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10<sup>th</sup> to 12<sup>th</sup> March, 2011**

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**AB V1-Pr 3 -1**

### BIOMEDICAL IMAGE PROCESSING USING SEGMENTATION

**A.R.BABULGAONKAR, SONALI V.BHARAD, NITIN B.PATIL, NIMISH R.GAWAS**

Department of IT, Dr.Babasaheb Ambedkar Technological University, Lonere, Raigad, (MS), India.

[arbabulgaonkar@gmail.com](mailto:arbabulgaonkar@gmail.com)

Image Processing is nothing but the processing of image in which removing ingredient and clearing and focusing on important object inside the image with improving its color quality and contrast and protect image from pixel distribution. Image segmentation is an essential but critical component in low level vision image analysis, pattern recognition Medical systems. Segmentation of medical images is challenging due to poor image contrast and artifacts that result in missing or diffuse organ/tissue boundaries. Consequently, this task involves incorporating as much prior information as possible (e.g., texture, shape, and spatial location of organs) into a single framework.

**AB V1-Pr 3 -2**

### COMPUTER AIDED DETECTION IN MAMMOGRAPHY

**SRINIVAS DIXIT, JOSEPH THOMAS, ADITYA SHETTY, PRIYA T. HANKARE**

Department of E & TC Engineering, Don Bosco Institute of Technology, Mumbai

[adishetti@yahoo.com](mailto:adishetti@yahoo.com)

CAD Mammography is a technology designed to decrease observational oversights and thus the false negative rates of radiologists interpreting medical mammograms. Prospective clinical studies have demonstrated an increase in breast cancer detection at an early stage with CAD assistance. CAD systems are used for detection by radiologists using the output of a computerized scheme for automated image analysis as a detection aid. The images in this case are mammograms which are low-dose x-rays of the breasts. The intent of CAD is to support rather than substitute the human observer in the analysis of radiographic mammograms. In this paper are described the general CAD systems as an expert system constituted of the following components: segmentation / detection, feature extraction, and classification / decision making. The objective is to assess the performance of computer-aided detection (CAD) on diagnostic mammography and to provide a second opinion. The project aims at implementing a cad algorithm using a computer software and testing it.



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**AB V1-Pr 3 -3**

### NEURAL NETWORKS IN MEDICAL IMAGE SEGMENTATION: A REVIEW

**KHACHANE MONALI YASHAWANT**

Assistant Professor, Institute of Management and Research, Jalgaon

[monalikhachane@gmail.com](mailto:monalikhachane@gmail.com)

This paper reviews the application of artificial neural networks in medical image preprocessing. Main advantages and drawbacks of artificial neural networks were discussed. By this survey, the paper tries to answer what the major strengths and weakness of applying neural networks for medical image Segmentation would be.

**AB V1-Pr 3 -4**

### DESIGNING OF NEW PROPOSED TECHNIQUE FOR LIE DETECTION USING EEG SIGNALS

**GANESH JANVALE<sup>1</sup>, AARON M. OIRERE<sup>2</sup>, VISHAL WAGHMARE<sup>3</sup>, RATNADEEP DESHMUKH<sup>4</sup>**

<sup>1</sup>Department of Management Science, Dr. Babasaheb Ambedkar Marathwada University, Sub-Center, Osmanabad (MS) India

<sup>2,3,4</sup>Department of Computer Science and Information Technology, Dr. Babasaheb Ambedkar Marathwada University, Aurangabad (MS) India

[ganesh.janvale@gmail.com](mailto:ganesh.janvale@gmail.com)

The proposed system is designed to make EEG database of criminals during the investigation by crime branch. System will be detecting the criminals on the bases of thought related to crime to be stored in brain, when the question related to the crime will be asked automatically remind the past event. The whole system will be tested after complete the investigation by crime branch.

**AB V1-Pr 3 -5**

### ARTIFICIAL NEURAL NETWORKS: A REQUIREMENT FOR INTELLIGENT SYSTEMS

**S. K. JAYASINGH, LECTURER<sup>1</sup>**

<sup>1</sup>Department of Computer Science, I.M.I.T., Cuttack, Biju Patnaik University of Technology, Orissa, India

[sjayasingh@gmail.com](mailto:sjayasingh@gmail.com)

This article is intended to be a guide on technologies of neural networks, technologies that I believe are an essential basis about what awaits us in the future. The article is divided into 3 sections: The first one contains technical information about the neural networks architectures known, this section is merely theoretical, The second section is set of topics related to neural networks as: artificial intelligence genetic

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algorithms, DSP's, among others. And the third section is the article blog where I expose personal projects related to neural networks and artificial intelligence, where the understanding of certain theoretical dilemmas can be understood with the aid of source code programs.

### AB V1-Pr 3 -6

#### KNOWLEDGEBASE DESIGN FOR CREDIT RISK EVALUATION USING EVOLUTIONARY NEURO FUZZY LOGIC

**SREEKANTHA . DESAI.KARANAM<sup>1</sup>, R.V. KULKARNI<sup>2</sup>**

<sup>1</sup>Department of Computer Science, Basaveshwar Science College, Bagalkot, India

<sup>2</sup> Chh. Shahu. Institute of Business Education & Research (SIBER), Shivaji University Road, Kolhapur, Maharashtra, India

[sreekantha.desai@gmail.com](mailto:sreekantha.desai@gmail.com)

Micro, Small and Medium scale Enterprises (MSME) need financial assistance to run their business activities. MSME find themselves spending a significant amount of time and effort while approaching various banks for credit. The researchers estimate that about 60% of the MSME credit is provided by commercial banks alone. Over the past few years, the Credit Risk Evaluation by banks and financial institutions has been an active area of research under the joint pressure of regulators and shareholders. The credit risk assessment involves assessment of risk parameters such as financial, business, industry and management areas. The mathematical models of evaluation area the core of modern credit risk management systems. This paper focuses on the use of fuzzy logic and neural network techniques to design a methodology for evaluating the credit worthiness of the entrepreneur. The neuro-fuzzy logic approach takes in to account the minute details of credit rating expert's thought process to arrive at the final decision. A flexible Credit Rating Framework (CRF) has been designed to organize all the facts of the client in a hierarchical fashion. The neural networks provide self-learning capability to the CRF. The CRF can be customized to suit different business and industrial interests.

### AB V1-Pr 3 -7

#### BRAIN CANCER DETECTION USING NEURO FUZZY LOGIC

**<sup>1</sup> LAXMI GHODKE, <sup>2</sup>APEKSHA NAIK, <sup>3</sup>RAHUL KONALE, <sup>4</sup>SUCHIT MEHTA.**

Information Technology Department, TERNA Engineering College  
MUMBAI UNIVERSITY

[lghodke@gmail.com](mailto:lghodke@gmail.com)

**This paper presents an approach of computer-aided diagnosis for early prediction of cancer cells in brain. It extracts the texture from the given brain MRI sample.**

It uses image processing techniques followed by neuro classification for prediction of Cancer for a given MRI sample. A neuro fuzzy approach is used for the recognition of the extracted region. The implementation is observed on various types of MRI images with different types of cancer regions.

