



# *National Conference on Sustainable Computing and Development (NCSCD)-2023*

*Proceedings  
2<sup>nd</sup> February 2023*

Department of Computer Science (SF)

ISBN: 978-93-95105-07-1



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NCSCD – 2023  
02-02-2023

## MESSAGE FROM SECRETARY



I congratulate and convey my best wishes to the HOD and faculty members of the Department of Computer Science (SF) for conducting the **National Conference on Sustainable Computing and Development (NCSCD-2023) on 2<sup>nd</sup> February 2023.**

The conference is conducted to provide a platform for the academicians, industrialist, researchers, and students to interact and share their pioneering ideas in research works in the field of Sustainable Computing. I wish them all success in their endeavours and extend my felicitations for the successful conduct of the conference in a grand manner.

I congratulate the organizing team and wish the organizers to conduct much more international events in the near future.

## MESSAGE FROM PRINCIPAL



It gives me immense pleasure to acknowledge that the Department of Computer Science (SF) is organizing a **National Conference on Sustainable Computing and Development (NCSCD-2023) on 2<sup>nd</sup> February 2023**.

As it is imperative to balance societal, economic, and environmental resources for the future well-being of humanity, the emerging field of computational sustainability gains paramount relevance in today's scenario. With a vision, important for professionals as well as academia, this conference will offer a prestigious platform for professionals and academicians to deliberate on the recent trends in Sustainable Computing.

At this Conference, we hope to delve into new frontiers of sustainable computing by bringing together the brightest minds from various sectors and provide a forum for productive and valuable discussions among the researchers and students to exchange their knowledge and expertise.

I would also like to acknowledge the Conference organizing committee members and the students for their contribution in successfully organizing this event. I wish that the "**National Conference on Sustainable Computing and Development -2023**" to be a fruitful and thought-provoking event.

I once again welcome you all to NCSCD-2023 and hope the Conference will challenge and inspire you, and result in new knowledge, collaborations, and friendships.

## MESSAGE FROM VICE-PRINCIPAL



I am immensely happy that Department of Computer Science (SF) is organizing a **National Conference on Sustainable Computing and Development (NCSCD-2023) on 2<sup>nd</sup> February 2023.**

It provides a fruitful environment for researchers, academicians and industrialist to develop the sustainable computing skills and apply them to real time problems. It is the high profile platform for the exchange of information and insights among the leading edge and to support the formulation of sustainable development in computing.

Congratulations to the vibrant team of faculty members for their endeavour in organizing this National Conference. I extend my best wishes to all the active participants of this Conference.

**CONTENTS**

<b>S.No</b>	<b>PAPER ID</b>	<b>TITLE &amp; AUTHOR DETAILS</b>	<b>PAGE NO</b>
1	NCSCD23011	<b>A REVIEW ON COMMUNITY DETECTION IN SOCIAL NETWORKS</b> D. Dhanalakshmi, Dr. G. Rajendran	1
2	NCSCD23002	<b>PROTEIN REMOTE HOMOLOGY DETECTION TECHNIQUES AND METHODS</b> Gopinath Krishnaraj, Rajendran Gurusamy	2
3	NCSCD23007	<b>ANALYSIS OF DEEP LEARNING IN IOT SECURITY</b> Mythili D, Dr. C. Thirumoorthi	3
4	NCSCD23022	<b>IOT-BASED HEALTHCARE SYSTEM USING DATA SCIENCE</b> V. Manjuladevi., Dr. P. Periyasamy	4
5	NCSCD23034	<b>IMAGE DETECTION METHOD BASED ON DEEP LEARNING</b> N. Gowri	5
6	NCSCD23024	<b>ZERO KNOWLEDGE PROOF WITH DISCRETE ALGORITHM AND RSA ALGORITHM FOR ACHIEVING EFFICIENT SECURITY ON COMPUTER NETWORK</b> E.Jansirani , Dr.N.Kowsalya	6
7	NCSCD23041	<b>AN ANALYSIS ON RECENT SENSITIVE CYBER CRIMES</b> A.N.Pavithra, S. Dharshini, Dr.J. Mahalakshmi	7
8	NCSCD23025	<b>IMPACT OF ETHICAL HACKING IN DATA SECURITY</b> Dr.V.S. Anitha Sofia, K Arun Karthik, V. Ninduja	8
9	NCSCD23016	<b>ROUTING PROTOCOL FOR LOW-POWER AND LOSSY NETWORKS (RPL) OBJECTIVE FUNCTION MERTICS USING INTERNET OF THINGS</b> S. Poorana Senthilkumar, Dr. B. Subramani, Dr. A.Muthusamy	9

