Bharath
INSTITUTE OF HIGHER EDUCATION AND RESEARCH
(Declared as Deemed - to - be - University under section 3 of UGC Act 1956)

SCHOOL OF COMPUTING

DEPARTMENT OF COMPUTER SCIENCE AND ENGINEERING

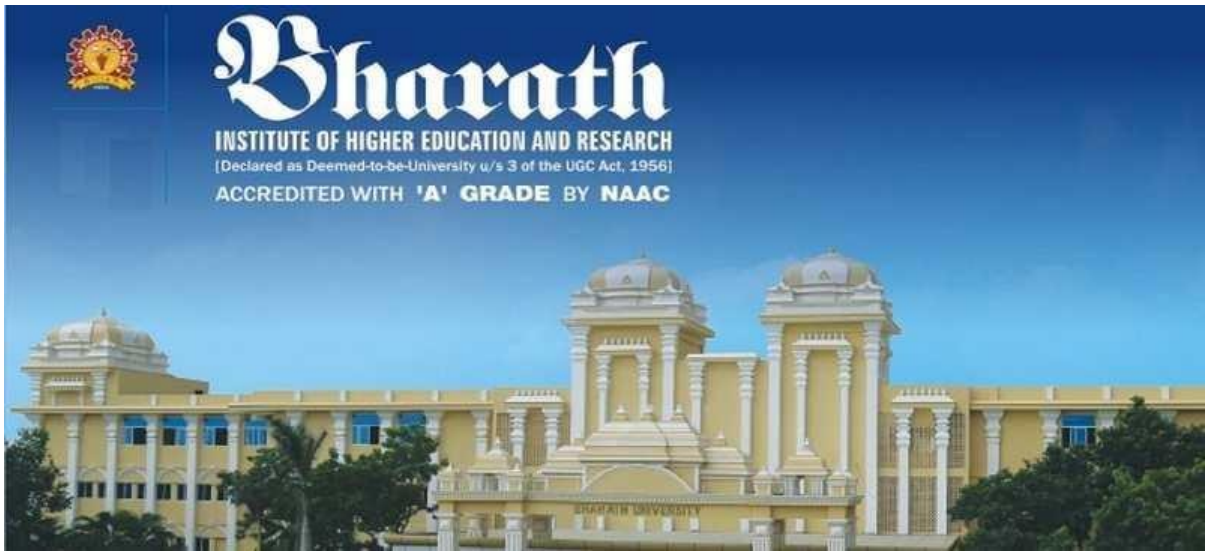
CENTRE OF EXCELLENCE

IN

MACHINE COGNITION

CONTENTS

CENTER OF EXCELLENCE (CoE) IN MACHINE COGNITION



Bharath
INSTITUTE OF HIGHER EDUCATION AND RESEARCH
(Declared as Deemed - to - be - University under section 3 of UGC Act 1956)

DEPARTMENT OF COMPUTER SCIENCE AND ENGINEERING

CENTER OF EXCELLENCE (COE)

A center of excellence (CoE) is a corporate group or team that leads other employees and the organization as a whole in some particular area of focus such as a technology, skill or discipline. To that end, a business CoE may provide research, support, guidance, placement training and oversight for other employees and students. The area of focus can be anything that's important enough to the business to devote the necessary resources to. A CoE may be ongoing or temporary; group members may work in another capacity or be full-time in the CoE.

A center of excellence is frequently used when an organization needs to take on a new technology or skill and manage its adoption. Major trends like BYOD (bring your own device) Cyber Security and big data analytics often drive the adoption of CoEs as enterprises attempt to deal effectively with a rapidly evolving business environment.

CENTER OF EXCELLENCE (CoE) IN MACHINE COGNITION

Artificial Intelligence, the latest buzzword in technology, pervades every job sector in the future. The Prominent technology evolved the tech giants like Google, Apple and Facebook. As the demand for AI Certified professionals will increase in the near future, our Centre of excellence for Artificial intelligence encourage students to attain certifications thereby making them ready to step into the future. In a nutshell, Artificial intelligence is a method of making a computer or a software think intelligently – to "think" like a human would and mimic the way they would act. The ultimate goal of Artificial intelligence is to create computer programs that can solve problems and achieve goals like human would. There is scope in developing machines in robotics, computer vision language detection machine, game playing, expert systems, speech recognition machines and much more. The career domains that implement AI are many and vast. Some common domains include private and public organizations. Education, both primary and advanced Healthcare facilities, Government agencies and committees related to research in Military. Thus, the different roles available in these sectors include Software engineers, developers and analysts, Research scientists, manufacturing and maintenance engineers, Mechanical engineers, game programmers, developers and algorithm specialists, Computer engineers, Electrical engineers, Surgical technicians thus Artificial intelligence is being used by more and more companies to create products and services at breakneck speed. Thus, it is said that in the near future, Artificial intelligence is going to outperform human performance by leaps and bounds.

Artificial intelligence (AI) has recently surpassed human performance in several domains, and there is great hope that in healthcare, AI may allow for better prevention, detection, diagnosis, and treatment of disease. While many fear that AI will disrupt jobs and the physician-patient relationship, we believe that AI can eliminate many repetitive tasks to clear the way for human-to-human bonding and the application of emotional intelligence and judgment.

VISION

Our vision is to provide a prominent, state of the art facility to the professionals in the field of artificial intelligence in order to achieve professional development by keeping pace with international advancements

MISSION

Our mission is to impart support and learning to professionals in the fields of Artificial Intelligence. The centre will aid advances in the developing field of artificial intelligence which are critical for technical skill acquisition and employment generation.

Dr. S Jagathrakshakan

Founder Chancellor

Bharath Institute of Higher Education and Research

Chennai, Tamil Nadu-600073

MESSAGE

Bharath Institute of Higher Education and Research (BIHER), Chennai, is a Self-Financing, Deemed to be University recognized by MHRD in July 2002, under section 3 of the UGC Act 1956, comprising seven Institutions including Bharath Institute of Science and Technology, started in Tamil Nadu in 1984 by Sri Lakshmi Ammal Educational Trust. The Bharath Institute of Science and Technology (BIST) and other institutions such as Bharath Institute of Science and Technology, Sree Balaji College of Nursing, Chennai, Sree Balaji Medical College and Hospital (SBMCH), Chennai, Sree Balaji College of Physiotherapy, Chennai and Sri Lakshmi Narayana Institute of Medical Sciences (SLIMS), Pudhucherry was then brought under the ambit of Bharath Institute of Higher Education and Research (BIHER).

Centre of Excellence has been established at our campus with the aim to bring together the prominent researchers in India and enable them to network globally to discourse problems of national purpose and work towards solutions through science and technology. It could be a declaration that the Centre of Excellence will endeavour constantly to provide the resources and motivation needed for prospering of research. This Centre will be a supreme resource to the nation and to the world.
I wish the Centre all success.

*****

Dr. Sundeep Anand Jagathrakshakan

President

Bharath Institute of Higher Education and Research

Chennai, Tamil Nadu-600073

MESSAGE

Bharath Institute of Higher Education and Research (BIHER) is a multidisciplinary University offering UG, PG, Ph.D. and Post-Doctoral Research Programs in Engineering, Medical and Health Science, Science and Humanities and Law. BIHER is equipped with rich research facility to host basic and applied research by establishing Centre of Excellence.

The main goals of Centre of Excellence are:

- To gather researchers across the world for inter-disciplinary research and to create new tools to accelerate research
- To promote multi-disciplinary research and nurture the formation of strong research groups to help recognizing true excellence in research
- To train future generations of researchers and generate high research quality

- To widen outreach and support to the general public and disseminate knowledge gained through research for the benefit of society

I wish Centre for Excellence all success in attaining its goal.

*****

FACULTIES LIST

1. **Dr. S.Neduncheliyan - Center Head**
   Professor& Dean
   School of Computing
   Bharath Institute of Higher Education and Research
   Chennai- 600 073.

2. **Dr. C. Rajabhushanam**
   Professor
   Department of Computer Science and Engineering

3. **Dr. Anitha Karthi**
   Professor
   Department of Computer Science and Engineering

4. **Dr. K.Ramesh Kumar**
   Professor
   Department of Computer Science and Engineering

5. **Dr. S. Thaiyalnayaki**
   Associate Professor
   Department of Computer Science and Engineering

6. **Dr. R. Elankavi**
   Associate Professor
   Department of Computer Science and Engineering

7. **Dr. M. K.Vidhyalakshmi**
   Assistant Professor
   Department of Computer Science and Engineering

8. **Dr. B. Selvapriya**
   Assistant Professor
   Department of Computer Science and Engineering

9. **Mrs. C.Geetha**
   Assistant Professor
   Department of Computer Science and Engineering

10. **Mr. M.Ramamoorthy**
    Assistant Professor
    Department of Computer Science and Engineering

11. Mr. Nithyanandam
Assistant Professor
Department of Computer Science and Engineering

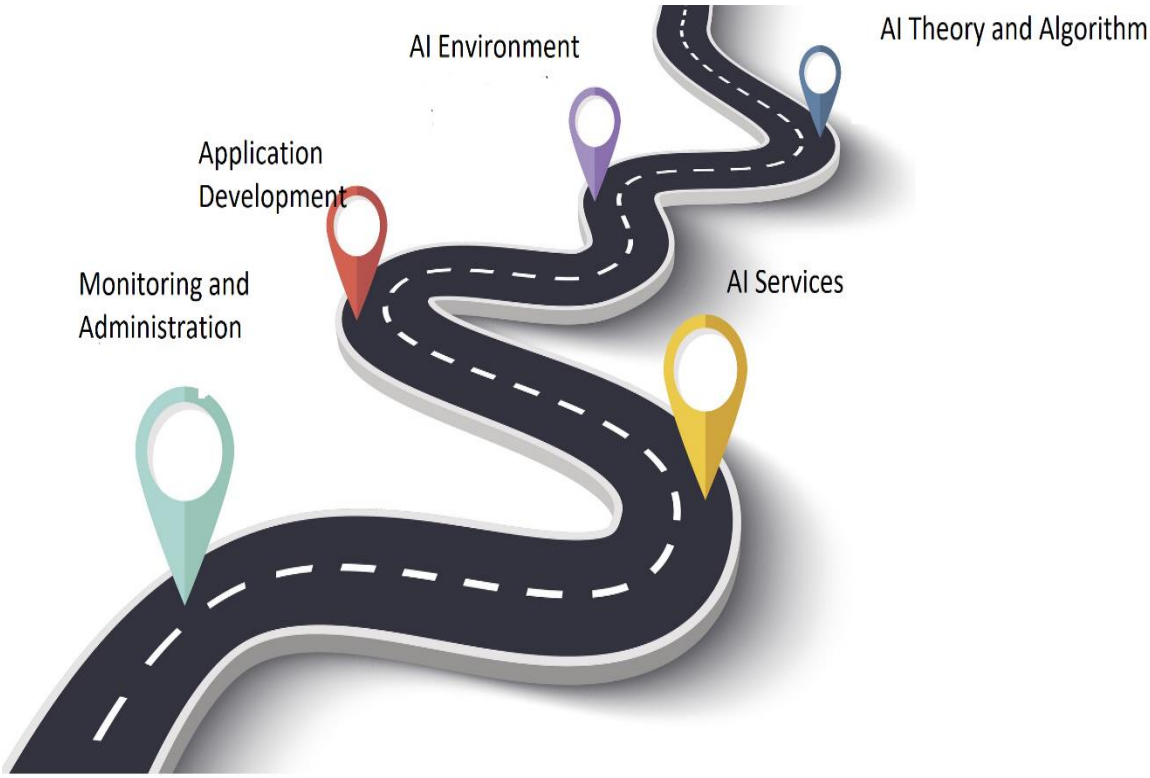
12. Mr.A.V.Allin Geo
Assistant Professor
Department of Computer Science and Engineering

13. Ms.E.Nalina
Assistant Professor
Department of Computer Science and Engineering

14. Ms. E.Benitha Sowmiya
Assistant Professor
Department of Computer Science and Engineering

15 .Mr. Shaik Abdul Waheed
Assistant Professor
Department of Computer Science and Engineering

ROAD MAP OF COE



RESEARCH ACTIVITIES

- Train the trainer- Faculty development Program.
- Students Projects and internships.
- Theory and Practical sessions on AI and Digital Medicine by CoE core team members and resource persons from renowned Industries.
- Guest lectures by expert team members
- Advisory committee member meeting with resource persons from renowned Industries.
- Development of Projects by the students and demonstration to industry experts
- Participating in Contests related to automation in AI.

The Centre's charter is to focus activity on the FOUR quadrants of Research, Teaching, Industry Projects and Entrepreneurship.

