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14.	HYBRID PHISHING SITE DETECTION	Prof. Nilesh Patil	International Journal of Advanced Science and Technology	http://sersc.org/journals/index.php/IJAST/article/view/11911
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18.	Expert System for Career Assessment using SVM and 8-Puzzle Game	Prof. Prachi Patil	International Journal of Advanced Science and Technology	http://sersc.org/journals/index.php/IJAST/article/view/10511
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IoT Based Smart Greenhouse Monitoring System

Anish Dias[1],
Saurabh Sharma[2],
Chinmay Khanolkar[3],
Nilesh Patil[4]
Fr. Conceicao Rodrigues College of Engineering, Bandra, Mumbai.

Abstract

In recent days, control systems are adapting and implementing irrigation to meet people's needs. The main reason behind this deficiency is that estimating the amount of irrigation required is a complex process and must consider several significant factors. We proposed an efficient automatic irrigation system based on the calculation of various changes needed in the greenhouse using a wireless sensor network and a server and the customer's website for controlling and monitoring service. The sensors used in the proposed design method are soil moisture, humidity, temperature, CO_2 and the light sensor, each of which has measurement changes in the atmosphere inside the greenhouse. The goal of this project is to develop a fast, easy to install and easy to use monitor and to record the natural values of temperature, humidity, soil moisture and sunlight which are constantly regulated and monitored to optimize them for growth and optimal performance of the plant.

Keywords: IoT, Sensor, WSN, Arduino

I. INTRODUCTION

In today's world, everything can be controlled and managed automatically using technology, but there are still several industries that are not as well equipped and require complete automation. We live in a world where climate change is real and is happening, conditions like drought and humidity affect the crops and plants which lead to lack of resources to match the constantly increasing human needs and also loss of the cultivation cost done by the framers. Due to lack of proper cultivation environment every year the farmers face a lot of difficulties whether that being financial problems or any other; the need for automation in the field of agriculture has now become the most basic and important need.

Implementation and development in the field of the Internet of Things in agriculture is particularly rapid in today's society. Intelligent agriculture focused on the Internet of Things will be more and more. At the heart of IOT technology [8], the Wireless Sensor Network (WSN) presents the advantages of an ad hoc network, simple implementation, low energy consumption and ease of administration. The wireless sensor network is a typical multi-hop network of an ad-hoc network and its self-organizing function can ensure that the network is connected in the

Emotion Recognition through Mobile Application

Ms. Kranti Wagle
Fr. Conceicao Rodrigues College
of Engineering, Bandra(w).
kranti@fragnel.edu.in

Seadon Rodrigues
Fr. Conceicao Rodrigues College
of Engineering, Bandra(w).
seadon1998@gmail.com

Arnav Deep Singh
Fr. Conceicao Rodrigues College
of Engineering, Bandra(w).
Deep.arnav98@gmail.com

Abstract

Emotion is an instinctive feeling derived from the surroundings or circumstances. Emotion recognition is a way of recognizing a human's emotion most commonly from face or from speech. There are many technologies that are created to recognize emotions. The main challenge of emotion recognition is to collect data, analyze and produce results with minimal computational time. Emotion recognition continues to improve as time advances. The ever rising technologies in the modern era are made feasible because of powerful resources with the help of proficient algorithms and other inventions.

Keywords— *Feature Selection, Natural User , bandlet.*

I. INTRODUCTION

The rapid growth of technology couples with frequent use smartphones, applications and services offered, emotion recognition is becoming a vital part of delivering emotional upkeep to other people If essential emotional care is delivered to people it can help enhance the quality of livelihood. There are few universal emotions- like Anger, Neutral, Fear, Surprise, Sadness, and Happiness which any smart system with the required resources can be trained to identify the particular emotion. We present an emotion recognition framework through an application on the mobile which will automatically detect emotions as and when required. Our focus is to make use of features to accomplish hands free and accurate result of the human's state of mind. The given system makes use of novel probabilistic method that integrates methods which don't include any kind of tools to help determine the human's state of mind effectively with ease.