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**AB V1-Pr 3 -8**

### NEURAL NETWORK

**ASHOK J. YEDE<sup>1</sup>, SAGAR S. ZANJE<sup>2</sup>**

<sup>1,2</sup> Department of Information Technology,  
[<sup>1,2</sup>] Dr Babasaheb Ambedkar Technological University, Lonere 402103 Dist Raigad M.S. INDIA  
[ask20070760@gmail.com](mailto:ask20070760@gmail.com)

In this paper we proposed a designing and implementing intelligent systems has become a crucial factor for the innovation and development of better products for society. such is the case of the implementation of artificial life as well as giving solution to interrogatives that linear systems are not able resolve .a neural network is a parallel system, capable of resolving paradigms that linear computing cannot. artificial neural networks (ANN) are among the newest signal-processing technologies in the engineer's toolbox. an artificial neural operation of biological neural networks network is a system based on the, in other words, is an emulation of biological neural system. why would be necessary the implementation of artificial neural networks? Although computing these days is truly advanced, there are certain tasks that a program made for a common microprocessor is unable to perform. Inspired by the structure of the brain, a neural network consists of a set of highly interconnected entities, called *nodes* or *units*. each unit is designed to mimic its biological counterpart, the neuron. Each accepts a weighted set of inputs and responds with an output.

**AB V1-Pr 3 -9**

### NEURO FUZZY LOGIC

**ASHOK J. YEDE<sup>1</sup>, SHIVAJIRAO M. JADHAV<sup>2</sup>**

<sup>1</sup> Department of Information Technology,  
<sup>2</sup> Department of Information Technology [Ph.D]  
<sup>1,2</sup> Dr Babasaheb Ambedkar Technological University, Lonere 402103 Dist Raigad M.S. INDIA  
[ask20070760@gmail.com](mailto:ask20070760@gmail.com)

In this paper we will introduce Fuzzy Logic (FL). Through the course of this article, a simple implementation will be explained in detail. FL is a problem-solving control system methodology that lends itself to implementation in systems ranging from simple, small, embedded micro-controllers to large, networked, multi-channel PC or workstation-based data acquisition and control systems. It can be implemented in hardware, software, or a combination of both. FL provides a simple way to arrive at a definite conclusion based upon vague, ambiguous, imprecise, noisy, or missing input information. FL's approach to control problems mimics how a person would make decisions, only much faster. Fuzzy logic emerged as a consequence of the 1965 proposal of fuzzy set theory by Lotfi Zadeh. Though fuzzy logic has been applied to many fields, from control theory to artificial intelligence, it still remains controversial among most statisticians, who prefer Bayesian logic, and some control engineers, who prefer traditional two-valued logic. The concept of Fuzzy Logic (FL) was conceived by Lotfi Zadeh, a professor at the University of California at Berkley, and presented not as a control methodology, but as a way of processing data by allowing partial set membership rather than crisp set membership or non-membership. This approach to set

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theory was not applied to control systems until the 70's due to insufficient small-computer capability prior to that time. Professor *Zadeh* reasoned that people do not require precise, numerical information input, and yet they are capable of highly adaptive control. If feedback controllers could be programmed to accept noisy, imprecise input, they would be much more effective and perhaps easier to implement. Unfortunately, U.S. manufacturers have not been so quick to embrace this technology while the Europeans and Japanese have been aggressively building real products around it.

### AB V1-Pr 3 -10

#### NEUROECONOMICS: THE HIDDEN TREASURE IN THE BRAIN

**A. S. RAMTEKE<sup>1</sup>, S. M. WANJARKHEDE<sup>2</sup>, R. J. RAMTEKE<sup>3</sup>**

<sup>1</sup> Dept. of MCA, Sinhgad Institutes, SIBACA Lonavala, University of Pune, Pune, India

<sup>2</sup> Dept. of IT, GNDEC, Bidar, Karnataka, India

<sup>3</sup> Department of Computer Science, North Maharashtra University, Jalgaon, India

[ajay\\_ramteke@yahoo.com](mailto:ajay_ramteke@yahoo.com)

Neuroeconomics is the study of interaction of brain with its external environment to produce economic behavior. Natural tendency of humans and other animals is to disregard future benefits and costs when choice is between immediate and delayed reward. This tendency may lead to make quick decision to go for immediate reward even if it is smaller in cost than bigger, delayed reward. Recently it has been found that there is a neurophysiologic basis of this self-defeating behavior. This article discuss the temptation to choose the smaller, immediate reward available than the bigger, delayed one.

### AB V1-Pr 3 -11

#### REMOVAL SPECKLE NOISE FROM MEDICAL IMAGE USING IMAGE PROCESSING TECHNIQUES

**SALEM SALEH AL-AMRI**

Research Student, Computer Science Dept., Yeshwant College, Nanded

[salemalamri2003@yahoo.com](mailto:salemalamri2003@yahoo.com)

In image processing, medical images are corrupted by different types of noises. It is very important to obtain precise images to facilitate accurate observations for the given application. Removing of noise from medical images is now a very challenging issue in the field of medical image processing, this paper attempts to undertake the study of speckle noise of medical image by using three types of filters as mean filter, median filter and adaptive median filter applied in the four types of medical image and compared with one another so as to choose the best technique



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### AB V1-Pr 3 -12

#### POTENTIAL LEAD MOLECULES AGAINST ISPC OF MYCOBACTERIUM TUBERCULOSIS

**D.M.PATIL<sup>1</sup>, S.M.JOSHI<sup>2</sup>, S.D.KHARBADE<sup>3</sup>**

Department of Biotechnology, KIT's College of Engineering, Kolhapur, India  
[saurabh.02@hotmail.com](mailto:saurabh.02@hotmail.com)

Mycobacterium tuberculosis is a multi drug resistant pathogen. It causes life threatening infections in individuals with compromised immune systems, such as cancer patients undergoing chemotherapy or patients with cystic fibrosis. This bacterium is naturally resistant to many antimicrobials and with the overuse of antibiotics has become resistant to those it was once sensitive. Thus, there is a real need for new drugs and approaches to combat the myriad diseases caused by this pathogen. For this purpose, Computer-aided drug design, one of the powerful method for discovering new drug leads against important targets, was used. The various proteins that are essential for the pathogenesis of the organism were selected as the targets. After the targets were selected, new leads were chosen from a subset of small molecules that scored well when docked *in silico* against target. The drug lead molecules were evaluated for their drug-likeness using "Lipinski Rule of Five". This approach greatly facilitates the search for new antimicrobials.

### AB V1-Pr 3 -13

#### A MULTIMEDIA TOOL FOR DYSLEXIA

**S N. DESHMUKH<sup>1</sup>, V. M. DANI<sup>2</sup>, JAYSHREE KULKARNI<sup>3</sup>**

<sup>1</sup> Scholar SIBACA, University of Pune, Lonavala, India

<sup>2</sup> Scholar SIBACA, University of Pune, Lonavala, India

<sup>3</sup> Asst. Professors, SIBACA University of Pune, Lonavala

[ankit\\_deshmukh60@yahoo.com](mailto:ankit_deshmukh60@yahoo.com), [vijit.dani@gmail.com](mailto:vijit.dani@gmail.com), [jayashreesk@yahoo.com](mailto:jayashreesk@yahoo.com)

Modern technology has developed through the years of intensive research and testing. The efforts of these researches have not come to waste since now the products are used to help people cope up with their disabilities and difficulties, whether acquired or natural. Technology has developed so immensely that it is applied in every possible field. The use of information and communication technology is done in learning. In this paper we are emphasizing on dyslexia under visual processing. The paper says about implementing the information and communication technology as a tool for trainers. This paper is about the fact that how information and communication technology can be implemented to help dyslexics to learn, read with a proper approach.