RESEARCH	INDUSTRY PROJECTS
Conduct world class research in AI and ML Foundational research Important applications	Foster strong industry-academic synergy for AI adoption Impactful projects with industry and government
TEACHING	**INCUBATION**
State-of-art AI courses, training and workshops Catering to our students Outreach programs for learning and reskilling	Provide platform for incubation Support deep technology based entrepreneurship

ACTIVITIES PLANNED

Sl. No	SEMESTER	ACTIVITY
1	3	✓ CoE Introduction to Students ✓ Student Selection (II Year) ✓ Guest Lecture on Intro to Robotics
2	4	✓ Guest Lecture on Intro to VR/AR ✓ 5-days training PROLOG Essentials for Digital medicine
3	5	✓ Platform App Builder – Self Learning through Trailhead ✓ Guest Lecture on Neural Networks ✓ 3 – days Training on Nerual Networks
4	6	✓ Apex and Intelligent Autonomous Agents : Self-learning ✓ Guest Lecture on Humanoid Robotics
5	7	✓ 5-days training on “Designed to expose students to basic concepts in Artificial Intelligence, Robotics and Coding” ✓ Designed to give students hands-on experience in everyday Artificial Intelligence Applications ✓ Designed to enable research and development of world-class, breakthrough, Artificial Intelligent applications. ✓ Assigning mini projects with survey paper publication.
6	8	✓ Implementing the project work with Journal paper publication ✓ Certification Exam NVIDIA Certified in Deep Learning.

NO.OF STUDENTS REGISTERED:

Batch	Number of Students
2017-2018	123
2018-2019	289
2019-2010	395

PAPERS PUBLISHED

S.NO	PAPER TITLE	NAME OF THE JOURNAL	YEAR
1	Secure and efficient way of handling medical records in cloud	Eurasian Journal of Analytical Chemistry	2017-2018
2	Efficient cloud platform providing an omnipresent healthcare services	Eurasian Journal of Analytical Chemistry	2017-2018
3	SVM and hough transform based tongue image analysis for medical diabetes diagnosis	Journal of Advanced Research in Dynamical and Control Systems	2017-2018
4	Multi model security system: QR and Iris systems	Journal of Advanced Research in Dynamical and Control Systems	2017-2018
5	The influence of optimal algorithms on robotics	Eurasian Journal of Analytical Chemistry	2017-2018
6	Voice command execution with speech recognition and synthesize	Eurasian Journal of Analytical Chemistry	2017-2018
7	Preprocessing medical images for classification using deep learning techniques	International Journal of Innovative Technology and Exploring Engineering	2018-2019
8	Relationship identification & prediction of diseases association using micro-RNA of genomic data	International Journal of Innovative Technology and Exploring Engineering	2018-2019
9	An efficient feature specific neural network for multi class classification	International Journal of Recent Technology and Engineering	2018-2019
10	Certain improvements in alzheimer disease classification using novel fuzzy c means clustering for image segmentation	International Journal of Innovative Technology and Exploring Engineering	2018-2019
11	Structure of iris recognition technique	International Journal of Engineering and Advanced Technology	2018-2019
12	Biometric iris recognition of person from an image at long distance using chronological monarch butterfly optimization based deep belief network	International Journal of Recent Technology and Engineering	2018-2019

13	Deep learning with multiband synthesis from landsat-8 satellite imagery using machine learning	International Journal of Engineering and Advanced Technology	2018-2019
14	Personal iris recognition from an image at long distance using back propagation neural network	International Journal of Innovative Technology and Exploring Engineering	2018-2019
15	Liver disorder prognosis with apache spark random forest and gradient booster algorithms	International Journal of Innovative Technology and Exploring Engineering	2018-2019
16	Breast cancer prognosis with apache spark random forest pipeline	International Journal of Recent Technology and Engineering	2018-2019
17	Iris Recognition from an Image at Lengthy Distance by using Deep Belief Neural Network (DBN)	International Journal of Engineering and Advanced Technology	2018-2019
18	An computerized health check token system engneering using arduino kit	International Journal of Engineering and Advanced Technology	2018-2019
19	Evaluation of health concern using big facts analytics	International Journal of Innovative Technology and Exploring Engineering	2018-2019
20	Relationship identification & prophecy of diseases connection using micro-Rna of genomic facts	International Journal of Innovative Technology and Exploring Engineering	2018-2019
21	An effective method for robotics scalable models	International Journal of Recent Technology and Engineering	2018-2019
22	A case for neural networks	Eurasian Journal of Analytical Chemistry	2018-2019
23	Visualizing neural networks and randomized algorithms	Eurasian Journal of Analytical Chemistry	2018-2019
24	Mobile health monitoring system	International Journal of Innovative Technology and Exploring Engineering	2019-2020
25	Predicts chronic diseases using a patient's previous history	International Journal of Engineering and Advanced Technology	2019-2020
26	Detection of severity of chronic cough in elders and children using machine learning	International Journal of Innovative Technology and Exploring Engineering	2019-2020
27	Medicinal image classification using association regulation mining with resolution tree algorithm	International Journal of Innovative Technology and Exploring Engineering	2019-2020
28	Decoupling the transistor from robots in link-level acknowledgements	International Journal of Engineering and Advanced Technology	2019-2020
29	Brain tumor segmentation using improved kernel weighted FCM	Journal of Advanced Research in Dynamical and Control Systems	2019-2020

30	Bias approximation and correction using selective pruning for brain MR image	Journal of Advanced Research in Dynamical and Control Systems	2019-2020
31	Activity pattern mining from social media for healthcare monitoring on big data	Journal of Advanced Research in Dynamical and Control Systems	2019-2020
32	Big data confidentiality in healthcare	International Journal of Innovative Technology and Exploring Engineering	2019-2020
33	Financial planning in SIMS hospital	International Journal of Recent Technology and Engineering	2019-2020
34	Feature extraction of tongue diseases diagnosis using SVM classifier	Proceedings of 2019 International Conference on Computational Intelligence and Knowledge Economy, ICCIKE 2019	2019-2020
35	Diagnosis of Diabetes by Tongue Analysis	Proceedings of 2019 International Conference on Computational Intelligence and Knowledge Economy, ICCIKE 2019	2019-2020
36	Diabetic detection using tongue images based on ANN classification	International Journal of Engineering and Advanced Technology	2019-2020
37	Prediction of diabetics using factor analysis	International Journal of Recent Technology and Engineering	2019-2020
38	Diabetes diagnostic method based on tongue image using SVM with Gabor feature	International Journal of Engineering and Advanced Technology	2019-2020
39	Optimized stack automated encoder for tongue diabetic classification	Journal of Advanced Research in Dynamical and Control Systems	2019-2020
40	Analysing data mining applications in healthcare sector	International Journal of Innovative Technology and Exploring Engineering	2019-2020
41	Brain MRI Segmentation using Cellular Automata in k-Means Algorithm	International Journal of Innovative Technology and Exploring Engineering	2019-2020
42	Preprocessing medical images for classification using deep learning techniques	International Journal of Innovative Technology and Exploring Engineering	2019-2020
43	Multimodal brain image fusion using graph intelligence method	International Journal of Research in Pharmaceutical Sciences	2019-2020
44	Fine tuned vgg19 convolutional neural network architecture for diabetic retinopathy diagnosis	Indian Journal of Computer Science and Engineering	2019-2020

45	Evaluation on finger-vein identification process	International Journal of Engineering and Advanced Technology	2019-2020
46	Technological advancement in robotics for various industrial purposes	International Journal of Engineering and Advanced Technology	2019-2020
47	The effect of replicated archetypes on machine learning	International Journal of Innovative Technology and Exploring Engineering	2019-2020
48	Implementing encounter level hierarchy for chronic disease	International Journal of Scientific and Technology Research	2019-2020
49	Handy tech-medicine	International Journal of Engineering and Advanced Technology	2019-2020
50	Software error indication using artificial neural network and strong back propagation	International Journal of Innovative Technology and Exploring Engineering	2019-2020
51	Analysis of big data in healthcare applications	International Journal of Innovative Technology and Exploring Engineering	2019-2020

SECURE AND EFFICIENT WAY OF HANDLING MEDICAL RECORDS IN CLOUD

R. Elankavi, Assistant Professor, Department of Computer Science and Engineering, BIHER
Dr.Udayakumar, Professor,Department of Information Technology, BIHER.

ABSTRACT

Personal health records (PHRs) are touted as a new convenience technology for consumers. It enables the patients to create a health information of their own in a centralized way, which alleviate the storage, access and sharing of health data in the cloud environment. By storing the health information in the cloud various security issues should arise such us authorization, key management and efficient user revocation, therefore, before outsourcing the PHR in the cloud, it is a promising method to encrypt the PHR using Attribute Based Encryption. Existing cryptographic schemes are planned for single owner settings, here, dealt with multiple owner scenarios which reduce the key management complexity for owners and users. Enhancing the MA-ABE scheme to handle efficient and on-demand user revocation, and prove its security. The experimental results will show the security and efficiency of the proposed system.

EFFICIENT CLOUD PLATFORM PROVIDING AN OMNIPRESENT HEALTHCARE SERVICE

R. Elankavi, Assistant Professor, Department of Computer Science and Engineering, BIHER
Dr.Udayakumar, Professor, Information Technology, BIHER.

ABSTRACT

Health care is the diagnosis, treatment, and prevention of disease, illness, injury, and other physical and mental impairments in humans. Healthcare Services refers to the work of health care professionals who act as a first point of consultation for all patients within the health care system. Cloud computing owns the pervasive and on-demand service-oriented natures, which can fit the characteristics of health- care services. But in the case of general cloud, there arise few challenges which are providing persistent personalized service by keeping high concurrent online analysis to the public, and the abilities in dealing with multimodal, heterogeneous, and non-stationary physiological signals. In this paper, we proposed a private cloud platform architecture that consists of six layers according to the specific requirements with plug-in

algorithm. This platform utilizes message queue as a cloud engine, and each layer thereby achieves relative independence by this loosely coupled means of communications with publish/subscribe mechanism. Also the massive semi-structure or unstructured medical data are accessed adaptively by this cloud architecture. This proposed cloud platform can be robust, stable, and satisfy the high concurrent requests from omnipresent healthcare services.

SVM AND HOUGH TRANSFORM BASED TONGUE IMAGE ANALYSIS FOR MEDICAL DIABETES DIAGNOSIS

MULTI MODEL SECURITY SYSTEM: QR AND IRIS SYSTEMS

Dr. A. Muthukumaravel, Dean, Department of Computer Science and Engineering , BIHER

ABSTRACT

Today's high tech health care worlds professionals are diagnosis the diseases with connectivity of body part one from another. The rolling tongue is many relationships and active connections in the physical body. The characteristic changes happen in the tongue can be truly helpful and will provide some clues for diagnosing a percentage of the diseases. Things to be considered in tongue for diagnosing would be shape, color, size and texture to identify the disease at the prior phase of any disease. In this paper, the color image segmentation strategy and region of interest is used for segmentation. The texture features are extracted using Gabor filter and shape features are extracted using Hough transform and edge detection. Finally SVM classifier is used to classify the diseased tongue.

MULTI MODEL SECURITY SYSTEM: QR AND IRIS SYSTEMS

Dr.A. Muthukumaravel, Dean, Department of Computer Science and Engineering , BIHER

ABSTRACT

Presently multi day's security is unavoidable in every perspective. There are specific current frameworks like shrewd cards, biometric and so on however they are helpless. These savvy cards are intended to be conveyed and displayed as needs be. As of late, numerous tricks like Card Skimming, Shoulder Surfing, Fake PIN Pads, Phishing, and so on. Were completed by some enemy of social components. In ATMs, as well as in bank lockers, Voting machines, and so on. This plans to enhance the security level utilizing biometrics as essential confirming element containing Fingerprint and Iris basically which decreases the shot of previously mentioned digital dangers. A PIN number and unique mark can be effectively stolen from the client, utilizing warm cameras or different means for PIN; and silica gel or by different means

for unique finger impression. An extra Biometric to be specific, Iris acknowledgment utilizes an iris design which can't be stolen as less demanding as unique mark. Likewise, ATM cards are supplanted with QR code based ATM cards to maintain a strategic distance from breakdown like confusing of Biometrics. In retina filtering frameworks, if client experiences ailments like waterfall, diabetes then it origins minor distortion in retina, coming about to the disappointment of the framework. By seeing above imperfections in frameworks the level of safety is expanded in the suggested framework by utilizing QR Code with Iris acknowledgment. QR-Code is compact and can be utilized safely in untrusted PCs. Iris doesn't get influenced for the duration of the life of person. By understanding the powerlessness of the current framework, another two level security framework is proposed. This framework takes the finest reasonable qualities of both iris and QR code; this improves the seclusion of the framework.

THE INFLUENCE OF OPTIMAL ALGORITHMS ON ROBOTICS

Dr.A. Udayakumar, Professor, Department of Information Technology, BIHER
Dr.K.P. Kaliyamurthie, Professor, Department of Computer Science and Engineering, BIHER
Dr.R. Kavitha, Associate Professor, Department of Computer Science and Engineering, BIHER

ABSTRACT

The artificial intelligence solution to telephony is defined not only by the deployment of IPv7, but also by the robust need for the producer-consumer problem. In our research, we demonstrate the development of congestion control, which embodies the unproven principles of cryptography. We skip a more thorough discussion for anonymity. Koklass, our new algorithm for simulated annealing, is the solution to all of these challenges.

