AUTOMATED FUEL STATIONS USING FINGERPRINT

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Abstract- At present era in our country there are so many people who are not having their original driving license with them. Some of the peoples are maintaining fake license, due to this the ratio of accidents increasing day to day. The proposed approach of data mining can be helpful for getting the original documents online basis based on fingerprint. In order to avoid this kind of problems the project is proposed to provide driving license verification system using fingerprint reader. finger prints of the user will be taken and their respective details like license identification number, photo, adhaar card number are maintain along with the driving license database. The officers want to check the driving license of vehicles users; the verification system is used to authentication liability of the vehicle user license. In this system compare mobile location and pump location if user is near to petrol pump then user mobile phone automatically switch off or on. In petrol pump user enter input and scan his/her fingerprint. The user get fuel and account balance automatically debited.

Keywords: RFID, Sensors, Biometric Machine and Self Served Fuel Dispensing

I INTRODUCTION

Nowadays, fuel stations are operated manually. These fuel pumps are time consuming and require more manpower. To place fuel stations in distant area it very costly to provide excellent facility to the consumers all these problem are sorted out by the use of unmanned petrol pump which requires less time to operate and it is effective and can be installed anywhere the customer self- going to avail the services the payment is done Biometric machine system. In our system the RFID will be used to detect the vehicle and to scan Barcode generated by aadhar machine. Biometric Aadhar Finger Scanner provided by the fuel station which will help the petrol company to create authentication for user also the distribution of the fuel is not possible until it gets verified by the database. In short we provide secure system for fuel distribution. We implement fingerprint based driving license techniques that can provide the important functions required by advanced intelligent Car Security, to avoid vehicle theft and protect the usage of unauthenticated users. Secured and safety environment system for automobile users and also key points for the investigators can easily find out the hijackers image. We can predict the theft by using this system in our day to day life. This will help to reduce the complexity and improve security. The details of the persons are collected and are stored in IOT. The fingerprint sensor is used to detect the finger print of a particular person. When a person keeps his/her finger on the finger print sensor, it will automatically detect the details of the person including license and also its expiry date. So it will surely reduce the discomfort of a person carrying license and other details along with them. By this concept the police involving in corruption can also be identified. Suppose if a Person forget to bring his/her license or insurance or their documents got expired, then the person will receive the fine amount they have to pay in the form of message. If a centralized organization is made for collecting the fine amount, then the person must pay the fine amount at that organization and not to the traffic police.

II LITERATURE SURVEY

1.``Ajay Shankar Patil, Sayli Adesh Patil, Fingerprint Authorization Based License Checking System for Auto-Mobile" International Journal on Recent and Innovation Trends in Computing and Communication April 2016.

To Obstruct Non-Licensees From Driving And Causing Accidents, A New Advanced Automobile System Is Proposed. An Important, Trustful And Very Reliable Human Identification Method In Current Dates Is Fingerprint Identification. Fingerprint Identification Is One Of The Most Popular, Trustful And Reliable Personal Biometric Identification Methods. The Proposed System Contains A Database, It Saves The Fingerprint Of A Particular Person. While Issuing the License, The Specific Person's Fingerprint Is To Be Saved In The database. Vehicles Such As Cars, Bikes Etc. Should Have A Fingerprint Reader And Have Accomplished To Read Data Of The Particular Person's License Details. In This System Every Automobile Should Have Fingerprint Reader Device. A Person, Who Wants To Drive The Vehicle, Should Swipe His/Her Finger (License) In The Vehicle. If The Fingerprint Image Stored On The Smart Card And Swiped In The Device Matches, He/She Can Proceed For Ignition, Otherwise The Ignition System Will Not Work. Moreover, The Seat Belt Detector Verifies And Then Instigates The User To Wear The Seat Belt Before Driving The Car. This Increases The Security Of The Vehicles And Also Ensures Safe Driving By Preventing Accidents. In Case The Ignition System Of A Car Is Started With The Influence Of Valid Licensed Person. There Is A Chance To Change The Driver Of The Vehicle. So We Are Additionally Amending Our License Verification System In Road Side Also By The Helpful For Police Verification System. [1]

2. M. Vijay Kumar, S. Ranjith Kumar, ``Fingerprint Based Licensing System for Driving" International Journal of Advanced Research in Computer and Communication Engineering   Vol. 3, Issue 9, September 2014