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**AB V1-Pr 3 -14**

### NEURAL MARKETING: PRACTICAL IMPLICATIONS FOR CONTEMPORARY MARKETERS

**PRATIMA SHEOREY<sup>1</sup>, POOJA EWEKAR<sup>2</sup>**

<sup>1</sup>B.Sc, MBA(Marketing), Associate Professor, Head of Department-Marketing, SCMHRD  
(Symbiosis Centre for Management and Human Resource Development), Pune, India

<sup>2</sup>B.sc (Biotechnology), M.Sc (Biotechnology), Currently MBA-I (Contemplated specialization-  
Marketing), SCMHRD, Pune, India

[pratima\\_sheorey@scmhrd.edu](mailto:pratima_sheorey@scmhrd.edu), [pooja\\_pewekar@scmhrd.edu](mailto:pooja_pewekar@scmhrd.edu)

Neural Marketing can be seen as an intriguing marriage of marketing and science. It can be called as the window into the human mind giving us an insight into the sub conscious thoughts, feelings and desires that drive the purchasing decisions of modern day consumers. All the work done on Neural Marketing so far is mostly derived from medical and scientific journals and therefore restricted to the possibilities offered by science. However there is little that is available that can give marketers a practical and direct insight into its application in the modern business scenario. This article will attempt to get an understanding of how a tool like Neural Marketing can be applied to better understand how consumers are making the decisions to purchase and use products or services.

Neural Marketing can therefore have wide ranging applications for executives and analysts by bringing to life all data related to the products and services consumers expect. Neural Marketing has the ability to link data and decisions across the entire palate of marketing functionality. The far reaching power of Neural Marketing will eventually become commonplace and that is what this article will try and gauge. Measuring consumer expectations is an integral part of any firm's strategy and Neural Marketing provides a new and intriguing possibility. Our attempt is also to understand the potential impact of using neurosciences as a marketing tool. The expected outcome is to try and understand what the future research into applied marketing science is going to lead to.

**AB V1-Pr 3 -15**

### A NOVEL APPROACH FOR OPTICAL CHARACTER RECOGNITION USING MATLAB

**OMKAR A. TRIKOLIKAR<sup>1</sup>, SHIVAPRAKASH T. MULEY<sup>2</sup>, SANJAY L. NALBALWAR<sup>3</sup>,  
A. B. NANDGAONKAR<sup>4</sup>**

<sup>1,2,3,4</sup> Department of Electronics & Telecommunication Engineering,  
Dr. Babasaheb Ambedkar Technological University,  
Lonere, Tal-Mangaon, Dist- Raigad.  
[OM.EXTC@gmail.com](mailto:OM.EXTC@gmail.com)

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In this paper, we review some studies on Optical Character Recognition & methods to implement the same using MATLAB software. OCR is an area of research that has attracted the interest of researchers for the past forty years. Although the subject has been the center topic for many researchers for years, it remains one of the most challenging and exciting areas in pattern recognition. The goal of OCR is to classify optical patterns (often contained in a digital image) corresponding to alphanumeric or other characters.

**AB V1-Pr 3 -16**

### INTERACTIVE DATABASE RETRIEVAL HEALTH ADVISOR MODEL BASED ON ARTIFICIAL INTELLIGENCE

**A. R. BABHULGAONKAR<sup>1</sup>, SAMARTH N. PATIL<sup>2</sup>, MAROTI V. KUMBHAR<sup>3</sup>**

Department of Information Technology  
Dr. Babasaheb Ambedkar Technological University  
Lonere (Raigad), India

[rbabhulgaonkar@gmail.com](mailto:rbabhulgaonkar@gmail.com)

Natural language processing is a branch of artificial intelligence that deals with analyzing, understanding and generating the languages that humans use naturally in order to interface with computers in both written and spoken contexts using natural human languages instead of computer languages.

In this paper, we propose a method to build a specific Health Advisor system using NLP, which is integrated with medical diagnosis of the patient. Users can use simple English language to enter information about related symptoms and get related prescription on the corresponding diseases by using NLP. Today many people are suffering health problems because lot of increase in pollutions. So he have face some daily health problems and now a days' time is one of the most valuable thing so it is not convenient to people to go to hospital for minor problems. So there is requirement of advisor who can be available at any time 24 hours so our project is fulfill the requirement of health advisor which can be help to patient with his minor health problems or also give information of the diseases.

**AB V1-Pr 3 -17**

### A ROLE OF QUERY OPTIMIZATION IN RELATIONAL DATABASE

**PROF.M.A.PUND<sup>1</sup>, MR.S.R.JADHAO<sup>2</sup>, MR.P.D.THAKARE<sup>3</sup>**

<sup>1</sup>Department of Comp. Science & Engineering, PRMITR Badnera, Amravati University, India

<sup>2,3</sup>Department of Comp. Science & Engineering, BNCOE Pusad, Amravati University, India

[pundmukesh@rediffmail.com](mailto:pundmukesh@rediffmail.com)

Nowadays, we are flooded with information through and from the Databases. We have to deal with a constantly increasing amount of facts, figures and dates. Therefore, it is necessary to somehow store this information in an adequate way. This is what database systems were developed for. One particular approach is the relational databases. In a relational database all information can be found in a series of tables in which data is stored in rows and columns. The problem with SQL query, its



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declarative – does not specify a query execution plan and also we have to deal with as a consequence is the question as how to find the specific facts that might interest us amongst all the information stored in the described tables. And as one might put it, “Time is Money” in our society, it is not only important to find the required information, but also with proper execution plan so that it takes less time. The solution is to convert SQL query to an equivalent relational algebra and evaluates it using the associated query execution plan.

This paper will introduce the reader to the basic concepts of query processing and query optimization in the relational database domain. How a database processes a query as well as some of the algorithms and rule-sets utilized to produce more efficient queries will also be presented. I will discuss the implementation plan to extend the capabilities of Database Engine program through the use of randomized algorithms iterative improvement method in the database area in the context of query optimization. More specifically, large combinatorial problems such as the multi-join optimization problem have been the most actively applied areas [9].

**AB V1-Pr 3 -18**

### AN OVERVIEW OF BACKGROUND SUBTRACTION ALGORITHMS IN VIDEO SURVEILLANCE

**VANDANA P. TONDE<sup>1</sup>, SHIVPRASAD P.PATIL<sup>2</sup>**

<sup>1</sup>Department of Information Technology, Sinhgad Institute of Technology, Lonavala.

<sup>2</sup>Department of Information Technology, Sinhgad Institute of Technology, Lonavala

[vandana\\_tonde123@rediffmail.com](mailto:vandana_tonde123@rediffmail.com)

This paper reviews performance of few common Background Subtraction algorithms which are median- based, Gaussian-based and Kernel density-based approaches. Here we considered image sequences of different challenging environments that may reflect the real scenario in Video Surveillances. The performances of these approaches can be evaluated in terms of processing speed, memory usage as well as object segmentation accuracy. The study demonstrates that Gaussian-based approach is the best approach for real-time applications, compromising between accuracy and computational time.

**AB V1-Pr 3 -19**

### BIOMETRICS: A NEED OF THE DAY

**N.U.KHAMKAR<sup>1</sup>, S.D.MUNDHE<sup>2</sup>**

<sup>1</sup>Dept. of Commerce and Management, Shivaji University, Kolhapur, India

<sup>2</sup>Sinhgad Institute of Management and Computer Application, Narhe, Pune, India

[nima\\_khamkar@yahoo.co.in](mailto:nima_khamkar@yahoo.co.in)

Biometrics is the science of authenticating or identifying subjects based on their physiological or behavioral characteristics such as fingerprint, face, voice and signature. Biometrics reaches into three main user segments: government, consumer, and business. It has gained prominence as a very useful tool for authentication. Biometrics-based authentication is becoming popular because of increasing ease-of-use and reliability. With the integration and use of biometric technology getting simpler, many corporations are

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venturing down the biometric road to verify the time and attendance of their employees. This paper highlights the use of biometrics to provide reliable time clock solution in any industry and Major challenges to use it in today's corporate world.

