

# Smart Vehicle Tracking System Using Internet of Things

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## ABSTRACT

Due to increase in population the burden on public transportation the remote user needs a smart vehicle monitoring system which provides the information about the bus, such as a current location of the bus and route between the stops. To overcome all the problems of our traditional transportation, we introduced our proposed system called as “Smart Vehicle Tracking System Using IoT”. This system is based on a newly evolved concept of IoT. We implemented a Raspberry pi kit along with a GPS receiver into the bus which sends the current location of the bus to the server and also, we have an android application for showing that location on map. Raspberry pi is low-cost device with the higher performance

**Keywords:** Smart Vehicle Tracking, IoT, GPS receiver

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## I. INTRODUCTION

Our systems aim is to overcome all the bus transportation problems and design an android application for the clients who want for the user's real-time data about the appropriate bus. The raspberry pi 3 b+ kit implemented into the bus along with GPS receiver. This GPS innovation helps in following the constant data of the transport like current area and route between the stops. With the transport motor turns over, the gadget begins working and constantly refreshes the area of the transport. It sends area facilitates as longitude and scope esteems to the worker. We fostered an android application which is extremely simple to deal with and use. This application can be

utilized by the clients, managerial people groups and drivers of those specific transports. Admin and drivers have to provide the login credentials for some authorization decisions. Users don't require any login information to use our application; simply open the application, go the user section and select their bus number to get current location of that bus and also the route.

## II. LITERATURE SURVEY

Because of speedy expansion in individuals, there is need for proficient public transportation framework. There is expanded burden on open transportation like vehicle due to individuals. In this way, a distant client

needs an awe-inspiring construction which gives industrious data of transport. Surprising and unforeseen conditions on the streets sway the smooth development of the vehicle structure and the improvement of vehicles. Moreover, typical issues, for example, gridlock, sudden deferrals, haphazardness in pioneer interest, sporadic vehicle dispatching times happen and considering which the timetable of the explorers are affected and they positively need to keep it together for the presence of their individual vehicle. This pioneer weight can be put forth an attempt not to by presenting a construction which gives tireless data about the space and assessed time of appearance of the vehicles.

### III. PROPOSED METHODOLOGY

The BUS TRACKING SYSTEM may valuable for following the course and the area of the transport. It should prompt save the appearance holding up a season of the client. The client will effortlessly know the data of the Route and area of the Bus. The framework ought to give the GUI to showing the areas of the transports. Frameworks ought to give the proper area to the client. The information base ought to get refreshed when the area of the get changed. In all climate conditions the framework should work appropriately and give the proper outcome. The framework ought not get closed down inside the functioning time it should work appropriately.

### IV. PROPOSED MODEL

System design refers to the core construction of the application; this specifies all the modules which make up the application and how they connect to one another.

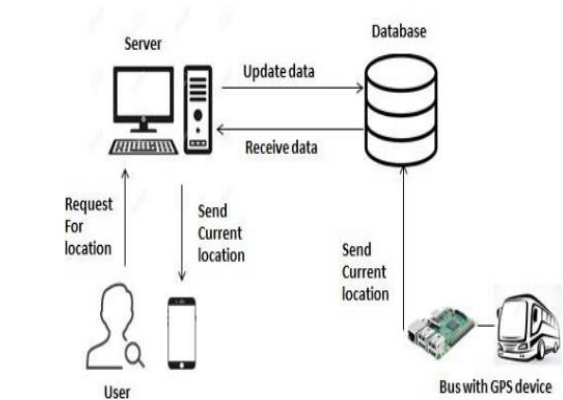
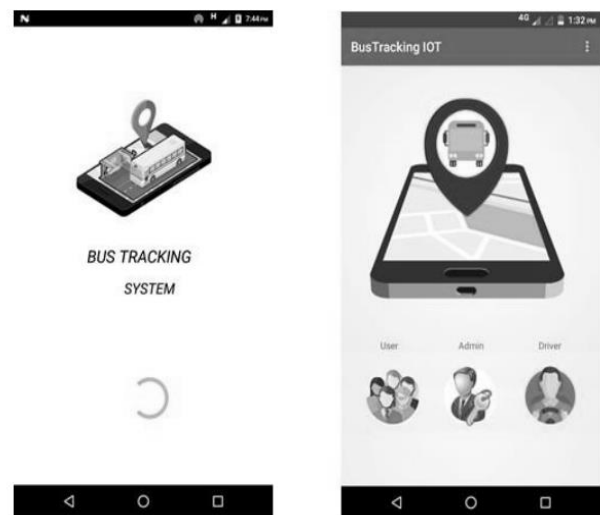


Figure 4.1.1: System Design

## V. IMPLEMENTATION

### Screenshots:



This is the homepage of BUS TRACKING SYSTEM. Here the user decides whether to login to the website or not.



Figure 6.1.2 User module

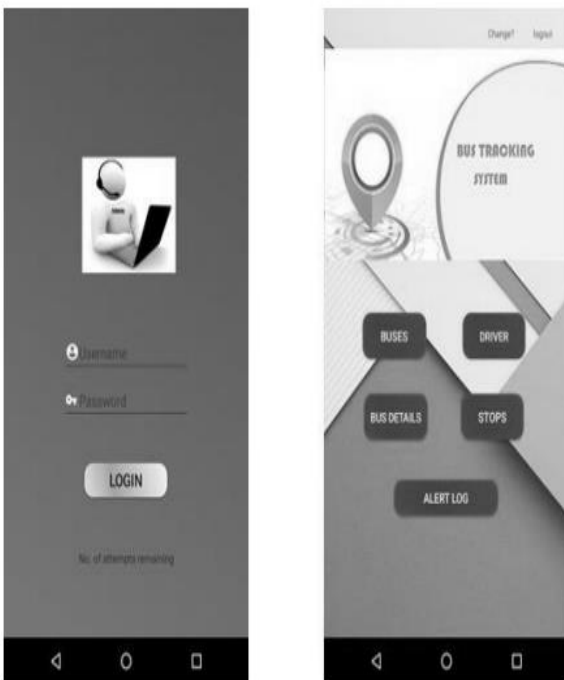


Figure :6.1.3 Admin module



Figure 6.1.4 Add driver and bus



Figure 6.1.5: Stops and alert log



Figure 6.1.6: Driver module



Figure 6.1.7 Send and clear alert

## VI. CONCLUSION

The framework tracks the transport at any area whenever. All the current data of transport is put away to the worker and it is recovered to distant clients by means of android application. GPS following monitors

