International Journal of Recent Technology and Engineering (IJRTE)
ISSN: 2277-3878 (Online), Volume-8 Issue-6, March 2020

Design and Development of Drivers Driving Pattern Analysis for Automatic License Issuing System

B. Thiruvaimalar Nathan, V. Jai Kishor, D. Srikanth Reddy, K. Satya Sai Kumar

Abstract*: To forestall licenses and in this manner causing mishaps, another mechanized framework is proposed. This framework can be executed utilizing Bayesian rationale grouping calculation and highlight extraction calculation. The proposed framework needs to structure the remote sensor engineer and in addition the multi sensor mix based distinctive confirmation technique for seeing outcome. The guide administrations additionally expected to look at the test information from Vehicle information recorder (VDR) with reference information. Mapping and multi-combination sensor blend transmission is finished utilizing remote server. The Bayesian characterization calculation is actualized with information digging for result. CC2500 remote module is utilizing as a passage. As a commitment to the general public this creative answer can defeat debasement and abatement the quantity of street wounds in light of most wounds as a result of absence of arranging, expectation and control which can be decently relying upon an individual's driving gifts. In this way, from our proposed conspire we will place in power a programmed riding check for permit trouble.

***Keywords*: Microcontroller, IoT, Automatic Driving License, RTO.**

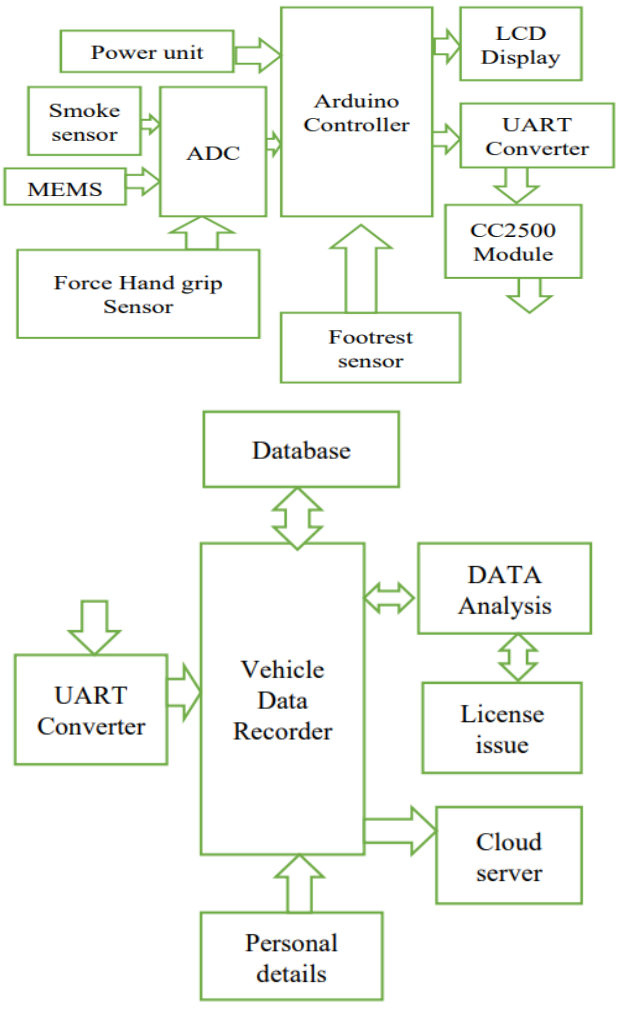
I. INTRODUCTION

In our India as demonstrated by the Motor Vehicle Act 1988, No individual is permitted to drive(Ride) an engine vehicle in any open spot beside if he/she holds a significant driving (Riding) permit given to them to drive a vehicle of confirmed class by the by single state through their Regional Transport Authorities.Driver conduct and driver mistakes are significant reasons for vehicular mishaps. Along these lines, comprehension and demonstrating driver conduct has pulled in a lot of consideration from analysts. The proposed driving conduct models have various purposes; some of them have attempted to evaluate the vehicle elements or to screen the driver status, while others have attempted to all the more likely comprehend the fundamental elements in driver conduct. The need of the undertaking is to control the spreads from automobiles offered move to the computerization of the vehicle. Hydrocarbons, carbon monoxide and oxides of nitrogen are made during the devouring procedure from vehicles and are made into the earth from the tail pipe. There are in addition hydrocarbons made because of vaporization of fuel and from the crankcase of the vehicle.

Manuscript received on March 15, 2020.
Revised Manuscript received on March 24, 2020.
Manuscript published on March 30, 2020.
* Correspondence Author
Mr B. Thiruvaimalar Nathan*, ECE department, SRM Institute of Science and Technology, Chennai, India. Email: nathanbobse@gmail.com
V. Jai Kishor, ECE department, SRM Institute of Science and Technology, Chennai, India. Email: jaikishor.veldurthy@gmail.com
D. Srikanth Reddy, ECE department, SRM Institute of Science and Technology, Chennai, India. Email: devireddysrikanth12@gmail.com
K. Satya Sai Kumar, ECE department, SRM Institute of Science and Technology, Chennai, India. Email: satyasrm28@gmail.com

II. PROPOSED SYSTEM

A. Block Diagram



The apparent data from the test track are set up by the AVR microcontroller at inside. In case the driver encountering test puts his feet on the ground (incase of bicycle) or if the vehicle contacts the sidewalls of the test track (incase of two and four-wheeler) the proportionate is perceived and managed and the status is sent to the remotely discovered PC at RTO office through cloud. It uses ESP 8266 Wi-Fi module to accomplish the IoT part.

