P. (2010). Biosynthesis and characterization of gold nanoparticles using the alga Kappaphycus alvarezii. *International Journal of Nanoscience*, *9*(05), 511-516.
- [46] Slimani, Y., Güngüneş, H., Nawaz, M., Manikandan, A., El Sayed, H. S., Almessiere, M. A., & Baykal, A. (2018). Magneto-optical and microstructural properties of spinel cubic copper ferrites with Li-Al co-substitution. *Ceramics International*, 44(12), 14242-14250.
- ^[47] Kaviyarasu, K., Manikandan, E., Kennedy, J., Jayachandran, M., & Maaza, M. (2016). Rice husks as a sustainable source of high quality nanostructured silica for high performance Li-ion battery requital by sol-gel method–a review. *Adv. Mater. Lett*, *7*(9), 684-696.
- ^[48] Ilayaraja, K., & Ambica, A. (2015). Spatial distribution of groundwater quality between injambakkamthiruvanmyiur areas, south east coast of India. *Nature Environment and Pollution Technology*, *14*(4), 771-776, 2015.
- ^[49] Sharmila, S., Rebecca, L. J., Das, M.P., & Saduzzaman, M. (2012). Isolation and partial purification of protease from plant leaves. *Journal of Chemical and Pharmaceutical Research*, *4*(8), 3808-3812.
- ^[50] Rajakumari, S.B., & Nalini, C. (2014). An efficient cost model for data storage with horizontal layout in the cloud. *Indian Journal of Science and Technology*, 7(3), 45-46.