II. LITERATURE SURVEY

[1] In the given system, the footage of the face is taken by the already available camera of a smartphone. Certain frames are extracted from the footage and further the facial regions are sensed by one module and this specific module is used to separate the facial regions by frames. The Bandlet transform is applied on the respective regions, and hence the acquired subband is allocated into a no. of non-overlapping blocks. The histograms deciphered from the acquired local binary patterns are designed for each and every block, and then they're merged over the respective blocks. The highly operative bins are established by the Kruskal-Wallis selection. The most effective bins are then served into a Gaussian mixture model-based classifier to segregate the human's state of mind. The further results show that the given system procures

Diabetes Risk Prediction Using Machine Learning

Dolly Gogri
Information Technology
Fr.CRCE
Mumbai,India

Jenny Anthony
Information Technology
Fr.CRCE
Mumbai,India

Vidhista Shetty
Information Technology
Fr.CRCE
Mumbai,India

Sarika Davare
Information Technology
Fr.CRCE
Mumbai,India

Abstract—*With changing lifestyle and food habits like lack of proper sleep, exercise, bad eating habits, etc have led to rapid increase in the number of people having diabetes hence, its necessary to decrease it. The proposed system developed will predict the risk of a person getting diabetes and classify it into one of the three categories namely low, medium and high. Depending on the risk level a diet plan or a nearby diabetologist will be suggested. The user's risk level will be provided based on the lifestyle parameters thereby avoiding complex medical jargons. The main advantage of this proposed system is its simplicity, ease of use and easy access. The system uses random forest, a supervised machine learning algorithm for classifying the person into the appropriate risk category based on their inputs that are expert approved lifestyle parameters. The accuracy of the proposed system using the random forest algorithm is 88%. The proposed system allows the users to understand and analyze their lifestyle habits and encourages them to adopt a better and active lifestyle and good eating habits according to their risk category. So, this system effectively contributes in creating a healthy society on the whole.*

Keywords—*classify, diabetes, lifestyle parameters, machine learning, random forest, risk, supervised learning.*

I. INTRODUCTION

Diabetes is an extensively growing disorder among people nowadays because of their unhealthy lifestyle and imbalanced nutrition, hence finding a solution for its prevention at early stages and spreading awareness about it has become an absolute necessity. The age group of people getting affected by diabetes is increasing every day That is why diabetes risk prediction has become the need of the hour. The diabetes risk predictor will help the user to know his or her risk level. By knowing their risk level, the users can take various preventive measure before diabetes actually hits them. The proposed system hence plays a vital role in keeping the masses educated and prudent.

These days a few systems to calculate the risk of diabetes have surfaced online. Named as the "Diabetes Risk Calculator" they calculate the risk of a person getting diabetes and also provide trivia based on diabetes. In most cases of such systems, machine learning algorithms aren't applied and hence risk is predicted according to a given range of set values of a few parameters. Hence, the accuracy of the risk calculated is at stake and not so reliable. Some other systems developed included some technical parameters that the user cannot enter without medical help which also affects the prediction's accuracy and also makes it difficult for the users to use it hence making it less economical and user-friendly.

Drawing inspiration from these systems as well as taking their drawbacks into account the proposed system will be able to calculate the risk using machine learning algorithm

called random forest which will improve the accuracy of the system as well make it more reliable. Apart from giving the risk classification the proposed system will also be able to give diet suggestions to the user as well as a list of nearby diabetologists based on the user location. Hence the proposed system to be developed will be a combination of all the pros of the previous systems and also an improvisation on them. This way an effective system to predict the risk of diabetes can provided to the society.

II. LITERATURE SURVEY

In [1], a mobile based solution was developed, to predict diabetes level of the user and spread awareness about diabetes by giving some facts and suggestions by making use of algorithms like Decision tree classifier, J48 (Weka tool), C4.5 algorithm for building decision tree J48, 4-fold cross validation in Weka and Naïve Bayes, SVM and Multilayer Perceptron to classify the collected data and providing some basic knowledge about diabetes and give the list of nearby diabetologists.

From [2], a system implementing ensemble machine learning algorithms was made to giving accurate prediction if a person has a probability of getting diabetes or not by using a combination of two algorithms namely boosting algorithm with perceptron algorithm for improving accuracy, saving time and money of people by giving accurate predictions using machine learning, the only input being the person's lifestyle details.

[3] includes a system predicting the risk of a person developing diabetes by taking into consideration various lifestyle parameters via a questionnaire. The algorithm used for this system is primarily CART (Classification and Regression Trees), this algorithm was applied on the given data set. Cross-validation was used to remove various discrepancies and biases in the result. Chi-squared tells developing diabetes is directly/indirectly dependent on which attributes, it is useful for people who can't afford expensive lab testing.