10	NCSCD23040	<b>BIG DATA ANALYSIS FOR SUSTAINABLE DEVELOPMENT</b> Dr.T.Revathi , S.Shylaja	10
11	NCSCD23027	<b>COMPARISON OF A SYMMETRIC KEY ALGORITHM FOR IMAGE ENCRYPTION AND DECRYPTION</b> Dr. L. Thara , Sudharsan.G, J. Godson	11
12	NCSCD23035	<b>IMPLEMENTATION OF A HEART DISEASE RISK PREDICTION MODEL USING MACHINE LEARNING</b> R.Subbulakshmi	12
13	NCSCD23014	<b>INVESTIGATING WHAT EXACTLY IS CONSIDERED TO BE UNETHICAL HACKING</b> D. Neeraja , Dr.Ramesh Cheripelli	13
14	NCSCD23017	<b>AIR POLLUTION USING IOT</b> R. Kaaviya, Madhu Mitha.V.M, Mythili.M , Sree Nandhini.S	14
15	NCSCD23012	<b>DETECTING COVID 19 SYMPTOMS BY APPLYING CLASSIFICATION ALGORITHMS</b> K. Karthiga, Dr.B. Rajdeepa	15
16	NCSCD23015	<b>EVALUATION OF ALGORITHMS WITH FEATURES IN MACHINE LEARNING FOR THYROID DISEASE DETECTION</b> Vanitha.R, Dr.K.Perumal	16
17	NCSCD23019	<b>OPTIMIZED REGION PROPOSAL NETWORK TO DIAGNOSIS AND DETECT PLANT DISEASES BASED ON IMAGE SEGMENTATION USING MACHINE LEARNING TECHNIQUES</b> Dr.M. Praneesh , K.Harish Surya	17
18	NCSCD23018	<b>ROLE OF WOMEN IN THE ARTIFICIAL INTELLIGENCE SECTOR</b> Ravula Bharathi, N.Rajani	18

19	NCSCD23047	<p><b>CONTROLLING MOUSE MOVEMENT USING EYE MOVEMENT AND EYE CLOSING FOR CLICK AND WHICH CAN BE USEFUL FOR DISABLED PERSONS</b></p> <p>Seshu Madhavan J B , Mervin Moses , Samson Raja</p>	19
20	NCSCD23010	<p><b>DATA TRANSMISSION IN MOBILE WIRELESS NETWORKS</b></p> <p>Dr.K.Santhosh Kumar</p>	20
21	NCSCD23013	<p><b>CYBER BULLYING DETECTION ON SOCIAL MEDIA USING SUPERVISED MACHINE LEARNING</b></p> <p>Mahalakshmi.K, K.Kathiga</p>	21
22	NCSCD23020	<p><b>ARTIFICIAL INTELLIGENCE RESEARCH IN INDIA: A SCIENTOMETRIC STUDY</b></p> <p>A. Muthuraj , N. Bakkiyaraj</p>	22
23	NCSCD23044	<p><b>AN OPTIMIZED AI EDGE DETECTION TECHNIQUES FOR CAR RADIATOR USING IMAGE PROCESSING.</b></p> <p>Karthick.S, Sai karthigeyan.S</p>	23
24	NCSCD23026	<p><b>TO IMPLEMENT SUSTAINABLE GREEN COMPUTING</b></p> <p>Dr.K.Gayathri</p>	24
25	NCSCD23006	<p><b>A SURVEY OF CYBER SECURITY</b></p> <p>A.Hari , M.Nithish, B.Manikandan, K.V.Navanetha Kumar</p>	25
26	NCSCD23046	<p><b>A BRIEF STUDY ON PROS AND CONS OF VARIOUS MACHINE LEARNING METHODS INVOLVED IN PADDY DISEASE</b></p> <p>R.S. Devaprasath, D. Dheeneswaran, Dr. Mahalakshmi J</p>	26