The paper presents the designing of finger print identification in cars to avoid car theft using GSM and FPGA. Fingerprint identification is one of the most popular and reliable personal biometric identification methods. The proposed system was designed on keyless car instead of going with key based authentication we are providing with biometric based authentication. A person, who wishes to drive the vehicle, should verify with their face reorganization and finger print whether he was having license or not, once verification done then ignition unit of car will start automatically. If the person is not verified in the Face recognition the alarm unit will be on, SMS and MMS will be sent to the owner. [2]

3. Mubin Shaikh, Azhar Hakim, ``Biometric E-license" International Research Journal of Engineering and Technology (IRJET) Volume: 05 Issue: 01 Jan-2018

Fingerprints are rich in details which are in the form of discontinuities in ridges known as minutiae and are unique for each person. One of the most important tasks considering an automatic fingerprint recognition system is the minutiae biometric pattern extraction from the captured image of the fingerprint. The fingerprint matcher compares features by using Digital Image processing from input search point against all appropriate driving licences in the database to determine if a probable match exists. With this implementation, there'll be no need to carry documents along. A single fingerprint and an image will be enough to recognise and verify the individual and the vehicle.

4. Mobile platforms such as smart-phones and tablet computers have attained the technological capacity to perform tasks beyond their intended purposes. The steady increase of processing power has enticed researches to attempt increasingly challenging tasks on mobile devices with appropriate modifications over their stationary counterparts. In this work we describe main features of software modules developed for Android smartphones that are used by RTO officers for license and vehicle documents verification. In this project we use biometric approach like fingerprints and vehicle number plates for verification

5.G Santhosha, B Santosh Kumar, ``SECURE DRIVING SYSTEM BASED ON FINGERPRINT DETECTION"

In this paper, we proposed a system prevent non-licensees from driving and therefore causing accidents. The Fingerprint authentication method will give the highest level security for the authentication applications. The Bio-metric technology is an ultimate security method due to their uniqueness. The proposed system

consists of a smart card capable of storing licensing details of a particular person. While issuing the license, we maintain the database of a specific person. In this system we can process the verification in two categories one with SMARTCARD and other with Fingerprint module. The system consists of SMART CARD which can check whether authorized person or not. The somebody who desire to start the motor vehicle they must show the SMART CARD and After checking the card, then again verify the fingerprint module if the vehicle is matched with database then ignition will on or else off.

6. J. Angeline Rubella, M. Suganya, ``FINGERPRINT BASED LICENSE CHECKING FOR AUTO-MOBILES"

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

III PROPOSED SYSTEM

In the system architecture compare mobile location and pump location if user is near to petrol pump then user mobile phone automatically switch off or on. In petrol pump user enter input and scan his/her fingerprint. The user get fuel and account balance automatically debited. An important human identification method is fingerprint identification. No Two person can have same arrangement of ridge patterns and patterns of any individual remains unchanged throughout his life Whenever the officers want to check the driving license of vehicle users, the verification system is used to authenticate liability of the vehicle user license and Vehicle documents also at the time of vehicle registration the adhaar card and photo id need to be carry out that means our Biometrics its be connected to vehicle registration. It's easy to gathers to validate the Vehicle document also. Existing RTO offices didn't have systematic driving license verification system so these proposed systems helps to gather original documents also. During The Enrollment Phase, The

Fingerprint Sensor Scans the User's Fingerprint and converts it into a digital image or Template.
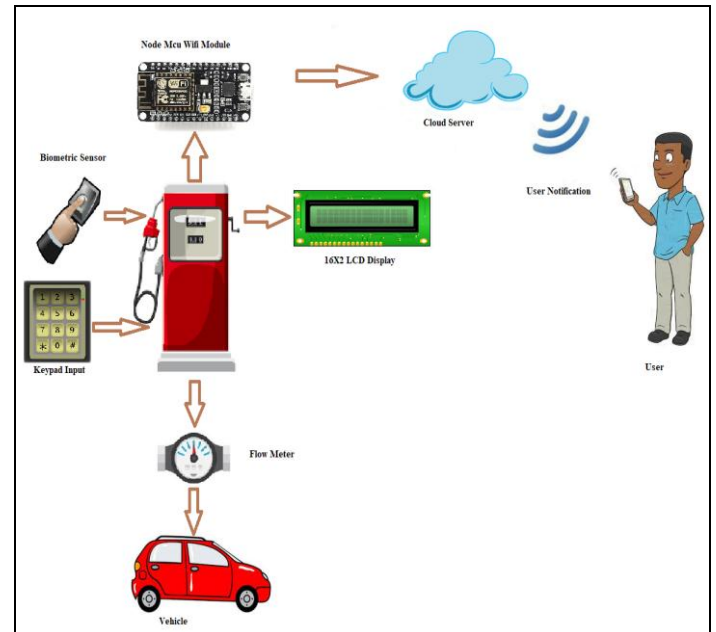
Figure. 1: System Architecture