In [4], a system which predicts heart diseases and diabetes using data mining was created. Explorer, Experimenter and knowledge flow interfaces existing in WEKA is used. Naïve Bayes algorithm is applied on the dataset to get the results. The dataset includes those kinds of attributes using which diabetes and heart disease both can be predicted properly. The downside of this system is that only a single attribute for diabetes prediction is included in the dataset which compromises accuracy and the system does not predict the type of diabetes.

According to [5], the system developed makes use of machine learning algorithm in clinical psychologist data for

Home Automation System Using IOT And Wi-Fi Technology

Prof. Vaibhav Godbole
Fr. Conceicao Rodrigues
College of Engineering.
Bandra, Mumbai, India
godbole@fragnel.edu.in

Astle E Dbritto
Fr. Conceicao Rodrigues
College of Engineering.
Bandra, Mumbai, India
dbritto.astle@gmail.com

Chris P Crasto
Fr. Conceicao Rodrigues
College of Engineering,
Bandra, Mumbai, India
chriscrasto4@gmail.com

Russel R Lopes
Fr. Conceicao Rodrigues
College of Engineering,
Bandra, Mumbai, India
russellopes@gmail.com

Abstract— Automation of the surrounding environment of a modern human being allows increasing his work efficiency and comfort. An automation system is a precisely planned change in a physical or administrative task utilizing a new process, method, or machine that increases productivity, quality, and profit while providing methodological control and analysis. The value of system automation is in its ability to improve efficiency; reduce wasted resources associated with rejects or errors increase consistency, quality, and customer satisfaction; and maximize profit. There has been a significant development in the area of an individual's routine tasks and those can be automated. In the present times, we can find most of the people clinging to their mobile phones and smart devices throughout the day. Hence with the help of his companion – a mobile phone, some daily household tasks can be accomplished by personifying the use of the mobile phone. Analyzing the current smart phone market, novice mobile users are opting for Android based phones. It has become a second name for a mobile phone in layman terms. Home automation gives an individual the ability to remotely or automatically control things around the home using the mobile application. A home appliance is a device or instrument designed to perform a specific function, especially an electrical device, such as a light, fan, refrigerator, for household use.

Keywords— Arduino UNO, Classification, Home Automation System, PIR Sensor, Relays.

I. INTRODUCTION

As we enter the 21st century, the interaction between humans and computers is breaking the old barriers and entering a new realm. Today's homes require sophistication control in its different gadgets which are basically electronic appliances. This has revolutionized the area of home automation with respect to an increased level of affordability and simplicity through the integration of home appliances with smart phone and tablet connectivity. Smart phones are already feature-perfect and can be made to communicate to any other devices in an ad hoc network with a connectivity options like Bluetooth and Wi-Fi.

In the highly technology driven world of today's computer and cell phones have become a part of our lifestyles. Computers are no longer tool to manage data and neither cell phone is just communication tool. Now a days Home automation has become important issue. Many types of solutions were developed and implemented .The wireless communication in mobile network has proved to be the best solution among all and has become a fast growing business .With the recent

Home automation system makes the operations of various home appliances more convenient and saves energy. With the energy saving concept, home automation or building automation makes life very simple nowadays. It involves automatic controlling of all electrical or electronic devices in homes or even remotely through wireless communication. Centralized control of lighting equipment's, air conditioning and heating, audio/video systems, security systems, kitchen appliances and all other equipment's used in home systems is possible within the system. The system is mainly implemented by sensors, controlling devices and actuators. Controllers may be personal computers/laptops, touch pads, smart phones, etc. Attached to the controlling devices like programmable-logic controllers that receive the information from the sensors, and based on the program, control the actuators.

II. OBJECTIVES

A. To implement home automation system and monitoring using advanced internet technology.

B. Use of smart phone Eg. Android phone to control home appliances from remote location.

C. Real time controlling of home appliances from remote location.

D. Power saving and improving overall power/cost efficiency.

- To Implement Home Automation And Monitor Using Advanced Technology Recent development in technologies such as WI-FI, GSM and BLUETOOTH has opened wide scope for automation. Moreover with the development of technologies such as IOT(internet of things) has added to efficiency of this system. Thus enabling users to control their home appliances from far of places.

- Helpful For Elderly People. Today we are living in 21st century where automation is playing important role in human life. Home automation allows us to control household appliances like Light, door, fan, AC etc. It also provides home security and emergency system to be activated.