**AB V1-Pr 3 -20**

### A MODEL FOR TEXT CONVERSION: DEVNAGARI TO BRAILLE SCRIPT

**S. A. KHILLARE<sup>1</sup>, P. P. SHRISHRIMAL<sup>2</sup>, C. N. MAHENDAR<sup>3</sup>**

Department of Computer Science and Information Technology,  
Dr. Babasaheb Ambedkar Marathwada University, Aurangabad

[sunil.khillare@gmail.com](mailto:sunil.khillare@gmail.com)

Braille is the most effective means of written communication between visually impaired and sighted people. Globally, an estimated 40 to 45 million people are blind and 135 million have low vision according to the World Health Organization (WHO) and this number grows every year. India is home of half of the world blind population. According to the survey report of All India Federation of Blind only 20% of the required data is available in Braille. The paper describes a new system that recognizes handwritten devanagari script word of numerals and translates it in a representation which is readily convertible into Braille using the structure based feature extraction, conceptually depending on philosophy of reading.

**AB V1-Pr 3 -21**

### STUDY OF OFF-LINE RECOGNITION OF HANDWRITTEN MODI SCRIPT CHARACTERS

**A. S. RAMTEKE<sup>1</sup>, R. J. RAMTEKE<sup>2</sup>**

<sup>1</sup>Department of MCA, SIBACA Lonavala, India

<sup>2</sup>Department of Computer Science, North Maharashtra University, Jalgaon, India

[ajay\\_ramteke@yahoo.com](mailto:ajay_ramteke@yahoo.com)

The subject of character & handwriting recognition has a great potential in data and has received considerable attention in recent years. Several methods for recognition of Latin, Chinese, and Arabic etc. scripts have been proposed. Among Indian script, some pioneering work has been done on Bengali, Devnagiri, Oriya, Telgu, Urdu scripts and OCR systems for this script are ready for commercialization. Modi script is a cursive type script of Devnagiri characters. Two major differences between the alphabets and cursive characters can be stated. Cursive script recognition has the context information in one dimensional way, but graphical alphabets usually are bi-dimensional.

In this paper, some structural similarities of standard characters and handwritten characters in Modi script are verified using measured structure similarity approach. The performance rate is found to be 91 to 97 percent which is most promising than other methods.



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### IRIS RECOGNITION

**NITIN CHARAPARAMBIL, MEVEN D'CUHNA, VISHAL D'SOUZA, IRO  
MICHEAL DYSON, PRIYA T. HANKARE**

Department of Electronics and Telecommunication Engineering,  
DON BOSCO INSTITUTE OF TECHNOLOGY, Mumbai  
[csnitin11@gmail.com](mailto:csnitin11@gmail.com)

Importance of automatic personal identification is increasing everyday for security reasons. Biometric identification technologies, including facial recognition, fingerprint recognition, speaker verification and so on, offer a new solution for personal identification due to secure access. Iris recognition, a relatively new biometric technology, has great advantages, such as variability, stability and security, thus it is the most promising for high security environments. The overall problem is to be able to accurately recognize a person's identity based on the outcome of the recognition process. In this method for iris recognition the proposed system first detects the iris region using Histogram. Then the system normalizes the iris region and removes any noise. Next step is to mask the pupil of reflections from the illuminations used. The iris region is then extracted from the masked image. The final step in our system is the feature extraction and encoding using Principle Component Analysis (PCA).

**AB V1-Pr 3 -23**

### IMAGE COMPRESSION USING KOHONEN SELF ORGANISING NETWORK

**VINOD J.KADAM<sup>1</sup>, MANOJ V.UTAGE<sup>2</sup>, SANDIP S. BHAGT<sup>3</sup>**

<sup>1</sup>Assistant Professor, Department of Information Technology

<sup>2</sup>Students, Department of Information Technology

Dr. Babasaheb Ambedkar Technological University

Lonere, Tal-Mangaon, Dist-Raigad, (M.S.) India.

[vjkadam@dbatu.ac.in](mailto:vjkadam@dbatu.ac.in)

This paper presents a neural network based technique that may be applied to Image compression. The proposed technique clusters all the pixels into predetermined number of groups and produces a representative color for each group. Finally for each pixel only cluster number is stored during compression. This technique can be obtained in neural network by using kohonen self organising network which is one of the best method for clustering. In this network counter back propagation network is used which is best for compression. An error back propagation algorithm is also used to train the neural network.





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### J2EE and MVC ARCHITECTURE

**YOGESH VEDPATHAK<sup>1</sup>, DINESH BANSWAL<sup>2</sup>, ANAND DHAKNE<sup>3</sup>**

Sinhgad Institute of Business Administration & Computer Application, Pune(MS)

[vedpathakyb@gmail.com](mailto:vedpathakyb@gmail.com)

J2EE architecture has many complicated layers, including client, presentation, business logic and data persistence layer. There is respective data presentation in relevant layer of J2EE, with strictly rules to access and transform data objects between these layers. According to the Façade pattern, In J2EE, it should control the access to data persistence layer seriously to protect important enterprise data and avoid showing database pattern to client directly. The data persistence layer hides behind the business logic layer and provide business interfaces via the business logic layer to communicate with the presentation layer to package the data persistence layer, separates the data persistence layer from the presentation layer. This paper brings forward middleware technology which is the kernel and key to the solution of the dynamic E-business system through analyzing J2EE architecture, MVC design pattern, the component technology of JSP, Servlet and EJB etc. J2EE technology and MVC design pattern can simplify the software development, improve the software performance and quickly construct the dynamic E-business system of the good expansibility, maintainability, dependability and high usability.

**AB V1-Pr 3 -25**

### FINDING DUPLICITY OF PRODUCT BY USING DECAMOUFLAGING: A REVIEW

**SUJIT KUMAR SINGH<sup>1</sup>, PATEL FIROJ SHAGIR<sup>2</sup>, BINOD<sup>3</sup>**

<sup>1</sup> Assistant Professor, SIBACA Lonavala Pune, India

<sup>2,3</sup> Scholars SIBACA, Lonavala, Pune, India.

[sujitmca2001@gmail.com](mailto:sujitmca2001@gmail.com)

Artificial intelligence (AI) is making its way back into the mainstream of corporate technology, this time at the core of business systems which are providing competitive advantage in all sorts of industries, including electronics, manufacturing, software, medicine, entertainment, engineering and communication. Decamouflaging is an approach to identify a defective object which is generally not identified by conventional quality control system. The primary purpose of camouflage is to hide a person or an object. To hide the defects in products, (which may occur at the time of production) duplicate products may be added during logistics. Since the texture similarity between the background and the defect is the premise for accomplishing camouflage, an intensive texture analysis should be able to discriminate defect from its background. There are different ways to detect co-occurrence matrix based texture, such as Co-occurrence and Canny technique. If block of image found defective then Clustering techniques with various algorithms may be applied to get exact position of defect. The objective of this review paper is to identify such camouflage breaking (decamouflaging) techniques and use of clustering analysis methods.

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**AB V1-Pr 3 -26**

### ROLE OF ARTIFICIAL INTELLIGENCE IN VARIOUS SECTORS OF BUSINESS ENTERPRISE

**MRS. P. A. DESHMUKH, MRS. G. A. PANDE, MRS. M. D. KOTTAWAR**

Pratibha Institute of Business Management, Chinchwad, Pune, India

[prachi\\_1612@yahoo.co.in](mailto:prachi_1612@yahoo.co.in)

As with all technologies, Artificial Intelligence (AI) initially generated much interest, but failed to live up to the hype. However, with the advent of web-enabled infrastructure and rapid strides made by the AI development community, the application of AI techniques in real-time business applications has picked up substantially in the recent past. In some instances, such as fraud detection, the use of AI has already become the most preferred method. In addition, neural networks have become a well-established technique for pattern recognition, particularly of images, data streams and complex data sources and, in turn, have emerged as a modeling backbone for a majority of data-mining tools available in the market.