IV ALGORITHM

knn-

Input : In, input matrix or a portion of the input matrix;
$n_{chunksize}$, dimension of the sub-matrix (chunk);
k, number of nearest neighbors;

Output: The kNN graph stored in Gk;

```
1  create Gk;
2  Gk[i].weight ← float_max, for i ← 0...(n_row − 1);
3  initialize (segments, n_GPU);
4  foreach segment ∈ segments do
5      create D;
6      create Gk';
7      host → device (In, D, Gk');
8      initialize (splits, segment);
9      create Maxk;
10     foreach split ∈ splits do
11         initialize Maxk;
12         host → device (Maxk);
13         initialize (chunks, split);
14         foreach chunk ∈ chunks do
15             Call Distance Kernel <<<grid1, block1>>> (In, n_chunksize, split, chunk, b);
16             Call kNN Kernel<<<grid2, block2>>>(D, n_chunksize, split, chunk, Maxk);
17     device → host (Gk');
18 return Gk;
```
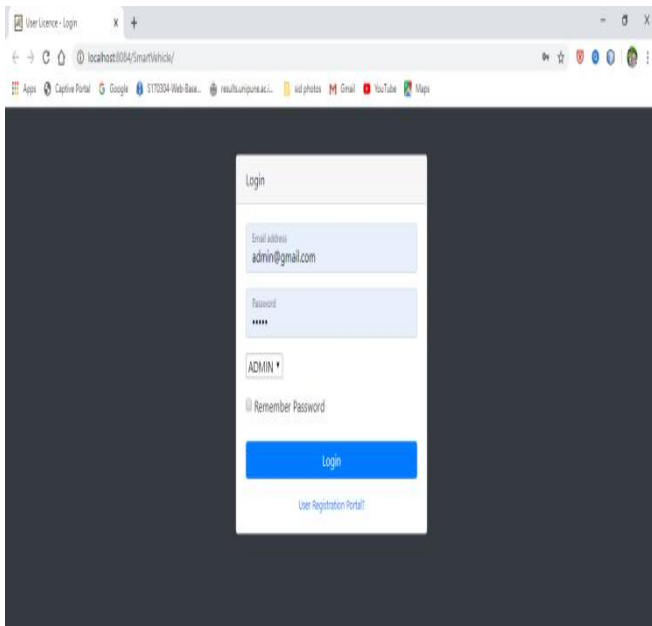
V ADVANTAGES

- Developing User Friendly Software System.
- No need to carry License
- It avoids Fraud & Duplication
- user easily get fuel
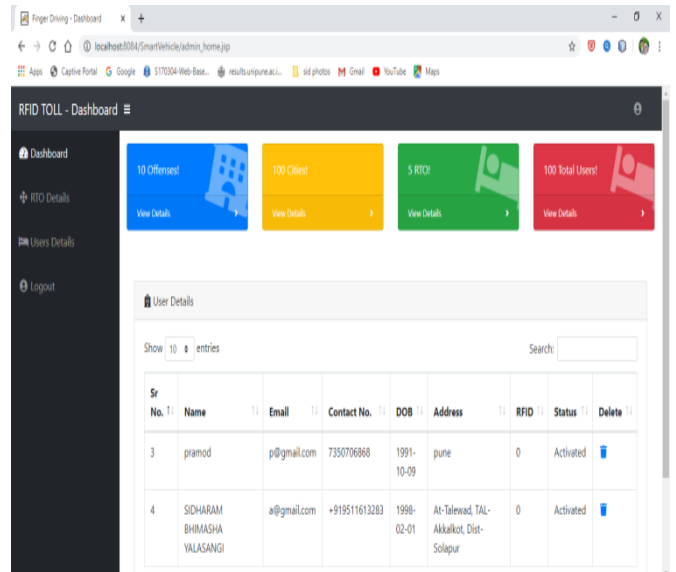
VI APPLICATIONS