- Power Saving And Improves Overall Efficiency The home automation system tends to reduce the power loss through smart switching of electrical appliances and thus increasing the

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AADHAR VOTING SYSTEM

Puja Sharma[#1], Megha More[*2], Aishwarya Wadlya[#3], Garima Tripathi[#4]

[#1]*Information Technology, University of Mumbai*
[#2]*Information Technology, University of Mumbai*
[#3]*Information Technology, University of Mumbai*
[#4] *Information Technology, University of Mumbai*

[1]getpujal1@gmail.com
[2]megha.more95@gmail.com
[3]aishwaryawadlya@gmail.com
[4]garima@frcrce.ac.in

ABSTRACT

The purpose of the System is to provide Authenticated & 100% tampering free votes. As we all know the amount of vote manipulation done during election. So as to avoid this, the proposed system will make use of Biometric authenticity which will be linked with your Aadhar card which makes you & your vote authenticated. In addition to this, the system also focuses on getting votes from the migrants so as to increase the voting percentage in our country. The voting system for the migrants will be App based voting wherein once again the authenticity will be verified through their respective Aadhar card. No Voter ID card is required for this proposed system but you definitely need to have an Aadhar card to take part in the Voting process of the election

Keywords — Aadhar card, Migrants, Biometric,

I. INTRODUCTION

In India or in any country election is a basic process of Democracy which specifically shows people's choice & their right to elect the government. But during the past few years it has been observed that the percentage of Voting is decreasing day by day & also a lot many questions are been raised on the total number of true Votes generated. Basically our current voting system fails to provide Authenticated votes. In order to avoid this, the proposed system will mainly focus on two sectors, firstly to receive authenticated/true votes & secondly to get votes from the migrants too in order to increase the voting percentage of our country. The system will be purely working on your Aadhaar card details so anyhow there is no need of Voter ID card but the requirement of Aadhaar card is a must. As far now biometric authentication method is known to be the best & a true method for proving someone's authenticity, so going ahead with this, the proposed system will also work on your fingerprint which will be linked to your Aadhaar card so as to prove your Authenticity. This will also make only the legitimate users to cast their vote resulting into tamper free votes. Secondly to receive votes of the migrants the system will consist of an app wherein again Aadhaar card is the medium of authentication providing an OTP on the Mobile number which is being linked with your Aadhaar card only after entering your 10 digit Aadhaar Number. So the proposed system mainly focuses on overcoming the flaws of the current Voting System & also takes a step towards Digital India.

II. SCOPE

The proposed system aims to fulfil two major goals firstly, to achieve 100% tamper free votes and secondly to receive votes from the migrants which majorly focuses on increasing the overall voting percentage. In order to achieve the listed goals above the following constraints need to be overcome i.e. requirement of Technical experts for maintenance of the website and application. Also maintaining the security of the data and credentials of the voters is the major concern for this proposed

Calorie Tracker using CNN

Lerisha D'souza[1], Nikita Jadhav[2], Rithika Radhan[3], Garima Tripathi[4]

[1,2,3,4]*Department of Information Technology Engineering,
Fr. Conceicao Rodrigues College of Engineering (FRCRCE), Bandra, Mumbai, India
[1]dsouzalerisha1@gmail.com, [2]nikzjadhav998@gmail.com, [3]rithikag65@gmail.com,
[4]garima@frcrce.ac.in*

ABSTRACT: The dramatic shift in people's lifestyle over the period of years has accelerated the obesity rates to a very high extent. Obesity makes people more prone to diseases. Food products have labels indicating the proportion of sugar, carbohydrates, proteins and fats in it. However, the busy lifestyle doesn't pave the way to read the contents printed on the food packets. Giving conducive and well-informed solutions to the people will help them to monitor their diet promoting to maintain a healthy lifestyle. The proposed system provides the intake of calories just by uploading a photograph of the food which the users consume throughout the day and provide an alert message when the consumption of calories exceeds the limit. Identification of the foodstuffs is done precisely by using convolutional neural networks. This paper, uses YoloV3 to detect the food and provide calorie estimation. The accuracy for recognition of the food is 80%.

KEYWORDS: *Darknet, Logistic Regression, Opencv, Yolov3, Average IOU.*

1. INTRODUCTION

Humans encounter a number of objects on daily basis including food, clothing, furniture, etc. At times, they aren't able to recognize or in other words able to detect what type of object is present in front of them. To help them with it, current detection system reuse the classifiers to perform detection. To detect such objects, the systems chooses a classifier for that respective object and evaluate the object at various scales in test image. Sliding window approach by systems like deformable parts models (DPM) run the classifier at evenly spaced locations over the entire image.