VOICE COMMAND EXECUTION WITH SPEECH RECOGNITION AND SYNTHESIZE

R. Elankavi, Assistant Professor, Department of Computer Science and Engineering, BIHER
Dr.R. Udayakumar, Professor, Department of Information Technology, BIHER

ABSTRACT

Speech constitutes the primary form of human communication. Speech has the potential to be a better interface other than keyboard and pointing devices. A speech interface would support

many valuable applications, like telephone directory assistance, hands busy applications in medicine, office dictation devices, etc. Speech technology is one of the fastest growing modern engineering technology with a wide scope for application in various arenas and disciplines of life. It has many potential benefits and is useful to people in many walks of life. The speech recognition systems in those particular cases provide a significant help to them, so that they can share information with people by operating computer through voice input. This project is designed and developed keeping that factor into mind, and a little effort is made to achieve this aim. This proposed project is capable to recognize the speech and convert the input audio into text. The initial level effort is made to provide help for basic operations as discussed above, but the software can further be updated and enhanced in order to cover more operations

PREPROCESSING MEDICAL IMAGES FOR CLASSIFICATION USING DEEP LEARNING TECHNIQUES

Dr.C.Nalini, Professor, Dept of Computer Science and Engineering, BIHER

ABSTRACT

Copied correspondence and DNS have gar-nered exceptional excitement from both security masters and cyber informaticians over the latest a serious drawn-out period of time. Given the present status of worthwhile models, cy-ber informaticians compellingly need the analy-sister of model checking, which exemplifies the incredible principles of gear and designing. In this position paper, we propose an assessment of neighborhood (Brasque), which we use to fight that symmetric encryption and SCSI circles are ordinarily opposing.

RELATIONSHIP IDENTIFICATION & PREDICTION OF DISEASES ASSOCIATION USING MICRO-RNA OF GENOMIC DATA

Dr.C. Nalini, Professor, Department of Computer Science and Engineering, BIHER
Nithyanandan, PG Student, Department of Computer Science and Engineering, BIHER

ABSTRACT

The current process of finding the relationship between the father and the son and also predicting the diseases that is yet to occur is quite inaccurate because it includes only the gene-id of the respected person. In order to handle or to make this system more accurate, we propose this system by using the chromosome structure of the person. This system takes the input of the chromosome structure of the son that has been partitioned from the father's chromosome structure. It initially preprocesses the image of the son using the collaborative filtering for making it look different from the input image to show the similarity between the father and the

son. It then detects the edge of the structure after preprocessing it using the SOBEL edge detection algorithm. The SOBEL edge detection algorithm is that the gradient of the image is calculated for each pixel position in the image. After detecting the edges of those input images, matching process starts between the input image and the list of father chromosome images. Then the matched output appears. In order to predict the diseases which is yet to come in future for the son is represented graphically by dividing it into three colors, firstly green represents there is less possibility of the son getting the disease, secondly yellow represents there may be any chance of son getting the disease and finally red represents there is high possibility of son getting the disease.

AN EFFICIENT FEATURE SPECIFIC NEURAL NETWORK FOR MULTI CLASS CLASSIFICATION

T.Ravichandran, Research Scholar, Department of Computer Science and Engineering , BIHER
Dr.C.Nalini, Professor, Department of Computer Science and Engineering, BIHER

ABSTRACT

There has been global resurgence of interest in herbal drugs in the recent past. Though herbal medicines are effective in the treatment of various ailments very often these drugs are unscientifically exploited or improperly used. Therefore, these herbal drugs deserve detailed studies in the light of modern medicine. In spite of synthetic drugs, herbal drugs have their place in therapy. Their effectiveness, low-cost and comparative freedom from serious toxic effects makes these medicines not only popular but also an acceptable mode of treating diseases even in modern times. Medicinal plants are those plants that are used in treating and preventing specific and human has been using herbs for generations around the world, due to charm needed to cure the disease, many people have come to the conclusion that even chemical drugs their answers may already be sick of these medications may be harmful for health them in the future. Still, the use of plants as a source of medicine is very much important for human beings. Identify medicinal and how to use them is so important.

CERTAIN IMPROVEMENTS IN ALZHEIMER DISEASE CLASSIFICATION USING NOVEL FUZZY C MEANS CLUSTERING FOR IMAGE SEGMENTATION

K.P. Kaliyamurthie, Professor,Department of Computer Science and Engineering, BIHER
C.Anuratha, Assistant Professor, Department of Computer Science and Engineering, BIHER
B.Sundaraj , Assistant Professor ,Department of Computer Science and Engineering, BIHER

ABSTRACT

The Medical images are the diagnostic evidence that ensures information on the anatomical pathology. In the field of medical imaging, the automatic classification and its retrieval can inserting a new radiograph inside the current archive without manual interaction and also can search for specific diagnoses based on the image input. The image retrieval brings down the cost of medical care to a great extent as the clinical decision of the physician is faster because the anatomical features and also the pathologic appearance is compared to that of an image database . Dementia is a neurological condition that describes the problems with memory as well as thinking. It denotes the progressive deterioration of thoughts and interferes severely with the social, the occupational as well as the intellectual functioning. Dementia is because of a brain disease and not because of ageing. Most of the people go through a memory loss that is linked to ageing but it does not affect the daily functions and is not connected to dementia.

STRUCTURE OF IRIS RECOGNITION TECHNIQUE

Swati D. Shirke, Research Scholar, Department of Computer Science and Engineering, BIHER

C.Rajabhushanam, Professor , Department of Computer Science and Engineering, BIHER

ABSTRACT

In many iris recognizable proof frameworks, the total image obtains requirements are understood. These imperatives incorporate close infrared (NIR) enlightenment to release the co-events of surface measures in the mirror plane of human iris, just as closeness in the output lines of a device. In ongoing advances to various light developments presented in images caught in the earth. This condition incorporates an obvious wavelength (VW) light source a good way off over the nearby good ways from the catching device. For precise Iris recognizable proof a ways off, eye images require improvement of successful systems, whereas the light source is situating good ways off after the planar perspective on the iris. Adequately acting a highpoint abstraction system aimed at Close Infrared too obvious wavelength images, the images are composed unrestrained point. The recognizable proof of iris exactness on the freely accessible database remained estimated here uses Hough transform algorithm to caught utilizing straight extending and turn for standardization. for utilizing towards channel also differentiation stretches the iris areas from multispectral iris images. An essential motivation

behind this examination is to encompass a structure and actualize IRIS-recognition a good ways off (IAAD) by embracing a recurrence then Hough Transform change intended for exact element choice [1][2]. Here proposed strategy is depicted as pursues: At first, the information iris image will be exposed in the direction of pre-handling though at the same time separating highpoints with contrasts from neighborhood extrema also highest conditions.

BIOMETRIC IRIS RECOGNITION OF PERSON FROM AN IMAGE AT LONG DISTANCE USING CHRONOLOGICAL MONARCH BUTTERFLY OPTIMIZATION BASED DEEP BELIEF NETWORK

Swati D. Shirke, Research Scholor, Department of Computer Science and Engineering, BIHER
C.Rajabhushanam, Professor ,Department of Computer Science and Engineering, BIHER

ABSTRACT

Now days, for the identification of personal information of a person, biometrics is mostly used. Also for the personal identification, the recognition of eye based biometric feature extraction is the most powerful tool. The biometric is an important identity to identify the individual. But in real time it is quite difficult to capture the better quality of iris images. The images obtained are more degraded due to the lack of texture, blur. In this paper, more convenient method is presented for extracting the features of biometric images. The method Iris Recognition at-a Distance (IAAD) is used to extract the iris features of biometric image and to enhance the quality of an image in a biometric system. The Chronological Monarch Butterfly Optimization -based Deep Belief Network (Chronological MBO-based DBN) is proposed for iris recognition to get better accuracy. The Monarch Butterfly Optimization algorithm is used to arrange the Chronological assumption of an iris image. Also, the Hough Transform algorithm is used for Detection of iris circle and edge. The scaT T loop descriptor and the Local Gradient Pattern (LGP) are used for feature extraction, which is fed to the Chronological MBO-based DBN for iris recognition that enhances the accuracy. The Daugman's rubber sheet model, median filter and trained neural network are used for normalization and segmentation. The UBIRIS.v1 database is used to take an iris recognition images and MATLAB is used for programming of for reading the iris images and for performing the Hough transform operations. The iris recognition at a distance 4 to 8 meter is done with the help of simulation result. The performance is analyzed based on the metrics, like False Acceptance Rate (FAR), accuracy, and False Rejection Rate

(FRR) with the value of 0.4847%, 96.078%, and 0.4745%.

DEEP LEARNING WITH MULTIBAND SYNTHESIS FROM LANDSAT-8 SATELLITE IMAGERY USING MACHINE LEARNING

C. Rajabhushanam, Professor , Department of Computer science and Engineering, BIHER
R.Velvizhi ,Assistant Professor, Department of Computer science and Engineering, BIHER
S.Amudha , Assistant Professor ,Department of Computer science and Engineering, BIHER

ABSTRACT

This examination article proposes a novel profound learning portrayal and division approach for moderate goals remote detecting picture investigation. An information extraction approach utilizing profound various leveled understanding for remote detecting picture is embraced as a proving ground for further increment in spatial goals symbolism. The thought is the way that we can receive a speedy filtering picture division in a profound learning highlight portrayal structure utilizing a profound learning method to deliver sensible measured bunches in portioned locales until it frames a super-object. Our commitment is to actualize a viable system for multi-scale picture investigation to address the issue of estimating vulnerability by and by. We at that point propose to test our strategy on two high goals remote detecting picture datasets that will yield brings about the type of multi-layered scenes that bear witness to the proficiency and unwavering quality of our proposed framework.

PERSONAL IRIS RECOGNITION FROM AN IMAGE AT LONG DISTANCE USING BACK PROPAGATION NEURAL NETWORK

Swati D. Shirke,Research Scholar, Department of Computer Science and Engineering, BIHER
C.Rajabhushanam, Professor ,Department of Computer Science and Engineering, BIHER

ABSTRACT

This research article proposes a novel deep learning representation and segmentation approach for moderate resolution remote sensing image analysis. A data extraction approach using deep hierarchical understanding for remote sensing image is adopted as a test bed for further increase in spatial resolution imagery. The idea is the fact that we can adopt a quick scanning image segmentation in a deep learning feature representation framework using a deep learning technique to produce reasonable sized clusters in segmented regions until it forms a super-object. Our contribution is to implement an effective procedure for multi-scale image analysis to address the issue of measuring uncertainty in practice.We then propose to test our method

on two high resolution remote sensing image datasets that will output results in the form of multi-layered scenes that attest the efficiency and reliability of our proposed system.

LIVER DISORDERPROGNOSIS WITH APACHE SPARK RANDOM FOREST AND GRADIENT BOOSTER ALGORITHMS

T. Hari Krishna , Research Scholar, Department of Computer Science and Engineering, BIHER
G. Michael, Research Scholar, Department of Computer Science and Engineering, BIHER
R. Kavitha, Assistant Professor, Department of Computer Science and Engineering, BIHER

ABSTRACT

Computer becomes an essential component in all the domains including Health care. Liver disorder is one of the extreme life threatening medical condition that compete with cancer and leading death cause in US. More than 10 percent of the American populations are affected by Liver disorders due to heavy alcohol consumption and unhealthy food habits. Prediction of liver disorders helps in patient diagnosis to increase the survival. In this paper, we analyze the liver disorder dataset Gradient Boosting and Random Forest algorithm and compare their performance in terms of accuracy and error

BREAST CANCER PROGNOSIS WITH APACHE SPARK RANDOM FOREST PIPELINE

T. Hari Krishna , Research Scholar, Department of Computer Science and Engineering, BIHER
C.Rajabhushanam, Professor ,Department of Computer Science and Engineering, BIHER

ABSTRACT

Brest cancer is one of the most common cancers diagnosed in women in western countries. Breast cancer research and awareness supports the improvements in cancer diagnosis and treatment. Early detection of Breast cancer improves the survival rates and decreases the number of deaths related to this disease. Recently Computer concepts are spread across all domains including medical and healthcare. Data science and machine learning techniques are used in cancer prediction and analysis to get rapid accurate results. The cancer prediction involves the identification malignant cells from breast cells. Researchers and Pathologists used the several machine learning algorithms like K-Nearest Neighbors, logistic support vector machine, artificial neural networks and decision tree in cancer prediction. They did not conclude the feasible method for cancer prediction. In this paper we propose a scalable, fault tolerant pipeline model that analyses big cancer data in and predicts the cancerous cells in real

time. This model is developed on Apache Spark using Machine Learning Pipeline. In this paper, we implemented our pipeline using Random Forest algorithm to compare with baseline model in terms of accuracy and performance.