27	NCSCD23045	<b>INCORPORATION OF AN IMAGE-BASED FACIAL RECOGNITION SYSTEM WITH USER SPECIFICATIONS</b> Rida Fatima Khan , Dr. Ramesh Cheripellii	27
28	NCSCD23005	<b>SMART AGRICULTURE SYSTEM USING IOT TECHNOLOGY</b> Lisanudeen, Leojohnson, Sanjai, Thiru surya, Naveen Kumar	28
29	NCSCD23004	<b>IOT BASED WASTE MANAGEMENT FOR SMARTCITY</b> Gokulshree.P.V , Kavipriya.T, Manju.K , Priyadharshini.T	29
30	NCSCD23049	<b>BINDING ARTIFICIAL INTELLIGENCE WITH CAPILLIUS</b> Jessica John, Christina Hart, Anso Sebastian	30
31	NCSCD23021	<b>DETECTING WEB APPLICATIONVULNERABILITIES WITH STATIC ANALYSIS AND DATA MINING</b> Dr.S. Manju , N.Thamaraikannan ,P.Krishnapriya	31
32	NCSCD23023	<b>IMPLICATION OF MACHINE LEARNING IN HEALTHCARE SECTOR</b> Dr.R.Kavitha	32
33	NCSCD23030	<b>SECURITY AND PROTECTION IN IOT UTILIZING AI AND BLOCKCHAIN</b> Dr. S.Selvi , R.Hemalatha	33
34	NCSCD23031	<b>A STUDY ON QR CODE BASED DATA SECURITY IN CLOUD USING VISUAL CRYPTOGRAPHY</b> Dr. S.Selvi, R.Hemalatha	34

35	NCSCD23032	<b>FOUNDATIONS AND IMPLICATIONS OF PRESCRIPTION MEDICATIONS</b> Dr.D. Mohanapriya	35
36	NCSCD23033	<b>DNA SEQUENCE CLASSIFICATION</b> P. Anu, Aswidtha, Dr.S. Vimala	36
37	NCSCD23036	<b>REVIEW ON NETWORK SECURITY CONCEPTS AND ATTACKS IN VANET</b> V. Rajasekaran, A. Vaidehy, Dr. C. Thiyagarajan	37
38	NCSCD23037	<b>COVID-19 PATIENT PREDICTION USING BOOSTED SUPPORT VECTOR MACHINE WITH NON-IMAGING INPUTS</b> S.M. Saravanakumar, Dr. T. Revathi	38
39	NCSCD23038	<b>STRATEGIC POLICY ANALYSIS ON CYBER SECURITY AND SUSTAINABLE DEVELOPMENT</b> Dr. D. Sowmyadevi	39
40	NCSCD23039	<b>A PROBABILISTIC DEPENDENT MATRIX WITH ATTRIBUTES USING THE MULTI MODEL TO PREDICT ADVERSE DRUG-DRUG INTERACTIONS</b> Dr.D. Mohanapriya, Dr.R. Beena	40
41	NCSCD23042	<b>A NOVEL SURVEY ON WORKFLOW SCHEDULING IN CLOUD COMPUTING USING VARIOUS OPTIMIZATION TECHNIQUES</b> S. S. Yuvaraj, Dr. T. Revathi	41
42	NCSCD23043	<b>BASED ON INTEGRATED SIMILARITY AND SEMI-SUPERVISED LEARNING, PROGNOSTICATING DRUG-DRUG INTERACTIONS</b> Dr.D. Mohanapriya	42