In recent times, approaches like RCNN which make use of regional approach methods first try to create a bounding box in an image and then run the classifiers on the boxes produced. Once the classification is done the next step is the post processing where we filter the bounding boxes, eliminate duplicate detections and rescore the boxes based on other objects in the scene. However, this process is a complex plan since it requires training each model separately which consumes a significant amount of time. Therefore, a model which could reduce this time was required. One such model is the YOLOV3

Music Genre Classification using Neural Networks

Kinjal Mhatre
Department of Information Technology, Fr. Conceicao Rodrigues college of Engineering, Mumbai University

Viraj Almeida
Department of Information Technology, Fr. Conceicao Rodrigues college of Engineering, Mumbai University

Samuel Lopes
Department of Information Technology, Fr. Conceicao Rodrigues college of Engineering, Mumbai University

Prof. Garima Tripathi
Department of Information Technology, Fr. Conceicao Rodrigues college of Engineering, Mumbai University

ABSTRACT

Classification of music in multiple genres is one the most important part today where the collection of music is growing at a great speed whether it be online or offline. In order to have better access to music we need to organize them accordingly. The music genre classification is used to identify a type of music from large collection of music data. Machine learning concepts are most widely used terminologies in music genre classifications. Here, we present a music dataset that includes ten different genres. In this project, we trained our models over the GTZAN dataset. We have compared the performances of CNN and RNN model and logged their results in terms of prediction accuracies. It is found that the convolutional recurrent neural network model has given the highest accuracy then that of the convolutional neural network mode.

Keywords: Feature extraction, machine learning concepts, concurrent neural network, music genre classification, recurrent neural network.

I. Introduction

Music genres are a bunch of keywords with description that contains high-level information about a music clip (hip-hop, classical, rock, etc.). Music Genre classification identifies and predicts music genre using the audio signal. Being able to automatize the task of detecting musical tags allow creating interesting content for the user like music discovery and playlist creations, and for the content provider like music labelling and ordering.

Building this system requires extraction of acoustic features which are good estimators of the type of genres we are interested, followed by a single or multi-label classification or in some cases, regression stage. Conventionally, feature extraction depends on a front end signal processing in order to evaluate relevant features from time or frequency domain audio representation. These features are further used as an input to the machine learning to stage. However, it is difficult to know which features are the most relevant to perform each task. The recent approaches using Deep Neural Networks (DNNs), unify feature extraction and decision taking. Thus, allow learning the relevant features for each task at the same time that the system is learning to classify them. The proposed system reviews the two state-of-the-art network architectures on the basis of their accuracy.

II. Literature Review

Paper [1], proposed the answer to meet the matter of blurry classification of Pop, Rock and Electronic genres. It seems that these genres don't seem to be arranged accurately by the above classifiers. The behaviour of the given classifier on the quality musical style dataset GTZAN genre collection that consists of 1000 songs and Free Music Archive (FMA) dataset is investigated. The proposed hybrid classifier is deployed on spark platform to demonstrate the scalability of the system. Here the input audio signal in divided into frames of constant frame-size, hopping thought the audio signal with a relentless hop-size; features are extracted on one frame at a time.

Detection and Prediction of Osteoporosis using ANN

Katoushka Gracias[1], Niharika Gogate[2] and Prof. Prajakta Bhangale[3]

Department of Information Technology Engineering,

Fr. Conceicao Rodrigues College of Engineering, Bandra

[1]katoushkag@gmail.com, [2]niharikagogate17@gmail.com, [3]prajakta.bhangale@fragnel.edu.in

Abstract

Osteoporosis is a bone disease caused due to low bone mineral density (BMD) and deterioration of bone tissue, leading to bone fragility and increased fracture risk. The inside of a healthy normal bone has minuscule spaces, similar to that of a honeycomb. Osteoporosis tends to increase the size of these spaces, due to which the bone loses strength and density. In addition to this, the exterior of the bone is inclined to grow weaker and thinner. Osteoporosis can develop in people of any age, but it's more common in older adults, especially women. People having osteoporosis are at a high risk of fractures, or bone breaks, while doing day to day activities such as standing or walking. The most commonly concerned bones are the ribs, hips, and the bones in the wrists and spine.