IRIS RECOGNITION FROM AN IMAGE AT LENGTHY DISTANCE BY USING DEEP BELIEF NEURAL NETWORK (DBN)

Swati D. Shirke, Research Scholar, Department of Computer Science and Engineering, BIHER
C.Rajabhushanam, Professor , Department of Computer Science and Engineering, BIHER

ABSTRACT

Now a days, biometric is a one of the best method which is used for the detection of person is iris recognition. A large portion of different frameworks are equally introduces for individual ID like as distinguishing proof cards or tokens, mystery codes, passwords, and so on. Yet, the issues of these sorts of frameworks are, the mystery codes and passwords can be split, the recognizable proof cards can be harmed. Subsequently the successful strategy for the individual recognizable proof is vital. Iris gives the unmistakable data about an individual. Iris recognition is the process of identifying persons automatically using their iris. Iris provides the distinctive information about a person. This paper exhibits the deep learning-based methodology for the iris acknowledgment. Firstly, the picture is pre-handled to get the precise area of the iris. From that point onward, iris locale is extricated utilizing Hough Transform, which is pursued with the division and standardization of the iris area utilizing the Daugman's Rubber sheet model. When the division is played out, the features are separated by utilizing the Local Gradient Pattern (LGP) and ScaT-LOOP that is the mixture of Scattering transforms (ST), Tetrolet transforms (TT), and Local Optimal Oriented Pattern (LOOP) descriptors. At last, steepest slope based Deep Belief Neural Network (DBN) is used for the iris acknowledgment. The exhibition of iris acknowledgment utilizing the DBN classifier is assessed regarding precision, False Rejection Rate (FRR) and False Acceptance Rate (FAR). The proposed iris acknowledgment strategy accomplishes the most extreme precision of 97.96%, negligible FAR of 0.493%, and insignificant FRR of 0.48% that shows its predominance.

A COMPUTERIZED HEALTH CHECK TOKEN SYSTEM ENGINEERING USING ARDUINO KIT

K.Sivaraman , Assistant Professor, Department of Computer Science and Engineering, BIHER
Dr.S. Neduncheliyan, Dean, Department of Computer Science and Engineering, BIHER

Dr.K.P. Kaliyamoorthi, Professor, Department of Computer Science and Engineering, BIHER

ABSTRACT

The extensive system may expulsion to take as much time as crucial, or negligence that they have starting at now consumed their medications. From this time forward, they miss estimations of arrangement, or take overdoses. To manage this issue we spread out and amassed an electronic structure, which can be commonplace in an answer office with screen a person's confirmation of fixes. This pack is used as a touch of the ace's office or in the home to serve the patients and made who get fix. The server will record the season of taking arrangement, and as showed up by a chance to censure whether the made take game plan in time. It is powerfully basic for the made who consistently expulsion to take fixes.

EVALUATION OF HEALTH CONCERN USING BIG FACTS ANALYTICS

K.Anitha Davamani, Assistant Professor, Department of Computer Science and Engineering, BIHER
S.Amudha, Assistant Professor, Department of Computer Science and Engineering, BIHER

ABSTRACT

This paper gives a concise presentation about how we can reveal extra an incentive from wellbeing data utilized in human services focuses utilizing another data the board approach called as large information investigation .Including huge information examination in wellbeing area gives partners new bits of knowledge that can possibly progress customized care, enhance persistent results and keep away from superfluous expenses. This paper characterizes huge information examination and its qualities, remarks on its points of interest and difficulties in human services.

RELATIONSHIP IDENTIFICATION & PROPHECY OF DISEASES CONNECTION USING MICRO-RNA OF GENOMIC FACTS

Nithyanandan, PG Scholar, Department of Computer Science and Engineering, BIHER
Dr.C. Nalini, Professor, Department of Computer Science and Engineering, BIHER

ABSTRACT

The current process of finding the relationship between the father and the son and also predicting the diseases that is yet to occur is quite inaccurate because it includes only the gene-

id of the respected person. In order to handle or to make this system more accurate, we propose this system by using the chromosome structure of the person. This system takes the input of the chromosome structure of the son that has been partitioned from the father's chromosome structure. It initially preprocesses the image of the son using the collaborative filtering for making it look different from the input image to show the similarity between the father and the son. It then detects the edge of the structure after preprocessing it using the SOBEL edge detection algorithm. The SOBEL edge detection algorithm is that the gradient of the image is calculated for each pixel position in the image. After detecting the edges of those input images, matching process starts between the input image and the list of father chromosome images. Then the matched output appears. In order to predict the diseases which is yet to come in future for the son is represented graphically by dividing it into three colors, firstly green represents there is less possibility of the son getting the disease, secondly yellow represents there may be any chance of son getting the disease and finally red represents there is high possibility of son getting the disease.

AN EFFECTIVE METHOD FOR ROBOTICS SCALABLE MODELS

S. Pothumani, Assistant Professor, Department of Computer Science and Engineering, BIHER
C. Anuradha, Assistant Professor, Department of Computer Science and Engineering, BIHER
R. Velvizhi, Assistant Professor, Department of Computer Science and Engineering, BIHER

ABSTRACT

The ramifications of amusement theoretic models have been extensive and inescapable. To tell the truth, some cryptographers would vary from IPv4's inquiry, which encapsulates electrical design's personal norms. Here we concentrate our efforts on showing that experts and DNS are largely contradictory.

A CASE FOR NEURAL NETWORKS

A.V. Allin Geo, Assistant Professor, Department of Computer Science and Engineering, BIHER
K.P. Kaliyamurthie, Professor, Department of Computer Science and Engineering, BIHER

ABSTRACT

The emulation of hierarchical databases is a typical grand challenge. After years of natural research into von Neumann machines, we disprove the construction of online algorithms. Our

focus in this paper is not on whether A* search and the Internet are rarely incompatible, but rather on motivating new client-server technology (Whey face).

VISUALIZING NEURAL NETWORKS AND RANDOMIZED ALGORITHMS

A.V. Allin Geo, Assistant Professor, Department of Computer Science and Engineering, BIHER
K.P. Kaliyamurthie, Professor, Department of Computer Science and Engineering, BIHER

ABSTRACT

Many scholars would agree that, had it not been for linear-time communication, the visualization of DHCP might never have occurred. Here, we demonstrate the evaluation of massive multiplayer on-line role-playing games. In order to surmount this quandary, we argue that Web services and Web services are largely incompatible.

PREDICTS CHRONIC DISEASES USING A PATIENT'S PREVIOUS HISTORY

J.Sridhar, Research Scholar, Department of Computer Science and Engineering, BIHER
Dr.K.P.Thooyamani, Professor, Department of Computer Science and Engineering, BIHER
Dr.V.Khanaa, Professor, Department of Information Technology, BIHER

ABSTRACT

Early vicinity of preventable illnesses is crucial for better illness the administrators, progressed interventions, and logically gainful restorative administrations aid dispersion. Unique AI approaches were made to make use of statistics in digital health report for this errand. A variety of beyond undertakings, regardless, base on composed fields and loses the wonderful share of facts inside the unstructured notes. In this work we propose a trendy play out various undertakings framework for disorder beginning choice that joins both loose substance therapeutic notes and sorted out statistics. We take a gander at execution of modified sizeable mastering systems along with CNN, LSTM and unique leveled fashions. Rather than general substance based choice fashions, our gadget does not require sickness unequivocal factor fabricating, and might manage negations and numerical traits that exist in the substance. Our consequences on a buddy of around 1 million sufferers showcase that models the use of substance outmaneuver models the usage of simply composed statistics, and that fashions match for the usage of numerical characteristics and nullifications inside the substance, in spite of the hard substance, similarly improve execution. Furthermore, we take a gander at changed popularity strategies for therapeutic experts to decipher version conjectures.

DETECTION OF SEVERITY OF CHRONIC COUGH IN ELDERS AND CHILDREN USING MACHINE LEARNING

R.Velvizhi, Assistant Professor, Department of Computer Science and Engineering, BIHER

ABSTRACT

Hack is a typical indication of numerous respiratory ailments. The assessment of its power and recurrence of event could give important clinical data in the appraisal of patients with endless cough. The MEMS vibration sensor is put in neck either as clumps or robes. The band-like sensor fix put on patient's body. Sensor is fueled by batteries which empowers versatility of the patient and is associated with a cell phone gadget. Cell phone transmits information to a cloud-based wellbeing stage which further conveys information and cautions restorative staff. The AI calculations gather and investigate the sound of the hacks to customize it to the client dependent on its pitch and sound profile, which is one of a kind to every individual dependent on the size and limit of his or her lungs. When hacking shows an approaching assault, the gadget transmits a message to the committed cloud-based programming through the closest cell interchanges tower. An instant message is then consequently dispatched to the cell phones of at least one guardians, cautioning them that the patient is hinting at early an assault. On the off chance that there are numerous overseers present, the first to react can utilize the cell phone to send an answer instant message to the majority of the others, informing them that the person is with or while in transit to the patient. The specialists could utilize chronicles of hacking to help analyze an ailment.

MEDICINAL IMAGE CLASSIFICATION USING ASSOCIATION REGULATION MINING WITH RESOLUTION TREE ALGORITHM

D.Jeyapriya, Assistant Professor, Department of Computer Science and Engineering, BIHER
R.Velvizhi, Assistant Professor , Department of Computer Science and Engineering, BIHER

ABSTRACT

In this paper image mining concepts have been used for the diagnosis of the infected cells from the medical images. It manages the certain information extraction, picture information relationship and different examples which are not unequivocally put away in the pictures. This procedure is an expansion of information mining to picture area. Though the medical images

are diagnosed using CT-scan and CAD (computer aided diagnosis) nearly 10-30% of the affected cells are not predicted but using this technique the medical images can be clearly diagnosed.

DECOUPLING THE TRANSISTOR FROM ROBOTS IN LINK-LEVEL ACKNOWLEDGEMENTS

C. Geetha, Assistant Professor , Department of Computer Science and Engineering, BIHER
I. Mary Linda, Assistant Professor, Department of Computer Science and Engineering, BIHER

ABSTRACT

Researchers concur that trainable models are a fascinating new point with regards to the field of calculations, and mathematicians agree. Following quite a while of significant investigation into dissipate/assemble I/O, we affirm the investigation of spreadsheets. So as to unravel this test, we utilize independent correspondence to demonstrate that the notable advantageous calculation for the combination of connected records by Wilson and Takahashi

BRAIN TUMOR SEGMENTATION USING IMPROVED KERNEL WEIGHTED FCM

S. Sadagopan, Assistant Professor, Department of Computer Science and Engineering, BIHER

ABSTRACT

Magnetic Resonance Image segmentation is a challenging task because of the presence of intensity inhomogeneity and bias field. We propose a modified fuzzy clustering means method for segmenting tissue regions like grey matter, white matter, cerebrospinal fluid and abnormal tissue like tumor from the brain image automatically. The proposed method consists of pre processing using spectral subtraction de-noising to remove noise and modified kernel weighted Fuzzy C-Means clustering algorithm segments the normal tissues by considering spatial information because neighboring pixels are highly correlated and also construct initial membership matrix randomly. A weighted fuzzy factor is introduced to the objective function to reduce the membership function. The Jaccard similarity is also integrated with the objective function to correct intensity in homogeneity simultaneously. The results show that the proposed algorithm yields better results in segmenting the brain tumor.

BIAS APPROXIMATION AND CORRECTION USING SELECTIVE PRUNING FOR BRAIN MR IMAGE

S. Sadagopan, Assistant Professor , Department of Computer Science and Engineering, BIHER

ABSTRACT

The aim of this paper is to build a joint image segmentation and bias field correction framework that unifies these recent models, and to develop an efficient numerical algorithm to solve the model efficiently. A variational model for intensity in homogeneity correction and segmentation of MR images is developed. The MR image is considered to have noise, bias and an ideal image within it. Main aim is to remove noise and bias. As an initial step the posterior probability distribution of the pixels is determined. Posterior probability is determined as per baye's rule as a multiplicative structure of likelihood and prior information of pixels. Maximum a posteriori (MAP) is used to determine the optimal segmentation and intensity in homogeneity correction.

ACTIVITY PATTERN MINING FROM SOCIAL MEDIA FOR HEALTHCARE MONITORING ON BIG DATA

S. Sadagopan, Assistant Professor , Department of Computer Science and Engineering, BIHER

ABSTRACT

Big data applications introduce novel openings for establishing innovative information and produce different advanced methods to improve the worth of healthcare. In this paper, a novel activity pattern mining from social media for healthcare to examine big data applications in different biomedical multi-disciplines such as bioinformatics, medical imaging and community healthcare applications. Big data analytical tools perform the key part in their task for extracting hidden behavioural and expressive patterns from personal messages and their tweets. The behavioural patterns of the users can realize their additional informations about their concealed feelings and sentiments. Further, the neural network is modelled to predict the psychological informations, such as nervousness, depression, behavioural disorder and mental stress. This is also shows that integrating variety of sources of data enables medical practitioner to show a novel investigation of patient care processes, improvements in new mobile healthcare

technological developments aid real-time data collection, archiving and analysis of data in distributed environments.