43	NCSCD23048	<b>SCRUTINY OF THE IMPACT OF BUSINESS ANALYTICS ON INNOVATION: A REVIEW</b> R. Subalakshmi	43
44	NCSCD23050	<b>A STUDY ON APPLICATIONS OF NEUROMARKETING IN CONSUMER BUYING BEHAVIOUR AND SUSTAINABILITY WITH RESPECT TO FMCG PRODUCTS</b> Dr.R. Swaranalatha	44

**S.No: 1**

**PAPER ID : NCSCD23011**

## **A REVIEW ON COMMUNITY DETECTION IN SOCIAL NETWORKS**

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### **Abstract**

With the rapid progress in Internet technologies, social networks have turned out to be a major platform for social interaction, lifestyle expression, and message spreading. Efficient community detection in social networks helps to evaluate public sentiment, identify community leaders, and make personalized recommendations. In community detection, the main work is to divide the network into regions in the graph. In some networks communities can exchange information because the persons in the community have same tastes and desires. These types of communities are used in variety of applications of network analysis like customer segmentation, link reference, recommendations and vertex labelling. Meanwhile, identifying group of people in a known complex network is a large challenge for scientists, which needs an important amount of literature and survey. This paper presents a survey of the existing algorithms and approaches for the detection of communities in social networks.

### **Keywords**

Social Networks, Vertex similarity, Edge density, Graph partitioning, Divisive algorithms.

**S.No: 2**

**PAPER ID : NCSCD23002**

## **PROTEIN REMOTE HOMOLOGY DETECTION TECHNIQUES AND METHODS**

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### **Abstract**

Protein Remote Homology Detection (PRHD) is an idea that plans to find remotely transformative connections between proteins. PRHD research is presently essential for surveying protein designs and capability. Various computational methodologies have been created in late a long time to conquer this challenge which requires steady width qualities to determine the Protein Sequences (PSs). In any case, with just simple information on proteins, recognizing their separation qualities is certainly not a simple errand. Consequently, a concise near survey and correlation of various calculation techniques is fundamental for PRHD. In this paper, a survey of different PRHD techniques with the assistance of various computational strategies is introduced. Furthermore, their advantages and disadvantages are examined in an even structure. In conclusion, the entire review is summed up and future headings are recommended to work on the proficiency of protein arrangement in light of amino corrosive groupings, particularly with low succession character between proteins.

### **Keywords**

Protein Remote Homology Detection (PRHD), Fold Recognition, Machine Learning, Deep Learning.

**S.No: 3**

**PAPER ID : NCSCD23007**

## **ANALYSIS OF DEEP LEARNING IN IOT SECURITY**

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### **Abstract**

The hardest part of internet and network application development is security. Neural Networks - Deep Learning can be used to respond to system vulnerabilities, attacks, or intrusions like attack, viruses, spamming, and hacking that occur in the virtual environment, ensuring the data protection of a company. Machine learning, a subset of artificial intelligence, is where Deep Learning derives from. Deep Learning is more sophisticated, has a larger predictive value, and allows for ongoing prediction improvement. We may use the vast amount of data to train our deep learning algorithms. This study examines several IoT security concerns that are resolved through deep learning.