This paper includes discussion on applications of AI in various sectors of business enterprise like Financial Services, Marketing, Human Resource (HR), and Information Technology (IT) in AI. Also discuss about recent research in AI such as Mobile Robot (2004-2007), Robot therapy for improvement in Arm and shoulder mobility (2011).

**AB V1-Pr 3 -27**

### ROLE OF EXPERT SYSTEM IN HUMAN RESOURCE

**K. P. TRIPATHI**

Assistant Professor (MCA Programme),  
Bharati Vidyapeeth Deemed University  
Institute of Management, Kolhapur, India.

[kpatripathi06@gmail.com](mailto:kpatripathi06@gmail.com)

In today's organizations Human Resource is considered as one of the key resources of business organizations. The transaction processing layer of MIS in human resource function deals with routine activities like attendance recording and payroll calculations. The operational level activities also include maintaining the employee records which is used as a basis for strategic layers. With the growing importance of human resource management and increasing size of the organizations, maintenance of employee related data and generating appropriate reports are the crucial aspects of any organization. Therefore more and more organizations are adopting computer based human resource management systems (HRMS). This paper is an attempt to design and implement an Expert System for the business organization and show how it helps in taking management decisions related to management function especially for the top management.



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### ARTIFICIAL NEURAL NETWORKS: A REVIEW

**SACHIN PATIL<sup>1</sup>, MURLIDHAR DHANAWADE<sup>2</sup>, KALPANA SALUNKHE<sup>3</sup>**

<sup>1</sup>Dr. D.Y.Patil Institute Of Management & Research, Pimpri, Pune (MS), India

<sup>2</sup>Sinhgad Institute of Business Administration & Computer Application, Pune(MS), India

<sup>3</sup>Sinhgad Institute of Business Administration & Computer Application, Pune(MS), India  
[sachpati@gmail.com](mailto:sachpati@gmail.com)

This report is an introduction to Artificial Neural Networks. The various types of neural networks are explained and demonstrated, applications of neural networks like ANNs in medicine are described, and a detailed historical background is provided. The connection between the artificial and the real thing is also investigated and explained. Finally, the mathematical models involved are presented and demonstrated.

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### WHEELCHAIR DIRECTION CONTROL SYSTEM WITH HEAD MOTION

**CHUNDI V SESA REDDY<sup>1</sup>, MRS. DIANA A<sup>2</sup>**

<sup>1</sup>M.tech Embedded Systems, Hindustan University

<sup>2</sup>Asst. Professor, Dept of ECE, Hindustan University

[seshareddy@gmail.com](mailto:seshareddy@gmail.com)

Easy Input is a head-controlled mems sensor. This study describes the motivation and the design considerations of an economical head-operated device for physically challenged people. In addition it focuses on the invention of a head-operated device that employs tilt sensors placed in the headset to determine head position and to function as simple head operated device. Depending on the head movement we can move the wheel chair for the physically challenged people. The system uses mems accelerometers to detect the user's head tilt in order to direct wheel chair movement. So depending on the head movement the wheel chair can be moved in all direction. When moving the wheel chair there is the change for obstacles .so to avoid that we have used ultrasonic sensor to sense the obstacle and move the wheel chair in other direction. The communication between the wheel chair and mems sensor is done using wireless technology.



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### **AUTHENTICATED CONNECTION USING IMAGE STEGANOGRAPHY**

**SARITA DHAWALE**

Department of Computer Science, Ashoka Institute of Management & Technology  
University of Pune, Maharashtra.

[saritadhawale@gmail.com](mailto:saritadhawale@gmail.com)

Providing Information security for client authentication over a network in a client/server environment is critical issue. Authenticated connection establishment between client and server requires password verification, in which client provides the password and server verifies it. Successful password verification initiates the client/Server to perform secured request/reply mechanisms. Hence there is need for confidential transmission of password in an unsecured network. Steganography is the art and science of writing hidden messages in such a way that no-one apart from the sender (client) and intended recipient(Server) even realizes there is a hidden message. The term Steganography includes the concealment of digital information within computer files. Generally a Steganography messages will appear to be something else: a picture, an article, a shopping list, or some other message. Steganography techniques can be used for providing confidentiality of password. This paper intends to give an overview of image steganography, its uses and techniques. It also attempts to identify the requirements of a good steganographic algorithm and briefly reflects on which steganographic techniques are more suitable for which applications. In this paper I would like to focus on the most secured connection establishment for client/Server Environment. Characters provided by the client as a password are appended in to an image using Steganography technique.

Appended image containing password Is transmitted over network to reach the server. Server retrieves the original password decoding algorithm .Server verifies and authorizes the client for connection establishment. Even though if the intruder steals the images over the network he/She will not be able to decode the password from the image. Hence Steganography can be used for confidential, integrated and secured transmission of password over network. Even this can extend to secure all online financial transaction for personal as well as business purpose.

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### **THE FUTURE OF 4G WIRELESS SYSTEMS: IN INDIA**

**MUGDHA MOHITE<sup>1</sup>, MANISH POL<sup>2</sup>**

Dept of Commerce and Management, SUK, Kolhapur

[mugdhamm@gmail.com](mailto:mugdhamm@gmail.com)

India took Step up in wireless technology and planning to launch 4G technology. People demand more from their technology, the latest technology purchase must have new features. With the advent of the internet, the most-wanted feature is better, faster access to information we need pervasive, high-speed wireless connectivity. A number of technologies currently exist to provide users with





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high-speed digital wireless connectivity; Bluetooth and 802.11 are examples. These two standards provide very high speed network connections over short distances, typically in the tens of meters. Meanwhile, cellular providers seek to increase speed on their long-range wireless networks. The goal is the same: long-range, high-speed wireless, which for the purposes of this report will be called 4G.

The telecom regulatory authority of India's (TRAI) seeking views of the industry on 4G mobile services, Tata teleservices strongly supports the TRAI to phase out the process for introducing 4G mobile technology in India. The paper focus on Indian situation to launch 4G technology, needs, issues. Here we want to mention the problems to launch 4G, the companies work on 4G and the net serve of people reactions.

**AB V1-Pr 3 -32**

### ROBOTIC DATA MINING

**N.N DEHURY<sup>1</sup>, R.P SHARMA<sup>2</sup>, SURYAVANSHI D. B.<sup>3</sup>, KULKARNI J<sup>4</sup>**

Sinhgad Institute Of Business Administration And Computer Application  
Lonavala, Maharashtra, India

[ndejury22@gmail.com](mailto:ndejury22@gmail.com)

Robots play a very important role in our today's fast moving life. In most of fields robots can do that work, which looks almost impossible for human being. Which require much more accuracy, which a human being can't provide. Though robots are not as intelligent as human being but still with the help of AI they are working much effectively. In this paper we describe how data mining is used in robotics learning Data Mining work similarly for the Robots, as the ability of human brain helps them to remember things & take the decision according to the previous results of similar situations. Human being has some limitations regarding weather, temperature, pressure, so he is unable to work out of this limitation in those situations robots work for us, in many field like in Marines, nuclear reactor, in the deep of ocean, or to limit of space where human are helpless but robots are at work on behalf of human being.