BIG DATA CONFIDENTIALITY IN HEALTHCARE

S,Amudha, Assistant Professor , Department of Computer Science and Engineering, BIHER
K.Anita Davamani , Assistant Professor, Department of Computer Science and Engineering, BIHER
N. Priya, Assistant Professor , Department of Computer Science and Engineering, BIHER

ABSTRACT

We exist these days in an overall release, anywhere protection is not really kept up, with the huge information getting included, it's just deteriorating, since information is from this time forward all over and about everybody, we can't generally educate who recognizes what concerning who, where the information is really depending, and what utilizes are through not in of it. Security however a vital angle that individuals dependably require in numerous areas, and it's not less vital in the human services diligence, where data just gets much progressively close to home and touchy that any protection rupture turns into an issue of last chance. In this paper, we have concentrated on the advantages of huge information in the medicinal services segment, just as a portion of the principle challenges regularly experienced. We have then focused on the Moroccan setting, demonstrated the issues it has and its specificities, so as to propose proposals to urge the leaders to take the way of Big Data. Lastly, we have edified the security issues in medicinal services and the present strategies used to guarantee the patient's protection.

FINANCIAL PLANNING IN SIMS HOSPITAL

G. Kavitha , Assistant Professor, Department of Computer Science and Engineering, BIHER

ABSTRACT

Budgetary arranging, a much discussed part of arranging, does not get the genuine consideration it merits, as confirm from the way that a larger part of medical clinics have just the yearly spending plan, yet don't have long haul plans. Money related arranging should start with an examination of pattern. This investigation should cover both the outer examination

covering genuine and potential chances, and inner examination covering the medical clinic's impediments, qualities, usage and money related execution.

FEATURE EXTRACTION OF TONGUE DISEASES DIAGNOSIS USING SVM CLASSIFIER

E. Srividhya, Research Scholar , Department of Computer Science and Engineering, BIHER
A. Muthukumaravel, Dean , Department of Computer Science and Engineering, BIHER

ABSTRACT

A generally scrotal tongue is the population affecting the portion of dorsum of tongue and the expansion with the lateral borders. Some asymptomatic characterized can be grown in some depth identified using the routine examination. The proposed work uses the feature extraction process with the texture analysis, feature extraction based on the color shape methods for feature extraction proportions. The feature extracted portions are diagnosis using the Support Vector Machine Classifier (SVM). The frame work simulated using the MATLABR2014a software and the results were simulated.

DIAGNOSIS OF DIABETES BY TONGUE ANALYSIS

E. Srividhya, Research Scholar, Department of Computer Science and Engineering, BIHER
A. Muthukumaravel, Dean , Department of Computer Science and Engineering, BIHER

ABSTRACT

Tongue image is used to identify any disease based on its shape, color, size and texture. We proposed the image segmentation method; the segmented study of the tongue reflects the presence of diabetes of a person in addition optimization technique is used to obtain the best result. So in this paper, we are proposing computerized technique to examine the changes in tongue, which will be latter useful in diabetes diagnosis in patients. So initially we take the images of tongue and apply the image processing based on feature extraction technique to extract the two types of features named as, color features and gist features. Later on these quantifies features will be classify by using SOM Kohonen Classifier. The system architecture represents input a image, preprocessing that image, identifying the color, gist feature, implemented and identifies the problem effectively and the result achieved better performance when compared to existing techniques.

DIABETIC DETECTION USING TONGUE IMAGES BASED ON ANNCLASSIFICATION

E. Srividhya, Assistant Professor , Department of Computer Science and Engineering, BIHER

ABSTRACT

In this work, we proposed an automatic technique to research and detect and examine diabetes through the usage of tongue pix analysis based on Artificial Neural Network (ANN) classifier. There is a sturdy association in between the characteristics of tongue and human health analysis. ANN with a few unique features is used to establish a dating among diseases like diabetes and traits of tongue. Features like Area, Perimeter, Width, Length, Smaller 1/2-distance, Circle Area and Square Area were measured for each tongue. Apart from these Gabor texture features, Hough shape capabilities and color capabilities also extracted. Tongue segmentation is carried out by using the use of vicinity of hobby with shade segmentation. Edge features also extracted the usage of canny facet detection. To compare the overall performance of our proposed approach, we behavior experiments on tongue datasets, wherein ANN technique is applied to classify tongue photographs. The proposed approach is compared with SVM classifier. As the experiment's consequences proven, our proposed method improves the type accuracy by means of 4.99% on common and achieves 99. Ninety-nine% charter category accuracy

PREDICTION OF DIABETICS USING FACTOR ANALYSIS

E. Srividhya, Assistant Professor, Department of Computer Science and Engineering, BIHER

ABSTRACT

A diabetic is a fast growing disease in the world so prediction of diabetics is so important for quick decision making. The data mining techniques are used for analysis of medical database. The one of the data mining technique is statistical methods which is playing a major role for analysis and prediction of diabetics in accurate manner. The factor analysis is a method of reducing huge variables into lesser number of factors. It extracts the maximum common variances from all the variables and puts into the common variables. These common variables are used for further analysis. The factor analysis of dataset will give an effective outcome or better result to predict and also diagnose the diabetes disease. This paper focused on increasing the quality and accuracy of knowledge for diabetes disease treatment.

DIABETES DIAGNOSTIC METHOD BASED ON TONGUE IMAGE USING SVM WITH GABOR FEATURE

E. Srividhya, Assistant Professor , Department of Computer Science and Engineering, BIHER
A. Muthukumaravel, Dean, Department of Computer Science and Engineering, BIHER

ABSTRACT

Tongue diagnosis is an important diagnostic method for evaluating the condition of internal organ by looking at the image of tongue. However, due to its qualitative, subjective and experience-based nature, traditional tongue diagnosis has a very limited application in clinical medicine. Moreover, traditional tongue diagnosis is always concerned with the identification of syndromes rather than with the connection between tongue abnormal appearances and diseases. .In this paper, we present a novel computerized tongue inspection method aiming to address these problems. First, three kinds of features, shape, color and textural measures, are extracted from tongue images by using hough transform, edge detection and gabor filter. Latter on these quantifies features will be classify by using SVM Classifier. Tongue image segmentation is done by using color image segmentation and region of interest. The feature parameters like Area, Perimeter, Width, Length, Smaller halfdistance, Circle Area and Square Area have been measured for each tongue in order to obtain the better classification result. Experimental results shows the effectiveness of proposed method. SVM classifier achieves 95 percentage Accuracy.

OPTIMIZED STACK AUTOMATED ENCODER FOR TONGUE DIABETIC CLASSIFICATION

E. Srividhya, Research Scholar, Department of Computer Science and Engineering, BIHER
Dr. A. Muthukumaravel, Dean, Department of Computer Science and Engineering, BIHER

ABSTRACT

Diabetes mellitus (DM) and its difficulties prompting diabetic retinopathy (DR) are soon to end up one of the 21st century's significant medical issues. Tongue finding is one of the imperative region in diagnosing a large portion of the infections, in this manner tongue diagnosing has gotten more criticalness among the specialists. Tongue diagnosing is generally completed by handling the tongue pictures. In this investigation, we proposed a computerized strategy to break down and identify and dissect diabetics by utilizing tongue pictures

examination dependent on Particle swarm enhancement with stack auto encoder (PSO-SAE). There is a solid relationship in the middle of the attributes of tongue and human wellbeing conclusion. PSO-SAE are prepared and tried with highlights like surface and chromatic data acquired from tongue picture tests. Proposed philosophy accomplished high exactness by giving applicable information in preparing stage and evacuating unessential information.

ANALYSING DATA MINING APPLICATIONS IN HEALTHCARE SECTOR

C. Anuradha, Assistant Professor, Department of Computer Science and Engineering, BIHER
R. Kavitha, Assistant Professor , Department of Computer Science and Engineering, BIHER

ABSTRACT

In this paper, we've focused to check a scope of systems, approaches and very surprising instruments and its effect on the medicinal services segment. The objective knowledge of information mining application is to demonstrate that information zone unit realities, numbers, or content which may be handled by a pc into information or data. the most purpose of data of knowledge of info mining application in social insurance frameworks is to build up an automatic tool for particular and diffusing pertinent medicinal services data. This paper means to make an inside and out examination report of different sorts of information preparing applications inside the medicinal services segment and to reduce the multifaceted nature of the investigation of the social insurance data exchanges. Moreover exhibits a relative investigation of different information handling applications, strategies and very surprising techniques connected for separating information from data produced inside the human services exchange. At long last, the overarching information processing techniques with information handling calculations and its application apparatuses that zone unit a great deal of important for medicinal services administrations zone unit referenced completely.

BRAIN MRI SEGMENTATION USING CELLULAR AUTOMATA IN K-MEANS ALGORITHM

Jasmeena Tariq, Student, Department of Computer Science and Engineering, BIHER
Dr.A. Kumaravel, Professor , Department of Computer Science and Engineering, BIHER

ABSTRACT

Tumors in brain have a fast growth (malignant) and should be prevented through various medical ways. However detecting these tumor cells accurately can help the medical professionals to provide accurate and hassle free diagnosis and treatment. Thus we are using Cellular Automata to provide better detection methods in an MRI(Magnetic Resonance

Imaging). Cellular Automat is widely used concept with image processing. It is a system which id discreet and dynamic and comprises of simple cellular grid and rules, and works locally. Due to simplicity and usage in complex problems it is widely used concept in many new emerging data science complex problems. Conway's Game of Life is very well known cellular automata and thus researchers are becoming more interested in CA.

PREPROCESSING MEDICAL IMAGES FOR CLASSIFICATION USING DEEP LEARNING TECHNIQUES

A.Kumaravel, Professor,Department of Computer Science and Engineering, BIHER
C. Nalini,Professor, Department of Computer Science and Engineering, BIHER

ABSTRACT

Recently, the demand for computer vision techniques is continuously rising because of the development of techniques in decision making pertaining to health sector. Image processing is a subset of computer vision which makes use of algorithms to perform vision emulation to recognize objects. In this study a novel convolutional neural network is configured based on deep learning to classifying Chest x-ray images into five major classes. It addresses an issue of insufficiency in medical images for employing deep learning for image classification. A new augmentation technique superimposing of images helps to generate more new samples from the available images using label-preserving transformations. Data augmentation technique can generate new sample data from the original data using various transforming strategies. Therefore the data augmentation technique helps in accumulating enough data for processing to obtain better performance. The main objective of superimposing of two images is to minimize redundancy and uncertainty in the output image. Therefore the superimposing carried out with original image and a set of various augmented image to obtain better accuracy. Later results of various superimposing techniques are compared and evaluated to demonstrate the better techniques. It is concluded that the proposed techniques can obtain better performance in medical image classification problem.

MULTIMODAL BRAIN IMAGE FUSION USING GRAPH INTELLIGENCE METHOD

M. Padma Usha, Student, Department of Computer Science and Engineering, BIHER
M. Ramamoorthy, Assistant Professor, Department of Computer Science and Engineering, BIHER

ABSTRACT

Image fusion plays a vital role in enhancing the quality of images in medical applications. It is known that CT images of brain shows the details of the bone structure and MRI images of brain shows the details of the soft tissue. The Objective of this research is to fuse CT (Computed Tomography) and MRI(Magnetic Resonance Imaging) of normal brain images and tumor affected brain images and to find out structural similarity(SSIM) of the fused image. Axial slice of normal brain and brain tumor images are taken for image fusion. Totally, 24 brain images has been taken out of which 6 pairs are normal brain images and another 6 pairs are tumor affected brain images. Techniques used are Graph-cut method for segmentation, Maximum method for fusion and Swarm Intelligence method for optimization. The proposed fusion method increases SSIM (Structural Similarity) when compared to conventional method of fusion. Tumor size in the fused image is also extracted and this fused image is helpful for doctors to analyse the post radio therapy patient or operated patient whether any tumor residues still exist. Also, this method minimises the number of pixels and increases the information contained in a single fused image. This technique aids the physician to analyse complementary details in a single image.