### **Keywords**

IoT Security, Deep Learning , Neural Networks , Encoding , Decoding

**S.No: 4**

**PAPER ID : NCSCD23022**

## **IOT-BASED HEALTHCARE SYSTEM USING DATA SCIENCE**

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### **Abstract**

IoT in healthcare is a crucial part of improving medical facilities for patients as well as helping hospitals and professionals. Various medical equipment, such as sensors and web- or mobile- based applications that communicate via network connected devices, are used to monitor and log patients' health data and medical information in the system that is described here. The method that is proposed in the study is designed to provide patients with excellent medical treatment even in rural areas without hospitals by connecting via the internet and learning about their health state through wearable gadgets. That would be able to capture the patient's blood pressure and heart rate. It would be helpful for the system to inform the patient's doctor, family, and other important parties of their current health state in the event of a medical emergency. Applying the gathered data as well as glucose level monitoring, blood pressure monitoring, and other methods, data mining approaches that will also provide the approach that is helpful for decision-making can be used to assess and predict heart attacks or other diseases such as diabetes complications from the initial stage itself. The challenges that the IoT in healthcare must solve include security, privacy, wearability, and low-power operation. Future directions for investigation are also suggested.

**S.No: 5**

**PAPER ID : NCSCD23034**

## **IMAGE DETECTION METHOD BASED ON DEEP LEARNING**

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### **Abstract**

Deep learning algorithms are a subset of the machine learning algorithms, which aim at discovering multiple levels of distributed representations. Recently, numerous deep learning algorithms have been proposed to solve the traditional artificial intelligence problems. In this work aims to review the state-of-the-art in deep learning algorithms in computer vision by highlighting the contributions and challenges from recent research papers. It first gives an overview of various deep learning approaches and their recent developments, and then briefly describes their applications in diverse vision tasks. Finally, the paper summarizes the future trends and challenges in designing and training deep neural networks.

### **Keywords**

Deep learning, computer vision, developments, applications, trends, challenges, image

**S.No: 6**

**PAPER ID :NCSCD23024**

**ZERO KNOWLEDGE PROOF WITH DISCRETE ALGORITHM AND RSA  
ALGORITHM FOR ACHIEVING EFFICIENT SECURITY ON COMPUTER  
NETWORK**

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**Abstract**

Today's world is completely based on two things, they are data or information and security. Nowadays data is playing very important role in each and every place around the world. Here the thing need to be focused is how data has to be transferred efficiently from one place to another place. We have a powerful network environment to deliver data to the valid destination. But the question is data is transmitted in safer way? To avoid this kind of question data should be delivered to the destination in safer way. This can be done by converting data into another format during transmission. Cryptography is the security tool which deals to convert the original information into another format which can be understood by anyone.

Cryptography does this work by using the process called encryption and decryption, this process provides security for our data during transmission but it takes time to convert information. Keeping this scenario in mind they move on to another cryptographic security technique known as "Zero Knowledge Proof (ZKP)", it provides end to end security for our information without taking much time at the moment of transmission. Instead of converting data it creates a lock between two users, the user who is valid they will be having the original key to open the lock. This ZKP checks and verifies whether the user is using original key or duplicate key. If it is original key then the communication line will be enabled between them else the duplicate user cannot open the communication line so data will not be lost at any cost. In this paper we will be discussing about various algorithms which will be used in ZKP to achieve safe and secure transmission.

**S.No: 7**

**PAPER ID : NCSCD23041**

**AN ANALYSIS ON RECENT SENSITIVE  
CYBER CRIMES**

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**Abstract**

The majority of economic, commercial, cultural, social, and political activity & exchanges between nation nowadays take place in cyberspace on all scales, involving people, non-governmental groups, governments, and governmental institutions. The issue of cyberattacks has recently become a problem for many commercial businesses and governmental institutions worldwide. In order to lower the danger of cyberattacks and guard against unauthorized use of systems, networks, and technology, cyber security is essential. The purpose of this study is to comprehend the many kinds of cybercrimes and cyberattacks that are now occurring worldwide and to learn how to prevent them.