**AB V1-Pr 3 -33**

### MOBILE TECHNOLOGY APPLICATIONS TO HELP AUTISM PERSON IN LEARNING AND COMMUNICATION

**LAL BIHARI BARIK<sup>1</sup>, OMPRAKASH CHANDRAKAR<sup>2</sup>, VIKASH PATEL<sup>3</sup>, K. HEMA KALIDASS<sup>4</sup>**

<sup>1,2</sup>SRIMCA, Sura, Gujaratt (India)

<sup>3</sup>BVPIBMCIT, Surat, Gujarat (India)

<sup>4</sup>SFRC, Sivakasi, Tamilnadu (India)

[lalbihari@hotmail.com](mailto:lalbihari@hotmail.com)

Behavior of an autistic person very badly affects their interaction and relationship with their friends, families and others from the society. Various researches show that more than half of the autism persons do not speak but are highly visual-oriented with the presence of strong visual-spatial skills. Persons diagnosed with autism respond very well to visual representation. These visual representations include written words.

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In advanced countries there are various techniques available that may be used to empower the autism person to improve their impairments.

Augmentative and Alternative Communication systems are gaining popularity and are being used to teach normal social and effective communication skills to autism person. Augmentative and Alternative Communication have improved the living of the autism person to great extent. Even though their benefits are beyond doubts, it has several drawbacks also, such as lack of mobility and high cost.

Much significant work has been done to address these limitations. In the present paper, researchers have reviewed the research work being carried out in this direction. This paper also presents some case studies that demonstrate the effectiveness of the use of mobile technology to enhance the communication and learning of the autistic person.

**AB V1-Pr 3 -34**

### BIOFUEL – A BOON FOR THE NEXT GENERATION

**SURYAVANSHI D. B., KULKARNI J., MODHWADIYA JAYESH.B.  
MODHVADIYA RAM G.**

Sinhgad Institute Of Business Administration And Computer Application Lonavala, Maharashtra,  
India.

[jayesh.modhwadiya@hotmail.co.uk](mailto:jayesh.modhwadiya@hotmail.co.uk)

Bioconversion" uses plant and animal wastes to produce "biofuels" such as methanol, natural gas, and oil. We can use rubbish, animal manure, woodchips, seaweed, corn stalks and other wastes. Carbon dioxide is one of a number of gases that transmit the visible light incident on the Earth from the Sun, but absorb the infra-red radiation emitted by the warm surface of the Earth, preventing its loss into space. This keeps the Earth around 33°C warmer than it would otherwise be, and is known as the Greenhouse Effect as it is the same effect achieved by the sheets of glass in a greenhouse. Using this plant in India we can save money because India is largest country who imports the fuels from other county and India is a country which is most of depends on agriculture. Growing jathropa we can make easily get bio-fuels like bio-diesel and Glycerin. For next generation fuel also we have to use or do developing in these types of bio-fuels because which fuels we use that not we get more than some year.

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### SMART MOBILE USING ARTIFICIAL INTELLIGENCE: A FUTURE ENHANCEMENT

**MAHENDRA M. WAGH<sup>1</sup>, MAYUR B. DAHAKE<sup>2</sup>, MANDAR D. HAVAL<sup>3</sup>,  
PRAVIN B. PATIL<sup>4</sup> , DUSHYANT BODKHEY<sup>5</sup>**

<sup>1,2,3,4</sup> Sinhgad Institute Of Business Administrator & computer Application (SIBACA).

[mahi81.rhce@gmail.com](mailto:mahi81.rhce@gmail.com)

Globally, various initiatives use the mobile phone to provide financial services to those with or without access to traditional banks. The emergence of mobile banking technology systems has implications for the general discussions about mobile technology in the developing world.

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In this paper we are implementing Artificial Intelligence so that the mobile will take there own decision. This outlined vividly the use of mobile phone in the banking industry, its economic implications, and in general a systematic look into the various forms of mobile banking with emphasis on the security measures that makes the whole process safe for adoption. At last, we attempt to describe that how mobile technology can replace the burden of carrying the debit card ,credit Card ,PAN card etc.

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### **SIMPLIFYING THE USE OF SOFTWARE TESTING IN E-LEARNING**

**STUTI PANDYA, YOGITA GHOGARE, AMIT BHANDARI, RAHUL DWIVEDI**

Sinhgad Institute Of Business Administrator & computer Application (SIBACA), Lonavala  
[spstuiii@gmail.com](mailto:spstuiii@gmail.com)

This paper presents the use of software verification, validation and testing technique, traditionally used in the software development, in the design and implementation of E-Learning package. We examine the ways one can apply testing techniques in E-Learning life cycle. This includes the strategy adoption for the selection of testing technique along with tool acquisition and measurement. The objective is to develop a collaborative approach involving software testing and educational methodology.

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### **SUPER DRUG-A REMEDY TO BIG FAT OBESITY**

**AMIT BHANDARI, STUTI PANDYA, YOGITA GHOGARE, SWATI ADE**

Sinhgad Institute Of Business Administrator & computer Application (SIBACA).  
[amit.bhandari26@gmail.com](mailto:amit.bhandari26@gmail.com)

Obesity is a condition in which the natural energy reserve, stored in the fatty tissue of humans and other mammals, is increased to a point where it is associated with certain health conditions or increased mortality. Women with over 30% body fat and men with over 25% body fat are considered obese. In Signalling pathway of obesity nuclear hormone receptors are transcription factors that bind DNA and regulate transcription in a ligand-dependent manner. PPAR-gamma is a member of this gene family that is activated by fatty acids and thiazolidinedione drugs that plays a role in insulin sensitivity and adipogenesis (Visceral Fat Deposits and the Metabolic Syndrome pathway).



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### **CLOUD COMPUTING- DYNAMICALLY SCALABLE INFRASTRUCTURE FOR APPLICATION**

**CHANDRAHAUNS R CHAVAN**

Institute of Management Studies, University of Mumbai

[chandrahauns@gmail.com](mailto:chandrahauns@gmail.com)

Cloud computing is a computing paradigm, where a large pool of system are connected in private network, to provide dynamically scalable infrastructure for application, data and file storage. With the advent of this technology, the cost of computation, application hosting, content storage and delivery is reduced significantly. Cloud computing is a practical approach to experience direct cost benefits and it has the potential to transform a data centres from a capital –intensive set up to a variable priced environment. The idea of cloud computing on a very fundamental principal of reusability of Information Technology capabilities'. The difference that cloud computing brings compared to traditional concepts of “grid computing”, “distributed computing”, utility computing”, or automatic computing “is to broaden horizon across organisational boundaries. Considering this technological revolution the objective of this descriptive research paper is to give an overall understanding about Cloud Computing technology and its infrastructure. It highlights the insight of the Benefits of Cloud Computing Technology, Cloud Computing Deployment Models, the corporate providing Cloud Computing technologies and briefly put forward the thoughts on the future of Cloud Computing technology.

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### **ANALYSIS OF RISK INVOLVED IN CLOUD COMPUTING**

**SHITAL P. ADKINE**

Department Of Computer Application,

Sardar Patel College, Chandrapur

Maharashtra, India

[sadkine@gmail.com](mailto:sadkine@gmail.com), [shital\\_adkine@yahoo.com](mailto:shital_adkine@yahoo.com)

Cloud computing play an important role in IT industry and in software development process. Cloud computing techniques can offer many facilities like sharing of hardware, availability of software and many more resources as a basic need. Cloud computing effectively reduces the cost, maintenance. As same security is important issue. While dealing with cloud computing lose of control over cloud component is one of the major issue in maintenance. This paper focuses a different issues of risk involved in cloud computing.





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### COMPUTER SECURITY ANALYSIS THROUGH DECOMPILATION AND HIGH-LEVEL DEBUGGING

**P.A.KADAM<sup>1</sup>, DR S.D.KHAMITKAR<sup>2</sup>**

<sup>1</sup> Department of computer science I.T.M. Nanded

<sup>2</sup> School of computational science Nanded

The extensive use of computers and networks worldwide has raised the awareness of the need for tools and techniques to aid in computer security analysis of binary code, such as the understanding of viruses, trojans, worms, backdoors and general security flaws, in order to provide immediate solutions with or without the aid of software vendors.