transports progressively, telling guardians of youngsters' the particular appearance times that utilizes the transport. This decreases the measure of time understudy need to hang tight for transports to show up, limit their openness to harsh climate and different other risk circumstances they can be confronted while hanging tight for a school transport to show up with the execution of the errand, a complete track ought to be conceivable of the school transports.

## VII. REFERENCES

- [1]. Balachandar S., Chinnaiyan R. (2019) Centralized Reliability and Security Management of Data in Internet of Things (IoT) with Rule Builder. In: Smys S., Bestak R., Chen JZ., Kotuliak I. (eds) International Conference on Computer Networks and Communication Technologies. Lecture Notes on Data Engineering and Communications Technologies, vol 15. Springer, Singapore
- [2]. Balachandar S., Chinnaiyan R. (2019) Reliable Digital Twin for Connected Footballer. In: Smys S., Bestak R., Chen JZ., Kotuliak I. (eds) International Conference on Computer Networks and Communication Technologies. Lecture Notes on Data Engineering and Communications Technologies, vol 15. Springer, Singapore
- [3]. Druv patel , Rahul seth, vikas Mishra” real -time bus tracking sysyem “ international research journal of engineering and technology volume: 04 issue :03 – march -2017.
- [4]. G Sabarmathi, R Chinnaiyan (2019), Envisagation and Analysis of Mosquito Borne Fevers: A Health Monitoring System by Envisagative Computing Using Big Data Analytics, Lecture Notes on Data Engineering and Communications Technologies book series (LNDECT, volume 31), 630-636. Springer, Cham
- [5]. G. Sabarmathi and R. Chinnaiyan, "Investigations on big data features research challenges and applications," 2017 International Conference on Intelligent Computing and Control Systems (ICICCS), Madurai, 2017, pp. 782-786.

- [6]. G. Sabarmathi and R. Chinnaiyan, "Reliable Machine Learning Approach to Predict Patient Satisfaction for Optimal Decision Making and Quality Health Care," 2019 International Conference on Communication and Electronics Systems (ICCES), Coimbatore, India, 2019, pp. 1489-1493
- [7]. Hari Pranav A;M. Senthilmurugan;Pradyumna Rahul K;R. Chinnaiyan , "iot and Machine Learning based Peer to Peer Platform for Crop Growth and Disease Monitoring System using Blockchain," 2021 International Conference on Computer Communication and Informatics (ICCCI), 2021, pp. 1-5, doi:
- [8]. M Swarnamugi, R Chinnaiyan (2019), IoT Hybrid Computing Model for Intelligent Transportation System (ITS), Proceedings of the Second International Conference on Computing Methodologies and Communication (ICCMC 2018), 802-806.
- [9]. M. Swarnamugi ; R. Chinnaiyan, "IoT Hybrid Computing Model for Intelligent Transportation System (ITS)", IEEE Second International Conference on Computing Methodologies and Communication (ICCMC), 15-16 Feb. 2018.
- [10]. M. Swarnamugi; R. Chinnaiyan, "Cloud and Fog Computing Models for Internet of Things", International Journal for Research in Applied Science & Engineering Technology, December 2017.
- [11]. Mohammed F. Alrifai, Norharyati Harum, MohdFairuzIskandar Othman, IrdaRoslan, Methaq Abdullah Shyaa, "vehical detection and tracking system iot based", International research journal of engineering and techanology volume:05 issue: 08 – aug 2018
- [12]. Preetika B, ; M. Latha; M. Senthilmurugan; R. Chinnaiyan, , "MRI Image based Brain Tumour Segmentation using Machine Learning Classifiers," 2021 International Conference on Computer Communication and Informatics (ICCCI), 2021, pp. 1-9, doi: 10.1109/ICCCI50826.2021.9402508.
- [13]. S G vijaykumari ,Reshma r, b kirthna "Transport tracking using raspberry pi ",international journal of pune and ap-used mathematic volum 119 no.15 june 2018.
- [14]. S. Balachandar, R. Chinnaiyan (2019), Internet of Things Based Reliable Real-Time Disease Monitoring of Poultry Farming Imagery Analytics, Lecture Notes on Data Engineering and Communications Technologies book series (LNDECT, volume 31), 615- 620. Springer, Cham
- [15]. S.Balachandar , R.Chinnaiyan (2018), A Reliable Troubleshooting Model for IoT Devices with Sensors and Voice Based Chatbot Application, International Journal for Research in Applied Science & Engineering Technology, Vol.6, Iss.2, 1406-1409.
- [16]. S.Balachandar , R.Chinnaiyan (2018), Centralized Reliability and Security Management of Data in Internet of Things (IoT) with Rule Builder, Lecture Notes on Data Engineering and Communications Technologies 15, 193-201.
- [17]. S.Balachandar , R.Chinnaiyan (2018), Reliable Digital Twin for Connected Footballer, Lecture Notes on Data Engineering and Communications Technologies 15, 185-191.

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