B. Algorithm

As masses grows, use of the vehicles like savvy augments in an increasingly broad scale. A huge segment of them slant toward for bike license is important. Customarily, in driving test an up-and-comer applied for license need to drive over a shut hover path before the authorities. The up-and-comer needs to turn over the path with no assistance over the land surface and in case he fails to do he will be prohibited. In normal everyday presence different impelled transportation vehicles coming in to the market. As the individuals expands the usage of such vehicles in like way enlarges on an inexorably wide scale. The vast majority of the individuals favor for four-wheeler shipping frameworks. For working the vehicles, the permit is necessary. Ordinarily, in driving test a contender applied for award need to drive over a shut float course before the [authorities]. The defilement in the present framework is any place scale, to manage the debasement we have concocted this thought. As the degree of straightforwardness develops, the unavoidability pace of corruption diminishes in giving of driving licenses in the Regional Transport Offices (RTOs). It doesn't require association between the experts and the inhabitants, destroying the odds of sullying. The general assessment of the extents of driving licenses given by the Karnataka Transport Department shows a sharp reducing. Wandered from 36,442 driving licenses gave during Sep 2009 to March 2010, the Department gave just 25,796 driving licenses during March 2010 to September 2010. It shows that the philosophy of giving driving licenses has become stringent leaving possibilities of getting a charge out of both interest and supply side of corrupting. The track length for four-wheeler is around 30-35 meters other than its width is around 8-feet. While the track for bike is around 25meters and width of 4-feet as showed up by 'Times of India' june18 2015 paper. Recently, in 2017 in Pune some spot of the old Mumbai-Pune road there are new various sorts of driving test is done on 3 unique tracks. They are:

i) **The insane 8-8 track: -** you can drive the vehicle in this spot using sensors and covers the track and it shows to the PCs at the control room.

ii) **Kill incline: -** This is 40-degree slant test studied really. You should simply drive up the slant and stop quickly before the top and restart the vehicle.

iii) **The derisive 'H': -** This is the dumbfounded track along a H-shaped region. You enter the belt of the H and travel along the essential vertical arm by then space into change outfit and get before long into belt in first, drive up the subsequent vertical arm, by then rehash.

C. Modules

a) *Smoke Sensor: -*

Forest - Gas Sensor recognizes flammable gasses and smoke. The Grove - Gas Sensor module is valuable for gas spillage identification (in home and industry). It can identify ignitable gas and smoke. The yield voltage from the Gas sensor increments when the centralization of gas. In our venture the smoke sensor is fixed in the vehicle to record information.

b) *MEMS Sensor: -*

MEMS inclinometers and accelerometers are minimal effort, high exactness inertial sensors that serve a wide assortment of mechanical applications. It is a chip-based innovation, known as a Micro Electro-Mechanical System, that is made out of a suspended mass between a couple of capacitive plates.

c) *Power Hand Grip Sensor: -*

Hold estimates interface pressure for human hand and finger grasping applications to survey solace, structure, and ergonomics. ... It is a perfect device for gathering fundamental data and understanding to upgrade item configuration, assembling, quality, and research.

d) *Simple to Computerized: -*

Simple to Digital Conversion (ADC) is an extremely valuable component in microcontrollers to interface sensors. The primary motivation behind this highlight is to interface simple sensor with the Arduino UNO or any microcontroller. Whatever simple incentive from 0-5V it peruses it changes over in the range from 0 to 1023 in computerized.

e) *Arduino***: -**

Arduino is a prototyping stage utilized for building gear attempts. It contains both a physical programmable circuit board and a thing, or IDE (Integrated Development Environment) that stunning spikes scanned for after for your PC, where you can make and move the PC code to the physical board.

f) *LCD: -*

LCD (Liquid Crystal Display) is a sort of level board show which utilizes fluid gems in its essential type of activity. LEDs have an enormous and shifting arrangement of utilization cases for buyers and organizations, as they can be regularly found in cell phones, TVs, PC screens and instrument boards.

g) *UART Converter***: -**

A comprehensive unique recipient transmitter is a PC gear device for nonconcurrent consecutive correspondence in which the data plan and transmission speeds are configurable. The electric hailing levels and strategies are dealt with by a driver circuit outside to the UART.

h) *CC2500: -*

CC2500 Serial Trans receiver Wireless Module is intended to meet the prerequisite for the ease, low force remote gadget to transmit and get sequential information. The module works on 2.4 GHz recurrence band. The module can likewise be utilized as Wireless Sensor Network (WSN) hub.

i) *Force Sensor*: -

This is a force sensitive resistor with a round, 0.5" expansiveness, distinguishing locale. This FSR will change its block depending upon how a great deal of weight is being applied to the distinguishing zone. The harder the force, the lower the hindrance. Exactly when no weight is being applied to the FSR its restriction will be greater than 1MΩ. This FSR can recognize applied force some place around 100g-10kg.It Enhance instrument safety. It distinguishes presence, position, Motion.