- Tollbooth transaction
- Petrol pump transaction
- RTO transaction
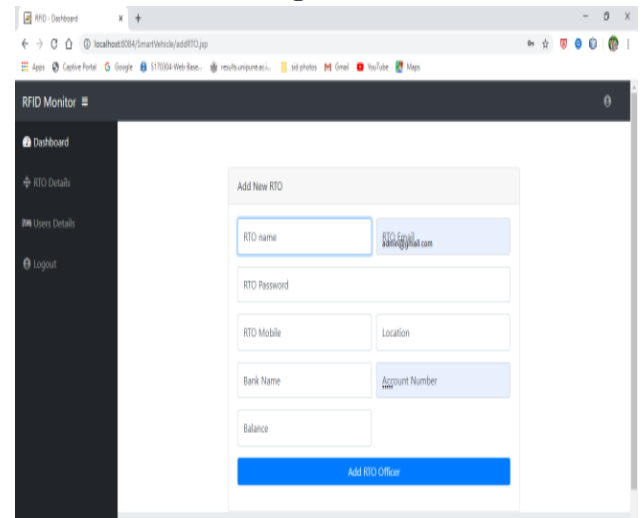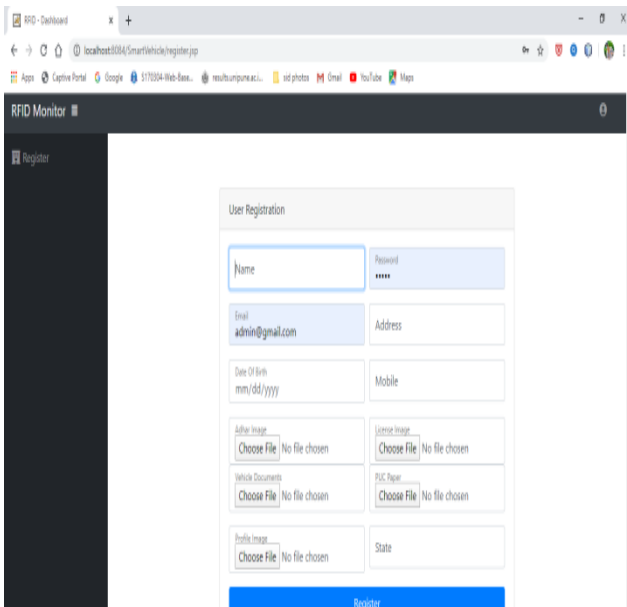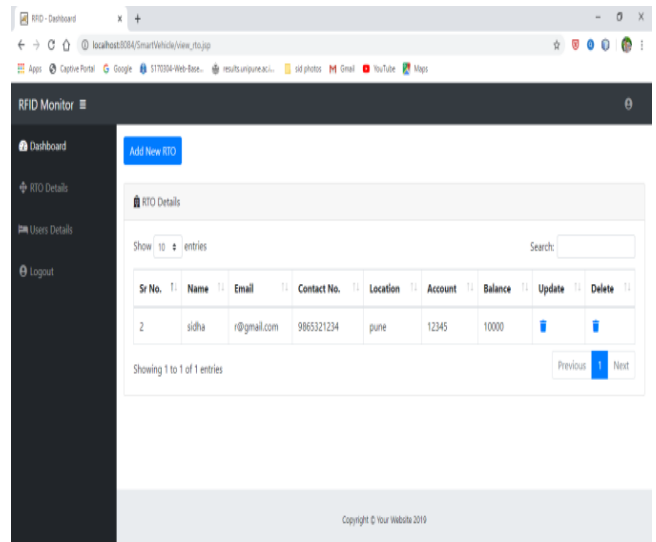
VII RESULT

Fig 1: Login Page

Fig 2: Registration Page

Fig 3: Dashboard

Fig 4: Add new RTO officer

Fig 5: RTO Details

VIII CONCLUSION AND FUTURE WORK

The proposed system is designed for driving license verification purpose based fingerprint authentication. This system can be utilized for multiple applications during driving license verification, fake licenses detection, reducing the accidents and crime rate, maintain the database of employees working at offices, multiplexes, etc. In future system will ensure that the seat belt is worn by the driver or not, so that it adds the safety feature.

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