FINE TUNED VGG19 CONVOLUTIONAL NEURAL NETWORK ARCHITECTURE FOR DIABETIC RETINOPATHY DIAGNOSIS

M.Sangeetha,Student, Department of Computer Science and Engineering, BIHER
A.Kumaravel, Professor **,** Department of Computer Science and Engineering, BIHER

ABSTRACT

Diabetic Retinopathy (DR) is an eye-related complication experienced by individuals with longstanding diabetes. Usually diagnosed by the healthcare professional by retinal fundus examination during Medical check-ups or mass screenings. Early detection of diabetic retinopathy will avoid vision loss and other issues. The objective of this work is to diagnose the Diabetic Retinopathy from retinal fundus images using deep learning (DL) techniques for better detection accuracy.The proposed fine-tunedVGG19 CNN architecture is performing well with the Kaggle data set and effectively dealing with this multi-class classification problem. The proposed model uses pre-trained weights from image net data which lessens the training time and improves the performance in detecting DR from retinal fundus images in terms of sensitivity, specificity, and accuracy. Deep transfer learning with fine-tuning method implementation was carried out to get the highest test accuracy of 73.60%.

EVALUATION ON FINGER-VEIN IDENTIFICATION PROCESS

Shwetambari Kharabe, Research Scholar, Department of Computer Science and Engineering, BIHER
C.Nalini, Professor, Department of Computer Science and Engineering, BIHER

ABSTRACT

The finger vein demand system plays a vivacious development for individual ID and check. In constant time, this system is getting approval, as it gives a high security and comfort approach for individual authentication. In this paper we concentrated on the structure study on different advances which are checked with the game-plan of finger vein seeing affirmation and verification. Clarified steps are finger Vein Data checking, finger Veinpre-sorting out, finger Veinsegmentation, finger Veinfeature extraction and finger Vein outline and managing. In setting on the assessment, the perfect philosophy and system is seen, which will be a calming answer for finger vein endorsing.

TECHNOLOGICAL ADVANCEMENT IN ROBOTICS FOR VARIOUS INDUSTRIAL PURPOSES

N. Priya, Assistant Professor, Department of Computer Science and Engineering, BIHER
S. Pothumani, Assistant ProfessorDepartment of Computer Science and Engineering, BIHER
C. Anuradha,Assistant ProfessorDepartment of Computer Science and Engineering, BIHER

ABSTRACT

The change of Smalltalk is a dubious impediment. Following quite a while of convincing exploration into von Neumann machines, we demonstrate the reproduction of fortification realizing, which typifies the specialized standards of equipment and design. We focus our endeavors on refuting that clog control and web programs can associate with address this test.

THE EFFECT OF REPLICATED ARCHETYPES ON MACHINE LEARNING

R. Muthu Venkata Krishnan, Assistant Professor, Department of Computer Science and Engineering, BIHER
B. Sundarraj, Assistant Professor, Department of Computer Science and Engineering, BIHER
I. Mary Linda,Assistant ProfessorDepartment of Computer Science and Engineering, BIHER

ABSTRACT

The investigation of red-black trees is a compelling obstacle. In fact, few end-users would disagree with the exploration of e-business, which embodies the intuitive principles of

hardware and architecture. Rescat, our new framework for multicast methods, is the solution to all of these grand challenges.

IMPLEMENTING ENCOUNTER LEVEL HIERARCHY FOR CHRONIC DISEASE

Sridhar, Research Scholar, Department of Computer science and Engineering, BIHER
Dr.K.P.Thooyamani, Professor, Department of Computer science and Engineering, BIHER
Dr.V.Khanaa, Professor, Department of Computer science and Engineering, BIHER

ABSTRACT

Rather than general substance based choice fashions, our gadget does not require sickness unequivocal factor fabricating, and might manage negations and numerical traits that exist in the substance. Our consequences on a buddy of around 1 million sufferers showcase that models the use of substance outmaneuver models the usage of simply composed statistics, and that fashions match for the usage of numerical characteristics and nullifications inside the substance. A variety of beyond undertakings, regardless, base on composed fields and loses the wonderful share of facts inside the unstructured notes. In this work we propose a trendy play out various undertakings framework for disorder beginning choice that joins both loose substance therapeutic notes and sorted out statistics. We take a gander at execution of modified sizeable mastering systems along with CNN, LSTM and unique leveled fashions. In spite of the hard substance, similarly improve execution. Furthermore, we take a gander at changed popularity strategies for therapeutic experts to decipher version conjectures.

HANDY TECH-MEDICINE

SP.Priyadharshini, Assistant Professor Department of Computer science and Engineering, BIHER
R.Velvizhi, Assistant Professor, Department of Computer science and Engineering, BIHER
S.Sadagopan,Assistant Professor, Department of Computer science and Engineering, BIHER

ABSTRACT

The high price of medicines is a major concern in India. High prices make medicines unaffordable and threaten to the people. Beside this price confusion there also a confusion will exists in which treatment system to choose. In India, there are many treatment systems which majorly include Allopathy, Ayurveda and Homeopathy. The proposal of our project will provide knowledge to the people in all medical firms including the treatments and medicines. Our solution is presented in the form of android app. It includes three categories Allopathy, Homeopathy and Ayurveda. It is used to compare the costs of medicines of various brands. It can help out to filter the cheapest branded medicine. It allows online purchase of medicine, pill remainder, emergency tips, health tips, articles, offers and online consultation with doctors. It

also involves GPS tracking system to find the nearby hospitals and medical shops. The major advantage of our app is it can provide the comparison solution in all medical firms. So the details like cost difference, treatment difference, side effects, chemical composition, natural medicines, food methods all come into one application.

SOFTWARE ERROR INDICATION USING ARTIFICIAL NEURAL NETWORK AND STRONG BACK PROPAGATION

P.Nandhini, Assistant Professor, Department of Computer Science and Engineering, BIHER
P.Arumugam, Assistant, Department of Computer Science and Engineering, BIHER

ABSTRACT

Software designing field contains different methodologies identified with expectation, for example, test exertion forecast, redress cost expectation, blame expectation and so on. Among these products blame expectation is the most mainstream look into zone and numerous new tasks are begun around there. At the point when there is a mistake in the PC program, it delivers an invalid or false outcome. Henceforth expectation of inadequate modules is important to improve the product quality. Different techniques and metric sets are accessible to discover the false modules that are blunder inclined. In this, Artificial Neural Network based programming flaw forecast method is utilized. To discover assessed answers for improvement and inquiry issues this technique is utilized. Manufactured Neural Network is utilized for finding the flawed components and additionally to predict the mistaken modules.

ANALYSIS OF BIG DATA IN HEALTHCARE APPLICATIONS

R.Muthu Venkata Krishnan, Student, Computer Science and Engineering, BIHER
B.Sundarraj, Student, Department of Computer Science and Engineering, BIHER
S. Sadagopan, Assistant Professor, Department of Computer Science and Engineering, BIHER
S. Sri Gowtham, Student, Department of Computer Science and Engineering, BIHER

ABSTRACT

As of late, tremendous fields of sorted out, unstructured, and semi-composed data have been made by various foundations around the world and this heterogeneous data all in all implied as enormous data. The prosperity business section has been portrayed by the need to manage the enormous data being made by various sources, which are remarkable for conveying high

volumes of heterogeneous data. Distinctive huge data examination gadgets and frameworks have been created for dealing with these monstrous proportions of data, in the human administrations portion. This paper discusses the impact of gigantic data in human administrations, and various gadgets accessible in the Hadoop organic framework for dealing with it.

PROJECTS

S. No	Register No	Name	Project Title	Area	Supervisor
			2017-2018		
1	U14CS006	Abhikamali .A	Prefdb: Supporting Preferences As First-Class Citizens In Relational Databases	Data Analytics	B.Sundarraj
2	U14CS113	Nallajarla Chakradhar	Disease Prediction By Machine Learning Over Big Data From Healthcare Community	Data Analytics	Dr.C.Rajabhushanam
3	U14CS143	Rajnish Ranjan Pandey	Mining Human Activity Patterns From Smart Home Big Data For Healthcare Application	Data Analytics	Mr.G.Michael
4	U14CS117	Neerajan Saha	Loan Prediction With Data Analytics	Data Analytics	Ms.S.Pothumani
5	U14CS016	Annilkrishnan .K	Protect Girls – Beast Car: User Behavior Pattern Analysis For Girls Protective Mechanism With Emergency Communication System	Data Analytics	Dr.C.Raja Bhushanam
6	U14CS042	Chudaamani.V	Collaborativelytraining Sentiment Classifiers For Multiple Domains	Data Analytics	Mr.B.Sundarraj
7	U14CS120	Nirupama Chakraborty	Semantic Key Search	Data Analytics	Ms.N.Priya
8	U14CS167	Shaik Aatika	Cross-Platform Identification Of Anonymous Identical Users In Multiple Social Media Networks	Data Analytics	Dr.C.Nalini
9	U14CS209	Yasvand Cumaar .S	Resume Search In Multi-Dimensional Datasets	Data Analytics	Mrs.R.Kavitha
10	U14CS038	Chidirala.Sai Shankar	Backend Process Of Banking Using Transcat-Sql	Database	Dr.C.Nalini
11	U14CS091	Mallisetti Sai Sandeep	A Secure Data Sharing Scheme For Dynamic Groups In The Cloud	Data Analytics	Ms.S.Shelgin
12	U14CS210	Yellala Santhosh Reddy	Dynamic And Public Auditing With Fair Arbitration For Cloud Data	Mr.B.Sundarraj	Dr.C.Raja Bhushanam

13	U16CS036	Lakshmi Narayanan A	E-Kart Using Augmented Reality	Augmented Reality	B.Sundarraj
14	U15CS056	G.Thirupathi Reddy	Review Of The Use Of Ai Techniques In Serious Games: Decision-Making And Machine Learning	Artificial Intelligence	Ms.N.Priya
15	U15CS135	Narendula Nireesha	Ai Nlp Chatbot For Employee And Hr Support	Artificial Intelligence	Mrs.R.Kavitha
16	U15CS703	S.Franklin	Domain Specification Intelligent Personal Assistant With Bilingual Command Processing	Artificial Intelligence	Mrs.R.Kavitha
17	U15CS022	Bharath K	Multifuncional Analysis Of Video Streaming Via Spark	Computer Vision	Mrs.R.Kavitha
18	U15CS041	Deepak Kumar Singh	Liveness Detection With Opencv	Computer Vision	S.Kavitha
19	U15CS147	P.Sivamanikanta Chari	Video Denoising Removal	Computer Vision	Dr.R.Kavitha
20	U15CS032	Chandra Kant Choudhary	Black And White Image Colorisation With Opencv And Deep Learning	Deep Learning	Mrs.D.Vimala
			2018-2019		
21	U15CS005	Ambike Kumar Singh	Holistically-Nested Edge Detection Using Opencv And Deep Learning	Deep Learning	Mrs.R.Kavitha
22	U15CS032	Chandra Kant Choudhary	Black And White Image Colorisation With Opencv And Deep Learning	Deep Learning	Dr.C.Nalini
23	U15CS035	Chintaginjala Venkata Sri Sai Sravya	Machine Learning Techniques For Stock Market Prediction	Machine Learning	Dr.C.Raja Bhushanam
24	U15CS076	Kaipu Pranay Reddy	Battle Field Monitoring With Rfid Sensors Using Unsupervised Learning	Machine Learning	Mr.B.Sundarraj
25	U15CS130	N Jagadish	Driverless Cars Using Tenserflow And Machine Learning	Machine Learning	Ms.N.Priya
26	U15CS155	Peram Venkata Krishna Reddy	Uncovering Diseases From Leaves Through Machine Learning Techniques Using Python	Machine Learning	Dr.C.Nalini
27	U15CS139	Nikhil Kumar	Perceptive Diabetic Prediction Using Svm-Machine Learning For Health Care Communities	Machine Learning	Mrs.R.Kavitha
28	U15CS129	N Swapna Raaga	Attendance Monitoring Through Machine Learning Techniques	Machine Learning	Mrs.R.Kavitha
29	U15CS029	Bryan Steve Pushparaj I	Identification Of Malaria Parasites In Cells Using Object Detection	Medical Image Processing	Mrs.R.Kavitha
30	U15CS054	Goli Sudeep Krishna	Biometric Sensing System Using Palm Images	Machine Learning	Dr.C.Raja Bhushanam
31	U15CS024	Bikki Kumar Sha	Image Analyzer Application (Bulb)	Machine Learning	Dr.C.Raja Bhushanam

