

SURVEY PAPER FOR BIOMETRIC BASED RTO LICENSE CHECKING AND FINE SYSTEM

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1. ABSTRACT:

Driving without a license is a major issue in many countries. Survey says that accidents happened mostly by an unlicensed person. So, a new system is proposed i.e., Biometric identification. Unlicensed driving is a matter of many problems. The technology of using human characteristics for the verification process. The user is first registered and then provided with the login details and connected with the bank using Aadhar card. The information is been updated and if RTO rules are broken then automatically fine will be deducted from that person's account and respective notification is sent for the same.

Keywords: Authentication, Fingerprint, License, Matching, Minutiae, Sensor.

2.INTRODUCTION:

As of late while us examining about Biometrics we are focusing on Unique mark filtering. For this we are utilizing high voltage module as a scanner. This module has in-assembled ROM(Read Only Memory), DSP (Digital Signal Processing) and Slam. In this we can hide away to 'n' no of clients fingerprints. This module can work in 2 modes they are Ace mode and Client mode. We will utilize Ace mode to enroll the fingerprints which will be put away in the ROM display on the scanner with a novel id. At the point when this module is interfaced to the microcontroller, we will utilize it in client mode. In this mode we will check the examined pictures with the put away pictures. When going to our application the pictures of the residents will be put away in the module with an extraordinary id. Residents need to filter their picture on request by police, which is then confirmed with the picture exhibit in unique mark module and their record will be refreshed. This scanner is interfaced to 8051 microcontroller through max232 empowering serial correspondence. By utilizing this controller we will control the filtering procedure. After the examining has been finished the outcome is put away in the microcontroller. By essentially squeezing a switch we can get the points of interest of the surveying.

3. MOTIVATION :

The main motivation of the system is to tend the users follow the RTO rule so that the upcoming problems such as accidents and many more can be overcome. If the set rules are not followed then directly respective fine amount is

been deducted from the account of the user and notification and receipt is generated. Rules are to be followed and not to be broken is the main purpose why the system is being proposed.

4.LITERATURE REVIEW :

In this paper named, Prototype of a Fingerprint based Licensing System for Driving, by authors S. Ashwin; S. Loganathan; S. Santosh Kumar; P. Sivakumar says that, Unlicensed driving is a matter of concern for several reasons. It is possible that drivers who have not undergone appropriate training and testing may be deficient in some aspect of the knowledge and skills required to drive safely and efficiently. Also, drivers who are unauthorized may have less incentive to comply with road traffic laws in that they would not be influenced by the rewards and penalties set up under the licensing system. To prevent non-licensees from driving and therefore causing accidents, a new system is proposed. An important and very reliable human identification method is fingerprint identification.[1]

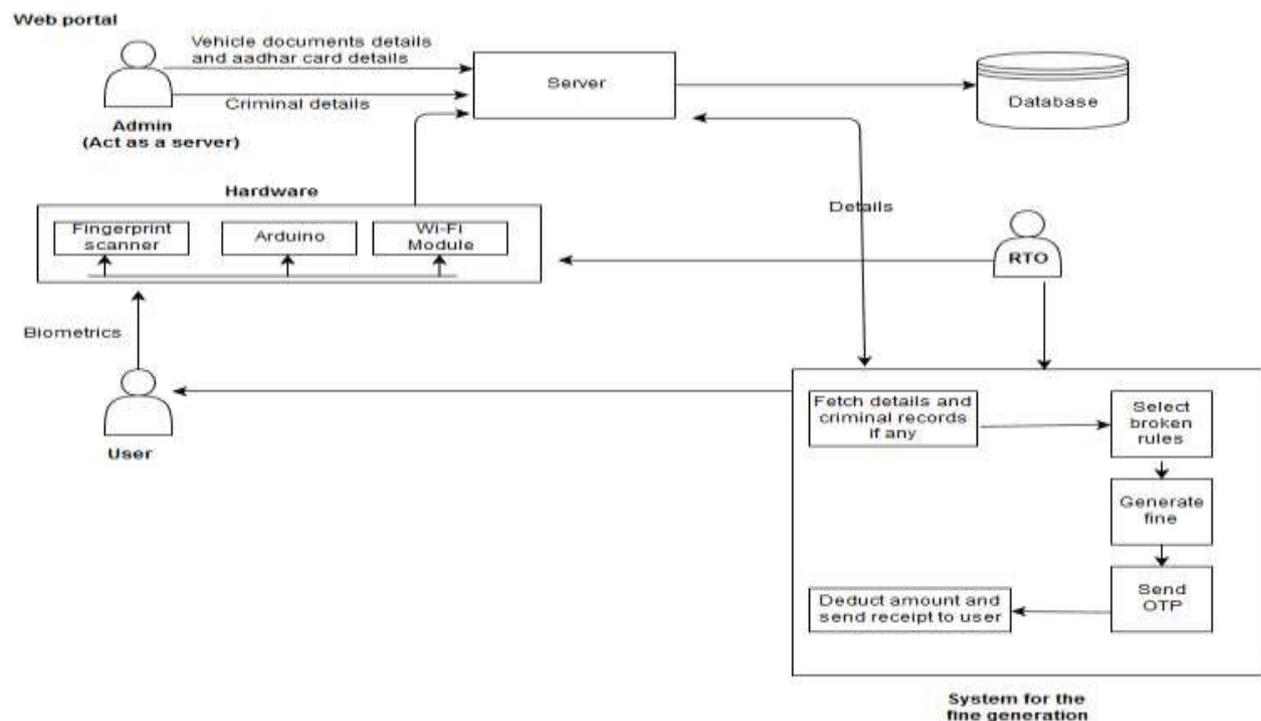
In this paper named, Fingerprint Based License Checking for Auto-Mobiles", by authors J. Angeline Rubella; M. Suganya; K. Senathipathi; B. Santhosh Kumar; K. R. Gowdham; M. Ranjithkumar says that, Driving license system is a very difficult task for the government to monitor. In this project, all the citizens' images will scan and recorded. Whenever a citizen crosses the traffic rules, the police can scan his image and can collect penalty / fine from the defaulter. Using this method, the police can track the history of the driver. This biometric based driving license monitoring system is very easy and convenient to monitor. [2]