III. RESULT

Legitimate assessments are driven by various subjects driving bike instrumented with accelerometers, whirligigs, and vehicle sensors. The riding structure verification issue is then sifted through as a system issue to see the class of the riding plan from the estimations gave by sensors mounted on the engine cycle. This undertaking other than pivots perceiving gas flooding watching and choosing structure in the Transport vehicle.

IV.CONCLUSION

The on-line driving model insistence is made by dealing with the part vectors and get-together these region vectors to one of the driving models in the reference database. This endeavor is worked with a perspective to see driving models with enough accuracy and less testing time isolated than other manual driving model arrangements.

This structure is used to segregate the driver's driving model with the objective that various scenes could be avoided by this rash driving. It can diminish the usage of manual decision of driver's regard, and to avoid the giving of unlawful regard. To maintain a strategic distance from these unlawful practices this structure is executed.

REFERENCES

1. Martin Albert, Alexander Lange, Annika Schmidt, Martin Wimmer, Klaus Bengler, "Automated driving –Assessment of interaction concepts under real driving conditions", in 6th International Conference on Applied Human Factors and Ergonomics (AHFE 2015) and the Affiliated Conferences, AHFE 2015.
2. Sharmila R , Padmavathi T , "A Smart Automation System for Monitoring License Test Drive Using Embedded System", in Vol-2 Issue3 2016 IJARIIEISSN(O)-2395-4396.
3. Vanhere Payal Gopinath, Pagare Sneha Sunil, Aware Rupali Shantaram, Prof. Snehal S. Somwanshi, "Automatic Driving License Test with Android Application", International Journal of Innovative Research in Computer and Communication Engineering (An ISO 3297: 2007 Certified Organization) Website: www.ijircce.com Vol. 5, Issue 1, January 2017.
4. Ms. Suvarna A. Dodke, "Automation of driving license test using wireless sensor network", International Research Journal of Engineering and Technology (IRJET), e- ISSN: 2395-0056 Volume: 02 Issue: 08 —Nov-2015 http://www.irjet.net p- ISSN: 2395-0072
   Komal A. Margale, Priyanka M. Pawale, Amruta A.Patil, Jyoti Waykule, "Driving License Test Automation Using VB", International Journal of Engineering and Applied Sciences (IJEAS) ISSN:2394-3661, Volume-2, Issue-4, April 2015.
5. Mohit John and Arun Joseph, "Zigbee Based Wireless Acquisition Using LabView For Implementing Smart Driving Skill Evaluation System", International Journal of Instrumentation and Control Systems (IJICS) Vol.3, No.3, July 2013
6. D. Sarathkumar, C. K. Sathish Kumar, S. Nithya, E.Thilagavathi, "Automatic Two Wheeler Driving Licence System by Using LabView", International Journal of Advanced Research in Electrical, Electronics and Instrumentation Engineering, Vol. 5, Issue 4, April 2016
7. Prince Samuel S, Kiruba R, Saranya M, "Development of Test RIG for Automated Driving Test Track and Issuing License Using Labview", International Journal International Research Journal of Engineering and Technology (IRJET) e-ISSN: 2395-0056 Volume: 05 Issue: 09 | Sep 2018 www.irjet.net p-ISSN: 2395-0072 © 2018, IRJET | Impact Factor value: 7.211 | ISO 9001:2008 Certified Journal | Page 35 on Recent and Innovation Trends in Computing and Communication ISSN:2321- 8169 Volume: 3 Issue: 12.
8. Rashmi Konapanavar.et.al. Int. Journal of Engineering Research and Application http://www.ijera.com ISSN: 2248-9622, Vol. 7, Issue 7, (Part -2) July 2017, pp.46- 49.
9. Pooja Jadhav, Akshata Thorat, Jayashri jagtap, "Smart Driving Test Track", Department of Electronics and Telecommunication
10. Engineering of Annasaheb Dange College of Engineering and Technology, Ashta,

AUTHORS PROFILE

Mr B. Thiruvaimalar Nathan, Asst Professor at SRM Institute of Science and Technology, Ramapuram , Department of Electronics and Communications Engineering.Email:nathanbose@gmail.com

V. Jai Kishor, Student at SRM Institute of Science and Technology, Ramapuram , Department of Electronics and Communications Engineering.
Email: jaikishor.veldurthy@gmail.com

D.Srikanth Reddy, Student at SRM Institute of Science and Technology, Ramapuram , Department of Electronics and Communications Engineering.
Email: devireddysrikanth12@gmail.com

K.Satya Sai Kumar, Student at SRM Institute of Science and Technology, Ramapuram , Department of Electronics and Communications Engineering.
Email: satyasrm28@gmail.com