This paper is a proposal for a high-level debugging tool to be used by computer security experts, which will reduce the amount of time needed in order to solve security-related problems in executable programs. The current state of the art involves the tracing of thousands of lines of assembly code using a standard debugger. A high-level debugger would be capable of displaying a high-level representation of an executable program in the C language, hence reducing the number of lines that need to be inspected by an order of magnitude (i.e. hundreds instead of thousands of lines). Effectively, these techniques will help in reducing the amount of time needed to trace a security flaw in an executable program, as well as reducing the costs of acquiring or training skilled assembler engineers.

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### SOFTWARE TESTING

**RAHUL DWIVEDI, ABHIRUCHI KUMARI, KAMALIKA KAMAL KUNDU,  
NITIN PRATAPRAY JANI**

SIBACA, Lonavala

[kamalikakund04@gmail.com](mailto:kamalikakund04@gmail.com)

This paper gives an overview of the field of Software testing. Some of the topics covered include: Introduction; role of software test; what, why and who does software testing ; descriptions of functional, structural, static, and dynamic test techniques; and how much testing is enough. The paper ends with resources and references for further study.



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### ROLE OF VIRTUAL REALITY IN COGNITIVE BEHAVIOR THERAPY

**VAISHALI JOSHI**

Sinhgad Institute of Business Administration and Computer Application, Lonavala  
[j.vaishali@gmail.com](mailto:j.vaishali@gmail.com)

The Word Cognition gives information about the processing information and this word when related with the psychology it makes the sense of processing information in context with mental and intelligence. Cognitive behavior is nothing but the problems concerning dysfunctional emotions, behaviors and cognitions. Cognitive-behavior is negative thoughts and maladaptive behaviors and the Cognitive behavioral therapy is a solution to overcome this problem, in which A therapist treating a client with social anxiety may help the client form more accurate thinking patterns as well as focusing on specific behaviors, such as social avoidance. There are two types of Therapies 1) Cognitive Therapy and another is 2) Behavioral Therapy The Cognitive Therapy tend to focus on specific problems. In this Therapy it is believed that irrational thinking or faulty perceptions cause dysfunctions. A cognitive therapist may work with a client to change thought patterns. This type of therapy is often effective for clients suffering from depression or anxiety.

The Behavioral therapy tends to change problematic behaviors that have been trained through years of reinforcement. To study the cognitive behavior of the person, Virtual Reality is the good example, in the field of computer science.

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### ARTIFICIAL INTILLEGENCE

**PATEL FIROJ**

M.C.A (II) ,Pune University  
SIBACA,Lonavla ,INDIA  
[fiorjpatel7@gmail.com](mailto:fiorjpatel7@gmail.com)

Artificial intelligence (AI) is making its way back into the mainstream of corporate technology, this time at the core of business systems which are providing competitive advantage in all sorts of industries, including electronics, manufacturing, software, medicine, entertainment, engineering and communication. Besides providing capability for management and transfer of user service profiles in mobile and personal communication systems ,the AIN concept has a broad range of applications in fixed and wireless networks.

The term "Intelligent Network describes an architectural concept that is intended to be applied to all telecommunication networks. AIN aims to facilitate the introduction of new services by decoupling the functions required to support cal and connection control from those required to support service control, thereby allowing two sets of functions to be placed on different physical platforms. New services can therefore be defined and implemented quickly, efficiently and cost-effectively because major software changes to the switching systems, which were required in the pre-IN network architectures are not necessary.



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### BIOMEDICAL IMAGE PROCESSING

**ABHIJEET KORE, DHANRAJ ALGUNDGI, DEEPAK SAWANT, AJAY KODAM**

MCA, SIBACA, Lonavala  
[deepak.sawant55@gmail.com](mailto:deepak.sawant55@gmail.com)

Biomedical image processing is a very broad field; it covers biomedical signal gathering, image forming, picture processing, and image display to medical diagnosis based on features extracted from images. This article reviews this topic in both its fundamentals and applications. In its fundamentals, some basic image processing techniques including outlining, deblurring, noise cleaning, filtering, search, classical analysis and texture analysis have been reviewed together with examples. The state-of-the-art image processing systems have been introduced and discussed in two categories: general purpose image processing systems and image analyzers. In order for these systems to be effective for biomedical applications, special biomedical image processing languages have to be developed. The combination of both hardware and software leads to clinical imaging devices. Two different types of clinical imaging devices have been discussed. There are radiological imagings which include radiography, thermography, ultrasound, nuclear medicine and CT. Among these, thermography is the most noninvasive but is limited in application due to the low energy of its source. X-ray CT is excellent for static anatomical images and is moving toward the measurement of dynamic function, whereas nuclear imaging is moving toward organ metabolism and ultrasound is toward tissue physical characteristics. Heart imaging is one of the most interesting and challenging research topics in biomedical image processing; current methods including the invasive-technique cineangiography, and noninvasive ultrasound, nuclear medicine, transmission, and emission CT methodologies have been reviewed. Two current federally funded research projects in heart imaging, the dynamic spatial reconstructor and the dynamic cardiac three-dimensional densitometer, should bring some fruitful results in the near future. Microscopic imaging technique is very different from the radiological imaging technique in the sense that interaction between the operator and the imaging device is very essential. The white blood cell analyzer has been developed to the point that it becomes a daily clinical imaging device. An interactive chromosome karyotyper is being clinical evaluated and its preliminary indication is very encouraging. Tremendous efforts have been devoted to automation of cancer cytology; it is hoped that some prototypes will be available for clinical trials very soon. Automation of histology is still in its infancy; much work still needs to be done in this area. The 1970s have been very fruitful in utilizing the imaging technique in biomedical application; the computerized tomographic scanner and the white blood cell analyzer being the most successful imaging devices.



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### BIOINFORMATICS: HISTORY AND USE

**MILIND SALE**

N. B. NAVALE COLLEGE OF COMMERCE, LONAVALA

[milindsale@rediffmail.com](mailto:milindsale@rediffmail.com)

Bioinformatics is the application of computer technology to the management of biological information. Computers are used to gather, store, analyze and integrate biological and genetic information which can then be applied to gene-based drug discovery and development. The term *bioinformatics* was coined by Paulien Hogeweg and Ben Hesper in 1978 for the study of informatics processes in biotic systems. Its primary use since at least the late 1980s has been in genomics and genetics, particularly in those areas of genomics involving large-scale DNA sequencing. Bioinformatics now entails the creation and advancement of databases, algorithms, computational and statistical techniques and theory to solve formal and practical problems arising from the management and analysis of biological data. Over the past few decades rapid developments in genomic and other molecular research technologies and developments in information technologies have combined to produce a tremendous amount of information related to molecular biology. It is the name given to these mathematical and computing approaches used to glean understanding of biological processes. Bioinformatics is the unified discipline formed from the combination of biology, computer science, and information technology. The primary goal of bioinformatics is to increase the understanding of biological processes. What is focus on developing and applying computationally intensive techniques e.g., pattern recognition, data mining, machine learning algorithms, and visualization to achieve this goal. Major research efforts in the field include gene finding, drug design, drug discovery, protein structure alignment.

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### A DISTRIBUTED COMPUTING AND BIOINFORMATICS

**P P PATIL<sup>1</sup>, R G PAWAR<sup>2</sup>, B T JADHAV<sup>3</sup>**

<sup>1</sup>BVDU Y. M. Institute of Mgmt., Karad

<sup>2</sup>SIBACA Lonawala

<sup>3</sup>Yashwantrao Chavan Institute of Science, Satara

[patilpp\\_karad48@rediffmail.com](mailto:patilpp_karad48@rediffmail.com)

It is observed that in the recent years, the non distributed systems are having certain limitations and its applications are limiting. There is need of study of distributed computing environment its applicability in the emerging area of study called Bioinformatics as whole.