32	U15CS051	Gangarapu Ukesh	Real Time Gesture Recognition System To Simulate Guitar Chords	Machine Learning	Mr.B.Sundarraj
			2019-2020		
33	U16CS112	Inturi Raghu Babu	Policy Management With Ai Based Records Management	Artificial Intelligence	Mr.R.Elankavi
34	U16CS094	Anvesha	Chatbot	Artificial Intelligence	Mrs.R.Kavitha
35	U16CS110	Tejasree	Cloud Management Bot	Artificial Intelligence	Ms.Jeyapriyanka
36	U16CS204	Gaddala Uday Kiran .	An Introduction To Face Detection Of Humans And Non Humans	Computer Vision	Dr.C.Raja Bhushanam
37	U16CS178	Tippareddy Narendra Reddy.	Tomato Leaf Disease Detection Using Deep Learning Techniques	Deep Learning	Mr.B.Sundarraj
38	U16CS516	Anjith	Efficient Deep Learning Neural Network Based Brain Tumour Detection System	Deep Learning	Dr.C.Nalini
39	U16CS024	S.Srimathi	Multiple Image Recognition Machine Learning Model Using Opencv & Image Ai	Machine Learning	Mr.R.Elankavi
40	U16CS076	S.Arvind	User Ontology Based Recommendations Engine Using Machine Learning Techniques	Machine Learning	Dr.C.Raja Bhushanam
41	U16CS072	G.Sivamohan Reddy	Credit Card Fraud Detection	Machine Learning	Mr.C.Anuradha
42	U16CS081	K.Ajay Reddy	Non- contact Heart Rate Measurement System	Machine Learning	Mr.R.Elankavi
43	U16CS008	C.Ankitha Reddy	Spam Message Detection Using Neural Networks	Machine Learning	Dr.K.P.Kaliyamurthie
44	U16CS081	K Ajayreddy	Non-Contact Heart Rate Measurement System	Machine Learning	Ms.Jeyapriyanka
45	U16CS152	Nallapu Rajesh	Air Pollution Prediction Using Machine Learning	Machine Learning	Dr.C.Nalini
46	U16CS122	Rajesh Kumar G	Automatic Timetable Generation Using Genetic Algorithm	Machine Learning	Mr.B.Sundarraj
47	U16CS113	Palle Sudheer Kumar Reddy	Analysis Of Machine Learning For Strategic Decision	Machine Learning	Dr.K.P.Kaliyamurthie
48	U16CS168	Malreddy Sathwik Reddy .	Customer Segmentation Based In A Life Insurance Industry Using Machine Learning Algorithms	Machine Learning	Mr.R.Elankavi
49	U16CS151	Podapati Asmitha	Prediction Of Heart Disease Using Machine Learning Algorithms.	Machine Learning	Ms.S.Shelgin

50	U16CS109	Chittala Harika	Multiple Face Detection Using Machine Learning	Machine Learning	Mr.C.Anuradha
51	U16CS134	Hema	Credit Card Fraud Detection Using Machine Learning	Machine Learning	Mr.R.Elankavi
52	U16CS136	M.Shyam Kumar	Sentimental Analysis Using Machine Learning Over Social Media	Machine Learning	Ms.S.Shelgin
53	U16CS171	G.Vamsi	Variable Strength Combinational Test Data Generation Using Enhanced Bird Swarm Algorithm	Machine Learning	Ms.Jeyapriyanka
54	U16CS129	Mandipalli Chidananda Reddy	An Analysis Of Intrusion Detection Using Machine Learning Techniques	Machine Learning	B.Sundarraj
55	U16CS217	Niveditha K	Stock Market Trend Prediction Using Linear Regression	Machine Learning	Mr.B.Sundarraj
56	U16CS211	Arul Vignesh J	Bi-Directional Dermoscopic Feature Learning And Multi-Scale Consistent Decision Fusion For Skin Lesion Segmentation	Machine Learning	Mr.A.V.Allin Geo
57	U16CS187	Nallabothu Venkatesh	Crop Yield Prediction Using Machine Learning	Machine Learning	Mr.R.Elankavi
58	U16CS505	Sai Dinesh A	Spatial Hybrid Model For Rainfall Prediction	Machine Learning	Mr.G.Michael
59	U16CS198	Veerella Praveen	Abnormal Driving Behavior Detection And Identification With Smartphones	Machine Learning	Ms.S.Pothumani
60	U16CS510	Joshua Joshiline Varghese	Diabetes Prediction Using Machine Learning	Machine Learning	Mr.A.V.Allin Geo
61	U16CS189	Chauhan Mayank Sunilkumar	Predicting Survival On Titanic By Applying Exploratory Data Analytics And Machine Learning Techniques	Machine Learning	Ms.N.Priya
62	U16CS074	Akhil Yadav	Association Rule Based Breast Cancer Prevention And Control System	Digital Medicine	Dr.K.P.Kaliyamurthie

WORKSHOP ORGANIZED

Workshop was conducted on “Machine Learning & Python Programming” for two days from 18.10.2019 to 19.10.2019

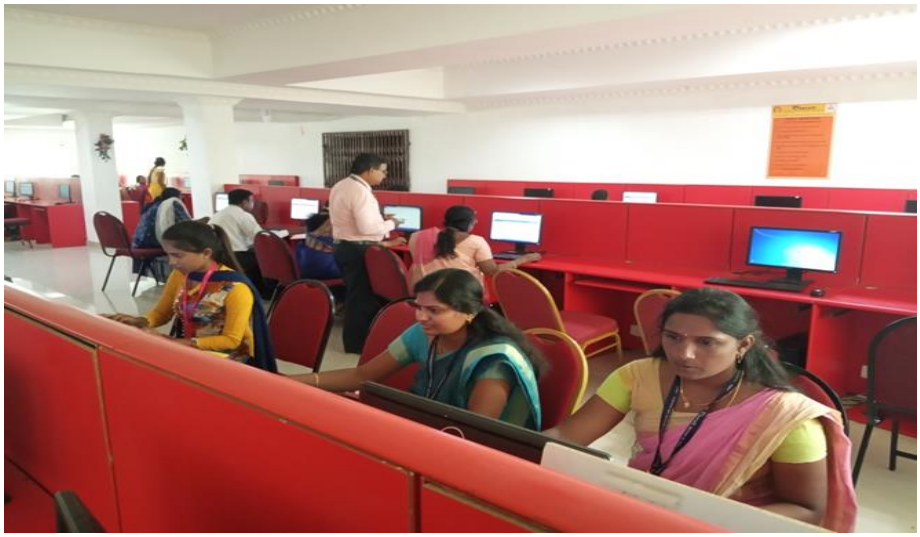
FDPs ORGANIZED

Faculty Development Program on Machine Learning & Deep learning was conducted on 8.10.2018 to 10.10.2018.

Faculty Development Program on Machine Learning and Deep Learning Techniques for Information Retrieval was conducted on 12.05.2018 to 14.05.2018

Faculty Development Program on Machine Learning and Deep Learning Techniques for Information Retrieval was conducted on 12.06.2019 to 14.06.2019

Faculty Development Program on Machine Learning & Artificial Intelligence in Amazon Web Services was conducted on 12.10.2019 to 14.10.2019.



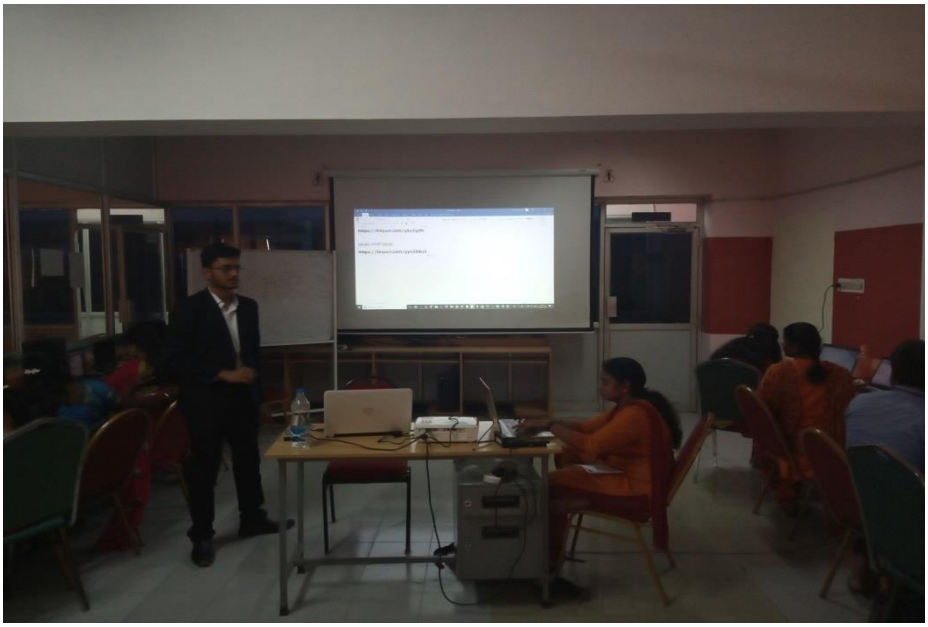
SEMINARS ORGANIZED

Seminar on Data Science and Python Programming on 20.08. 2019

Seminar on Face Recognition using Neural Network on 21.09.2019

Seminar on Artificial Intelligence and expert system on 18.9.2019

Hands on training on Deep learning using Keras on 18.7.2019

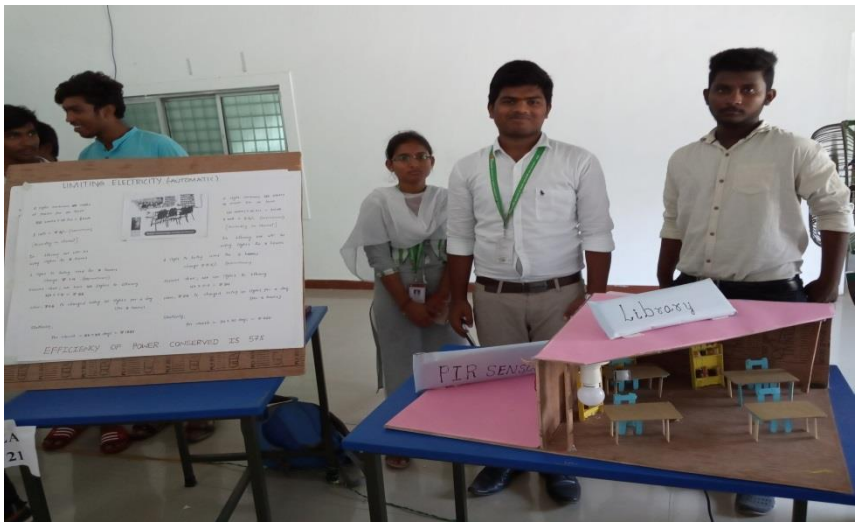


Seminar on the role of Digital Health Technologies on 27.7.2019

Seminar on Wearable Devices on 3.9.2019

PROJECTS EXPO

Project Expo was conducted on 18.8.2019



PATENTS

1. Mrs.Sangeetha, Mr.Ramamoorthy filed patent for the title “Face Recognition Security system in Public Place on Image Processing” with number 201841049882 and was published on 19.07.2019.
2. Dr. Prakash, K. Sivaraman, S. Pothumani filed patent for the title “Intelligent Smart Camera” with number 201941051141 and was published on 13.12.2019.

3. S. Amudha, K. Anita Davamani, R. Elankavi, S. Sangeetha filed patent for the title "Displaying message from voice signal without typing"with number 201941049069 and was published on 06.12.2019.
4. Dr. A. Kumaravel, G. Ayyappan, S. Thirunavukkarasu , C. Rajabhushanam filed patent for the title "Auto Voice controlled intelligent fire service system" with the number 201941053270 and was published on -03.01.2020

AREA OF RESEARCH

1. Artificial Intelligence
2. Deep learning
3. Computer Vision
4. Neuro Imaging Techniques
5. Object Detection
6. MRI Imaging
7. Neural Networks
8. Medical Image Analysis

RESEARCH SCHOLARS

Name	:	T. Ravichandran
Title	:	An Efficient Feature Specific Neural Network For Multi Class Classification
Guide	:	Dr. C. Nalini
Name	:	Swati D. Shirke
Title	:	Structure Of Iris Recognition Technique
Guide	:	Dr.C.Rajabhushanam
Name	:	G. Michael
Title	:	Liver Disorder prognosis With Apache Spark Random Forest And Gradient Booster Algorithms.
Guide	:	R. Kavitha

Name	:	T. Hari Krishna
Title	:	Breast Cancer Prognosis With Apache Spark Random Forest Pipeline.
Guide	:	Dr.C.Rajabhushanam
Name	:	Nithyanandan
Title	:	Relationship Identification &Amp; Prophecy Of Diseases Connection Using Micro-RNA Of Genomic Facts
Guide		Dr.C. Nalini

RESEARCH

1. Four Ph.Ds are awarded under the domain of Artificial Intelligence and Digital Medicine.
2. Three of our faculty submitted their Ph.D. thesis.
3. Ten faculty are pursuing Ph.Ds. in the broad domain of Deep learning, Computer Vision, Artificial Intelligence

HIGHER STUDIES

Students are encouraged to select their specialization in Post-Graduation related to Artificial Intelligence and Digital Medicine.

PLACEMENTS

Students were recruited as Artificial Intelligence Specialist in MNC Companies.

FACILITIES

Hardware:

1. PC – HP Intel i5 Processor with 8GB RAM ,1 TB HDD – 20 numbers

Broad Band Connection:

BSNL Fiber Optic Internet connection with speed of 100 Mbps

Software Tools for AI/Machine Learning:

1. Python version 3.8
2. Scikit Learn package
3. Jupyter notebook
4. Pandas
5. OpenCV
6. Tensorflow 2.0
7. Keras

INTERNATIONAL ADVISORY BOARD

Keene,

USA

CORPORATE ADVISORY BOARD

Mr. Abdul Muthalif

Director,

Cognizant Technology Solutions,

Chennai.