Keywords — Osteoporosis, ANN, BMD, DEXA Scan, T-score.

1. Introduction

Osteoporosis is a bone disease that weakens bones making them fragile and more likely to fracture, it leads to bone injury. It develops gradually over several years, hence occurs in elderly people and is only detected due to a minor fall or sudden impact on the bone. Osteoporosis can develop in people of any age, but it's more common in older adults, especially women. A DEXA scan is a non-intrusive test that calculates the bone mineral density to determine whether a person may or may not be at risk of osteoporosis or fracture. DEXA stands for dual energy x-ray absorptiometry—this term actually informs you about this procedure, where two X-ray beams are aimed at the bones. Unlike a regular X-ray that can show changes in bone density (osteopenia) after bone loss of about 40 percent; a DEXA scan can detect changes as minuscule as 1 percent, making it extremely sensitive and accurate. It is sometimes also known as a central DEXA scan, bone densitometer scan, or a DXA scan.

2. Literature Survey

The paper [1] is carried out on the tibial bone to detect osteoporosis, a surgical hammer is used for this technique. The human leg is subjected to a lot of loading action due to running, walking, jumping and various activities and hence is considered as an ideal region to carry out these operations. The vibrations that were generated by the surgical hammer were collected by the accelerometer to process. ADXL 335 is a 3-axis accelerometer with signal conditioned voltage outputs.

Random Graphic User Password in Mobile Devices

Jasmine Angel[*1], Prajakta Bhangale[*2], Mary Elizabeth[*3]

*"Dept. of I.T., Fr.Conceicao Rodrigues college of Engineering, University of Mumbai, India

[1]sjasmineangel@gmail.com

[2]maryelizabeth12598@gmail.com

[3]Prajakta.bhongale@fragnal.edu.in

Abstract-- Nowadays, smart phones are used, so authentication plays an important role here. So to keep the system secure, we have come up with an idea of random graphic pattern generator. In this case, just like smart phones there will be patterns, user is allowed to draw their pattern on a circle shaped designed user interface. Basically, there will be pin and patterns. The pin will remain same but number sequence will keep changing. To make a system more secure random graphic pattern is used. The user needs to first select a pin (exactly 4 digit). Then based on the pin the user needs to draw a pattern. Next time if the user logs-in, the pin remains same, but arrangement of the numbers on the circle keeps changing (by randomly changing the fixed position of the digital graphics that shows on the touch screen).

Key Words-- Pattern generation, Random digitals, Shuffling algorithm, Pixel geometry, Android.

I. INTRODUCTION

User authentication is a fundamental component in most computer security contexts. It provides the idea for access control and user accountability. While there are various sorts of user authentication systems, alphanumerical username/passwords are the foremost common sort of user authentication. They are versatile and straightforward to implement and use. Alphanumerical passwords are required to satisfy two contradictory requirements. They have to be easily remembered by a user, while they have to be hard to guess by impostor [7]. In addition, conventional passwords have significant security issues, thanks to the difficult combination of keys (which includes uppercase, special characters and numbers). Thus, human felt it so hard to remember those passwords. When they choose a straight forward password, this helps hackers to crack their passwords easily by dictionary or brute force attack. Also they are vulnerable to shoulder surfing attack or observation by nearby third party. The creation of a secure graphical password is to provide best possible usability and security [8]. This common practice might lead to security risks such as insider attacks. Malicious administrators or insiders, who have access to username and password tables, can leverage the information to access other services and websites. Biometric systems depend on unique features unchanged within the lifetime of a person, like fingerprints, retina pattern, iris, voice print and face pattern, and are used as an alternate to alphanumeric passwords, but not yet widely adopted. The major drawback of using biometrics as an authentication technique is that such systems may be expensive for additional devices to obtain and handle the physical characters of users, and the identification process may cost a big amount of your time. If the biometric identification feature is physically altered through an accident or operation, the authentication becomes invalid [10]. However, biometric-based passwords are believed to provide the highest level of security. Researchers have developed several authentication methods based on graphical passwords, originally proposed by Blonder in 1996 [8] Various graphical password schemes have been demonstrated as feasible alternatives to alphanumeric-based or biometric-based authentications [9] In this paper random graphical pattern is generated using pixel geometry. The main contribution of this paper is to provide a reliable authentication method with resistance to shoulder surfing attack.