In this paper named, FPGA implementation : Smart card based license management using iris scanning approach", by authors Lalin L. Laudis; Amit Kumar Sinha; P. D. Saravanan; S. Anand says that, The advancement in the field of transportation leads to the increase in number of road users. Yet, the threat of road accidents is fast increasing in parallel to the count of vehicles on road. One of the causes for road accidents is the unlicensed drivers on road. A very similar issue to the unlicensed drivers is that the drivers who disobey the regulations of traffic. For two wheeler users 90 countries which represents 77% of the world population have comprehensive helmet law [3]. It has been reported that wearing a helmet would reduce death on accidents by 40% and the serious injuries by 70% [3].

In this paper named, Optimal RTO Timer for Best Transmission Efficiency of DTN Protocol in Deep-Space Vehicle Communications by authors Ruhai Wang; Mingjian Qiu; Kanglian Zhao says that, we present a study of the retransmission time-out (RTO) timer setting for the use of BP for reliable file (or data) transmission over a relay-based deepspace vehicle communication infrastructure characterized by extremely long latency, lossy data links, and highly asymmetric channel rates. Unlike most of the studies proposed for terrestrial Internet for which the RTO timer is set equal to or longer than the round-trip time (RTT), we propose to set the RTO timer shorter than the RTT and expect it will increase delivery efficiency per unit of time.[4]

In this paper named, Finger print based license authentication scheme for Indian scenario: A Review, by authors D. Archana Thilagavathy, Prasanna R., Priyadarshinee Patnaik and Rama P. says that, Fingerprint authentication or recognition refers to the automated method of verifying a match between two human fingerprints. Fingerprints are one of many forms of biometrics used to identify individuals and verify their identity. The analysis of fingerprints for matching purposes generally requires the comparison of several features of the print pattern. In this project, we use the Finger print authentication scheme which is a non-imitable biometric authentication scheme. By using this biometric authentication, we can prevent the non-licensed person from driving. Our proposed system consists of a smart card capable of storing the finger print of a particular person. While issuing the license, the specific person's finger print is to be stored in the card. At the time that person's details are fully stored in that database. So at anywhere the person should place on his finger on the finger print reader. That person's entire information will be displaying.[5]

5. PROPOSED SYSTEM :



6. PROPOSED REQUIREMENT:

| Sr. No | Parameter | Average requirement |
|--------|------------------------|---------------------|
| 1. | Aurdino UNO | 1unit |
| 2. | WI-FI Module(ESP 8266) | 1 unit |

| | | |
|----|-----------------------------|--------|
| 3. | Fingerprint Sensor(GT511C3) | 1 unit |
|----|-----------------------------|--------|

Biometrics is the technical term for body measurements and calculations. It refers to metrics related to human characteristics. Biometrics authentication is used in computer science as a form of identification and access control. Biometric identifiers are then distinctive, measurable characteristics used to label and describe individuals. Biometric identifiers are often categorized as physiological versus behavioral characteristics. Physiological characteristics are related to the shape of the body. Examples include, but are not limited to fingerprint, palm veins, face recognition, DNA, palm print, hand geometry, iris recognition, retina and odour/scent. Behavioral characteristics are related to the pattern of behavior of a person, including but not limited to typing rhythm, gait and voice. Some researchers have coined the term behaviometrics to describe the latter class of biometrics.

RTO: The Regional Transport Office or Regional Transport Authority(RTO/RTA) is the organisation of the Indian government responsible for maintaining a database of drivers and a database of vehicles for various states of India. The RTO issues driving licences, organises collection of vehicle excise duty(also known as road tax and road fund licence) and sells personalised registrations. The RTO identifies untaxed vehicles, and identify keepers of cars entering various Indian states, or who exceed speed limits on a road that has speed cameras by matching the cars to their keepers utilising the RTO database

7. HARDWARE DESCRIPTION:

Arduino:

Arduino is an open-source electronics platform based on easy-to-use hardware and software. Arduino boards are able to read inputs - light on a sensor, a finger on a button, or a Twitter message - and turn it into an output - activating a motor, turning on an LED, publishing something online. You can tell your board what to do by sending a set of instructions to the microcontroller on the board. To do so you use the Arduino programming language (based on Wiring), and the Arduino Software (IDE), based on Processing.

Wi - Fi/ Ethernet module:

The ESP8266 WiFi Module is a self contained SOC with integrated TCP/IP protocol stack that can give any microcontroller access to your WiFi network. The ESP8266 is capable of either hosting an application or offloading all Wi-Fi networking functions from another application processor.

Fingerprint Scanner:

A biometric finger scanner is a device that scans a fingerprint and keeps a record of it.

8. CONCLUSION:

Automated fingerprint identification systems have been successfully deployed around the globe for both law-enforcement and civilian applications, and new fingerprint matching applications continue to emerge. The fingerprint will continue to be the dominant biometric trait, and many identity management and access control applications will continue to rely on fingerprint recognition because of its proven performance, the existence of large legacy databases, and the availability of compact and cheap fingerprint readers.

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