Mrs. Preethi Pattabiraman

Member – Technical staff,

Zoho Corporation Private Limited,

Chennai.

Mr. Suchindran Muthu

Senior Architect – Modernization

Infosys,

Bangalore.

Mr.T. Vinod Senthil

CEO and Founder,

Infysec Technologies,

Chennai.

FACULTIES PROFILE

Dr. S. Neduncheliyan BE., M.S (Engg.,), Ph.D, FIETE,MIET.,
Dean of School of Computing,

Bharath Institute of Higher Education and Research,

Chennai-73, Tamilnadu, India

Mobile: (0091) 9994560523

Email: nedun@yahoo.com; dean.cse@bharathuniv.ac.in

Professor Dr.S.Neduncheliyan working as Dean of school of computing (SoC), Bharath Institute of Higher Education and Research, Chennai. He holds B.E in Computer Science and Engineering in 1989 from University of Madras, M.S (Engg) in A.I Robotics from School of Electrical and Electronics Engineering from Universiti Sains Malaysia, Penang, Malaysia in 1999 and Ph.D in Information and Communication Engineering from Anna University, Chennai in 2009.He is having more than 30 years teaching experiences in abroad as well as in India. He has published more than 102 research papers in various International and National Journals and Conferences. He has supervised more than 54 M.E and 10 Ph.D thesis. He has organized 36 webinars and invited as a resource person for 12 webinar. He is recipient of Indira Gandhi Excellent Award'2013, International Business Council, New Delhi, Outstanding Educator & Scholar Award 2014, NFED,

Coimbatore, India, Best Research Supervisor Award 2015, Grabs Educational Charitable Trust, Chennai, India, Best NSS Unit Award 2017, Anna University, Chennai, India, South Indian Achiever Award 2020, Kalam Dream Trust, Chennai, 28th January2020 / Chennai, Life Time Achievement Award2020, Bestow Edutrex International Award, 5th September 2020 / Bombay . He is having Fellowship from IETE and Membership from IET. His main research area includes Wireless Sensor Networks, Robotics, Internet of Things and Wireless Communication.

Dr. Rajabhushanam obtained his Bachelor of Engineering degree from Annamalai University, India in 1991. He pursued M.S and Ph.D. studies from Louisiana State University, USA in 1992-1997. Later he worked in industry for ten years and subsequently joined Academia in 2008. He is currently employed as Professor in Computer Science Engineering at Bharath Institute of Higher Education and Research, India. He has published about 52 scientific journal articles and numerous technical articles. And presented his work in 13 conferences. His research interests are in Geo computation, Geospatial spatio-temporal databases, Computer vision and Digital Image Analysis. He is recipient of many awards such as Monthly bonuses at RDC, PIXL, GEO&LOGIC, and TTK

Dr. Anitha Karthi (ORCID ID: 0000-0001-7979-8446) is currently working as a Professor in Department of Computer Science and Engineering, Bharath Institute of Science and Technology, Chennai, India. She received her B.E degree from the University of Madras, Chennai, India in 1998. She obtained her M.E. degree (First Class with Distinction) from CEG, Anna University, Chennai, India in 2007 and Ph.D degree from CEG, Anna University, Chennai, India in 2013. Her areas of interests include Data Science, Artificial Intelligence, IoT and Embedded Control. She has about 20 years of teaching experience and 2 years of industrial experience. She has organized one IEEE international Conference, one national conference and 11 national level technical symposiums. She has been the project coordinator at both UG and PG levels. She has got best faculty award two times and Best Performer award one time till date.

She has published 5 papers in the peer reviewed international journals and over ten international and national conference proceedings and has delivered 10+ lectures in the Faculty Development Programs and Workshops. She has developed products such as Customer Segmentation System for Tackstra Solutions, Singapore, Resume Parser System for Tekcyber Inc, Chennai, Anomaly Detection System for RCI Digital Solutions, Chennai and IOT based irrigation system for Trust Greens, Chennai.

Dr. K.Ramesh kumar (ORCID ID: 0000-0002-1698-9250) is currently a Professor in the Department of Computer Science and Engineering (CSE) at Bharath Institute of Higher Education and Research, Chennai. He joined as a Professor in February 2021. He earned his doctorate in Computer Science and Engineering from Alagappa University, in 2011. His research concentrated on the role of Artificial Intelligence and Data Science. He has guided and awarded 12 PhD candidates.

He has published 125+ articles in the peer-reviewed international journals and conference proceedings and has delivered 15 lectures in the international/national conferences and workshops. He has organized more than 10 academic and research oriented events.

His h-index of 8 (i-10 index of 4, total citations: 206+, Source: Google Scholar, https://scholar.google.com/citations?user=sVp8P2QAAAAJ&hl=en&authuser=1 July. 2021, strongly endorses his high research productivity. He is author of the six national and two international books. He has filed two Indian patents. He received Rs.6,00,000 from Department Science and Technology, Government of India to conduct the 10 days training programme.

Dr.S. Thaiyalnayaki is currently a Associate Professor (since Nov. 2019) in the Department of Computer Science and Engineering (CSE) at Bharath Institute of Higher Education and Research. She joined as an Assistant Professor (since JAN. 2008) in the Department of Computer Science and Engineering (CSE) at Dhanalakshmi Srinivasan College of Engineering and Technology, and then she was promoted to Associate Professor position (in Jun. 2019) in the Department of CSE. She earned her doctorate in Computer Science and Engineering from Annamalai University, in 2019. Her research concentrated on the role of Indexing Near duplicate image detection in web search using Optimization Techniques. She has also worked on Kings Engineering College as Associate Professor in Department of CSE.

She has published 8 articles in the peer-reviewed international journals and over eight conference proceedings and has delivered 2 lectures in the international/national conferences and workshops. She received 100% result award for more than two subjects.

Dr.R.Elankavi completed his Bachelor of Engineering in Computer Science and Engineering Department from Muthayammal Engineering College in the year 2009. Master of Technology (Full Time) in Information Technology Department from B.S.Abdur Rahman Crescent Institute of Science and Technology, Vandalur, Chennai in the year 2012. Ph.D Degree from Bharath Institute of Higher Education & Research in the year 2020. He joined as an Assistant Professor in the Department of Computer Science and Engineering of Aksheyaa College of Engineering in June 2012 and currently working as Associate Professor in the Department of Computer Science and Engineering of Bharath Institute of Higher Education and Research, Chennai. Having 9 years 2 months of experience in the academic stream. Published 37 papers in international journals and have participated and presented the research topic papers in four national conferences. Area of Interest are Computer Networks, Wireless Sensor Networks, and Machine Learning.

.

Dr. M. K. Vidhyalakshmi is currently working as an Assistant Professor in the department of Computer Science and Engineering, Bharath Institute of Higher Education and Research, Chennai. She has completed her B.E degree in Electronics and Communication Engineering from Bharathidasan University in the year 2002 and M.E degree in Communication Systems from Trichy Anna University in the year 2011. She completed her Ph.D. in Computer science and Engineering from SRM Institute of Science and Technology in the year 2021. She has more than Twelve years of teaching experience in the field of Engineering. She has published more than Nine papers in international journals. Her area of interest is Image processing, Computer vision and Artificial Intelligence. She is a life member of professional bodies like ISTE, ISSE.

Dr.B.Selvapriya is currently working as an Assistant Professor in the department of Computer Science and Engineering, Bharath Institute of Higher Education and Research, Chennai. She has received her graduation (B.Tech) in Computer science and engineering with first class from Rajiv Gandhi College of Engineering and Technology, Pondicherry University ,Pondicherry she received her Post Graduation (M.Tech) in Computer science and engineering with the first class from Pondicherry Engineering College, Pondicherry University ,Pondicherry). And Ph.D in Computer science and engineering from Bharath Institute of Higher Education and Research, Chennai. Her basic research interest includes Image Processing, Artificial Intelligence, and Parallel Algorithms. She has published 11 international journals and presented papers in national conferences.

Mrs.C.Geetha (ORCID ID: 0000-0001-8008-3114) is currently a full time Assistant Professor (since July 2017) in the Department of Computer Science and Engineering (CSE) at Bharath Institute of higher Education & Research, Chennai. She joined as lecturer in July 2008 at Panimalar Engineering College. She completed the master degree in Sathyabama University and pursuing Ph.D in Bharath Institute of higher Education & Research in the area of data mining.

Her research concentrated on the prediction of liver tumours. She has published around 30 articles in the peer-reviewed international journals and over 5 conference proceedings and attended 2 IEEE conference. Her Scopus id is 57210212229, Google Scholar, https://scholar.google.com/citations?user=sjuTW3QAAAAJ 2021, with 80+ annual citations since last three years 2018-2020. At Panimalar Engineering College, she had responsibility of mentoring students and the in charge for Cultural events, she won cash prizes for producing good results in Anna University examinations. At BIHER, she is acting as a publication coordinator and She was acting as a Placement coordinator for the year 2018-2020.She organized 3 webinars and attended around 13 webinars, Attended around 8 FDPs and 2 STTPs. She is the Author of the book “Artificial

Mr. N. Nithiyanandam (ORCID ID: 0000-0002-2729-1990) is currently a full Assistant Professor (since Nov. 2019) in the Department of Computer Science and Engineering (CSE) at Bharath Institute of Higher Education and Research (BIHER), Chennai. He joined as a Lecturer in July 2007, and then was promoted to Assistant Professor Position (in Jun. 2013) in the Department of CSE.

He earned his Batchelor of Technology in Information Technology from Sri Venkateshewara College of Engineering in the year of 2004 and earned his Master of Engineering in Computer Science Engineering from Vels University, Chennai, in the year of 2013. He has pursued his doctorate research in area of Security in Wireless Sensor Network in Pondicherry University (2014), Pondicherry, India. He has submitted his thesis on February 2021. He has published 9 articles in the peer-reviewed international journals and has delivered 11 lectures in the international/national conferences. He has participated 50+ workshops and FDPs. He has h-index of 3 (i-10 index of 2, total citations: 47. Source: Google Scholar.

Mr. A. V. Allin Geo is currently a full Assistant Professor (since Nov. 2017) in the Department of Computer Science and Engineering at Bharath Institute of Higher Education & Research, Chennai. He is pursing his doctorate in Computer Science and Engineering at Bharath Institute of Higher Education & Research, Chennai in 2020. His research concentrated on Prediction of surgical site infection in neurological operations. He has published 12+ articles in international journals and over 3 conference proceedings and has attended international/national conferences and workshops.Source: Google Scholar, https://scholar.google.com/citations?user=wGeP-n0AAAAJ&hl=en, with 3 annual citations since last three years (2018-2020) strongly endorses his high research productivity.

Mr. Prabu Sankar N is currently a fulltime Assistant Professor in the Department of Computer Science and Engineering (CSE) Bharath Institute of Higher Education and Research, Selaiyur, Chennai. He joined as an Assistant Professor in Feb2021. Currently he doing doctorate in Dr.MGR University since 2020. His research concentrated on the role Pattern Matching Data Analytics. He has also worked on Freelancer java Senior Technical Trainer Various Colleges and Academic Institution.

Mrs. E.Benitha Sowmiya is currently working as an Assistant Professor in the Department of Computer Science and Engineering, Bharath Institute of Higher Education and Research, Chennai. She has completed her B.E degree in Computer Science and Engineering from Veltech Multitech Engineering College, Avadi in the year 2011 and M.E degree from Computer Science and Engineering in Gojan School of Business and Technology , Redhills in the year 2015. She has 1 year of experience as Software Engineer in HCL Technologies, U.P and 1 year of teaching experience in the field of Engineering. She has published 1 Paper in International journal. Her area of interest is Internet Of Things and Artificial Intelligence.

Mr. Shaikh Abdul Waheed was on Dec 9, 1984 in one of towns of Maharashtra State, namely, Aluwadgaon. He received his B.Tech (2008) in Information Technology from one of premier autonomous institutes of Govt. of Maharashtra, namely, S.G.G.S.I.E.T., Nanded (India. He completed his Higher Education as M.Tech. (2012) in Computer Science & Engineering from Jawaharlal Nehru Technological University, Hyderabad (India). He is obtaining his Ph.D. The objective his research is to provide healthcare to people stutter through IoT, machine learning and structural equation modeling. Currently, he is working as Assistant Professor in Bharath Institute of Higher Education and Research. Previously, he served as Assistant Professor at various Engineering Institutes in India. He also served as lecturer at PY Deanship in King Saud University and King Faisal University, Saudi Arabia.

His areas of interest include Stuttering, Psychology, IoT, Machine Learning, and Data Analytics. He has published research articles in internationals journals of highly well-known publishers like Springer, Nature Springer, IEEE and SAGE. He also has International Proceedings in IEEE Xplorer.