In order to enhance the bioinformatics research, we feel the need of distributed computing environment – web services, in which, biologists can solve bioinformatics problems using distributed

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computing resources and reduce execution time. In this paper, types of web services, work flow and its management aspects are explained. The researcher also stated: How does the resources are shared for the benefits of users community by using the Bioinformatics?. The paper also elaborates the limitations, benefits, and applications of distributed computing in the bioinformatics.

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### BIO-CHIPS

**MR. SURYAVANSHI DASHARATH, MS. KULKARNI JAYASHREE, MR. TUSHAR KADAM, MR.YOGESH KASKAR,**

Sinhgad Institute of Business Administration and Computer Application  
[dasharathssur@gmail.com](mailto:dasharathssur@gmail.com), [jayashreesk@yahoo.com](mailto:jayashreesk@yahoo.com), [tushar.kadam07@gmail.com](mailto:tushar.kadam07@gmail.com)  
[yogesh\\_kaskar@rediffmail.com](mailto:yogesh_kaskar@rediffmail.com)

“Biochips”-The most exciting future technology is an outcome of the fields of Computer science, Electronics & Biology. It’s a new type of bio-security device to accurately track information regarding what a person is doing, and who is to accurately track information regarding what he is doing, and who is actually doing it. It’s no more required with biochips the good old idea of remembering pesky PINs, Passwords, & Social security numbers. Power of biochips exists in capability of locating lost children, downed soldiers, and wandering Alzheimer patients. Our contributions to this paper lie in the aspects of “Implementation of Glucose detector in Biochips”, “Implementation of Oxygen sensor in Biochips”, “Implementation of Blood pressure sensor in Biochips”, “Proposal of Solution for the typical theft problem faced by the Biochips”. The four contributions have been discussed in detail with the proposed principles for implementation of the concepts. Companies such as AVID, Electronic ID, Inc. and Electronic Identification Devices, Ltd. sell both the chips and the detectors. The chips are of the size of an uncooked grain of rice, small enough to be injected under the skin using a hypodermic syringe needle. They respond to a signal from the detector, held just a few feet away, by transmitting out an identification number. This number is then compared to database listings of registered pets. The Biochip tagging for humans has already started.

**AB V1-Pr 3 -48**

### USING A COMPETITIVE APPROACH TO IMPROVE MILITARY SIMULATION ARTIFICIAL INTELLIGENCE DESIGN

**MR.SURYAVANSHI D. B.<sup>1</sup>, MR. NALODE G.Y<sup>2</sup>**

<sup>1,2</sup>Sinhgad Institute Of Business Administration And Computer Application  
Lonavala, Maharashtra, India.

[g.webdeveloper@gmail.com](mailto:g.webdeveloper@gmail.com), [dasharathsur@gmail.com](mailto:dasharathsur@gmail.com)

The research presented in this paper attempts to show how using a competitive approach to artificial intelligence (AI) design can lead to improvement of the AI solutions used in military simulations. To demonstrate the potential of the competitive approach, ORTS, a real-time strategy game engine is used.



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The idea is to setup a tournament of virtual battles between base case AIs and new test AIs, and by using the information from these battles to advance the test AIs. The analysis of the results from the experimental tournament shows possible advantages and applications of the competitive approach. At the end of the paper, some conclusions and recommendations for future work are made.

**AB V1-Pr 3 -49**

### MARKET BASKET ANALYSIS

**KALPNA B. SALUNKHE, MANISH KUMAR MISHTRA,  
NITIN PRATAPRAY JANI, TARUN PRATAPRAY JANI**

SIBACA, LONAVALA

[kbsalunkhe2000@yahoo.co.in](mailto:kbsalunkhe2000@yahoo.co.in)

Market Basket Analysis :( Association Mining).Market Basket Analysis is the discovery of relations or correlations among a set of items. Such valuable information can be used to support a variety of business -related applications such as marketing promotions, inventory management, and customer relationship management.

**AB V1-Pr 3 -50**

### DOMOTICS – A GATEWAY TO HUMAN SOLUTION

**S.M.AGRAWAL, P. D. RAHANGDALE, A.A INGLE, K.B.JAWALKAR, A GHODKE**  
[sonambcs@gmail.com](mailto:sonambcs@gmail.com)

Domotics (Home automation) involves the automatic controlling of different routine activities of the house using certain sets of hardware and software. For instance, a lighting system that turns on as soon as someone enters the room is one of many possible home automation systems. Similarly, a security system that detects intrusion in the house is also a home automation system. Other appliances that can be controlled using home automation system include home theaters, phones, air conditioners, garden sprinklers, and so on.



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**AB V1-Pr 3 -51**

### **NOISY FINGERPRINT IMAGE ENHANCEMENT TECHNIQUE THROUGH FREQUENCY DOMAIN: A FOURIER TRANSFORM APPROACH**

**RAJU SONAVANE<sup>1</sup>, B.S. SAWANT<sup>2</sup>**

<sup>1</sup>Sinhgad Institute of Business and Computer Application, Kusagaon Lonavala, Dist-Pune, Maharashtra, India- 410401

<sup>2</sup>Rayat Shikshan Santstha's Karmaveer Bhaurao Patil institute of management studies & research, Satara

A technology for recognizing fingerprints for security purposes is proving as regards as reliable but efficient recognition is depending on the quality of input fingerprint image. Recognition of the fingerprint becomes a complex computer problem, while dealing with noisy and low quality images. In this paper work researchers are focusing the frequency domain enhancements for biometric System of noisy and low quality images, which will be beneficial for recognition system.

The New proposed algorithm for enhancement method based on Frequency Domain with a Fourier Transform and contrast approach based on spatial domain shows the best experimental results over the past results, with considerable differences. The enhancement in the minutia like Curve, Dot, spur are seen better which is discusses in this paper. The final output indicates that the proposed enhancement method improves the quality of the fingerprint images which makes more comfortable for biometric Identification system.

**AB V1-Pr 3 -52**

### **QUALITY ENHANCMENT IN TELEHEALTH USING PEER-TO PEER AND LTE TECHNOLOGIES COLLABORATION IN FUTURE**

**MINESH S. ADE**

Sinhgad Institute of Business and Computer Application, Kusagaon Lonavala,  
Dist-Pune, Maharashtra, India- 410401

[drmade.sibaca@sinhgad.edu](mailto:drmade.sibaca@sinhgad.edu)

In last decade, telemedicine, e-health, m-health and now Telehealth like innovative technologies has been introduced and implemented all over the world. Because of these technologies, patients are getting better health services at distant places. The role of telecommunication is crucial in these all technologies. We were using GSM, GPRS, GPS, WiFi, WiMax etc. for these technologies and Internet off course. Recently, LTE (Long Term Evolution) has been introduced. LTE is the next major enhancement to mobile radio communications networks. LTE is a standard that is part of the evolution of 3G, which incorporates significantly increased data rates (up to 100Mb/s) and better performance to enhance the mobile broadband experience. P2P (Peer-to-Peer), is today's famous and faster technology for the content transfer.

In this paper I am going to propose new architecture, which is the collabotion of P2P and LTE like strong technologies to make all the healthcare facilities available on request. Using these architecture patients from rural area, sub urban and urban area will get the same facilities which are distinct today. With the help of this collaborative technology, remote surgeries are possible with the help of technologies like

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artificial intelligence, neural network and robotics. This architecture will replace technologies like wifi, wimax etc which are used in today's era. LTE and P2P collaboration will support all the nations for high definition content delivery at faster rate for the implementation of telehealth through out.



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