**Keywords:**

Cyber Attack, Cyber Security, Data Breach

**S.No: 8**

**PAPER ID : NCSCD23025**

**IMPACT OF ETHICAL HACKING IN DATA  
SECURITY**

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**Abstract**

Since ancient times wireless communication has been a part of our human evolution where pigeons were used to send messages, smoke grenades to identify lost soldiers during world war etc. Now we use electromagnetic waves to transmit signals to the other end. There are other varying types of waves such as microwaves, radio waves, IR waves used to transmit signals. They provide Flexibility and wide range of transmission compared to Wireless Communication networks. In this paper, we will discuss about the data security Wireless Communication including the risks of online data theft and how security can improved using ethical hacking.

**Keywords**

Wireless transmission, Data security, Ethical hacking

**S.No: 9**

**PAPER ID : NCSCD23016**

**ROUTING PROTOCOL FOR LOW-POWER AND LOSSY NETWORKS (RPL)  
OBJECTIVE FUNCTION METRICS USING INTERNET OF THINGS**

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**Abstract**

The last decade embedded devices are emerging to communicate every day human life real time applications by using of Internet of Things (IoT). The Routing protocol for Low Power and Lossy Networks (RPL) has been promising as the standardized protocol for routing in IoT applications. The Internet Engineering Task Force (IETF) has vision in IoT and proposed new protocol for IPv6 based routing and data collection in constraints environment, the RPL is a distance vector protocol which constructs Destination Oriented Directed Acyclic Graph (DODAG) based on different set of metrics by using of Objective Functions (OFs). This OFs are defines the best path in the DODAG and build the routes between nodes for data transmission. In this regards IETF proposed two objective functions with node metrics and link metrics in constrains that are named as Objective Function Zero (OF0) and Minimum Rank with Hysteresis Objective Function (MRHOF) for selects the best parents and construct the optimized routes in LLNs. In this paper we present the evaluated functionality and applied metrics of standardized OFs in RPL.

**Keywords**

IoT, RPL, OF0, MRHOF, Metrics, Objective Function

**S.No: 10**

**PAPER ID : NCSCD23040**

**BIG DATA ANALYSIS FOR SUSTAINABLE DEVELOPMENT**

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**Abstract**

This document aims at discussing the applications of big data analysis in sustainable development through descriptive metadata. Data is the most important unit of information. Data type and amount in human society is growing in amazing speed which is caused by emerging new services as cloud computing, internet of things and location-based services, the era of big data has arrived. These require immediate attention and need to be handled because if not handled then the failure of the technology may take place which can also lead to some unpleasant result. Big data challenges include the storing, analyzing the extremely large and fast-growing data. One of the great challenges facing businesses in the modern era is reconciling the conflicting interests of maximizing profit and promoting sustainability. This paper discusses various domains that are using the Big Data for their research purpose. It will also cover major source of many applications, talking attention to all stages of computer systems from raw materials extraction to recycling and how big data is applied in different areas to foster sustainability.

**Keywords**

Big Data, Sustainability, Metadata

**S.No: 11**

**PAPER ID : NCSCD23027**

**COMPARISON OF A SYMMETRIC KEY ALGORITHM FOR  
IMAGE ENCRYPTION AND DECRYPTION**

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**Abstract**

Data is encoded through the technique of encryption to prevent unauthorized access. The current demand is for cyber security, which guarantees the confidentiality and integrity of data transmission over the internet and offers defense against hostile attacks. In this paper, a comparison between the symmetric key algorithms, viz, Data Encryption Standard (DES), Triple-Data Encryption Standard (TDES) Blowfish, and Advanced Encryption Standard(AES) is done in terms of the time of encryption and decryption, and their throughput, and the results are analyzed indicating the superiority of AES over DES, TDES, and BLOWFISH as a viable algorithm for Image encryption.

**Keywords**

DES, TDES, BLOWFISH, AES, Symmetric key

**S.No: 12**

**PAPER ID : NCSCD23035**

**IMPLEMENTATION OF A HEART DISEASE RISK PREDICTION  
MODEL USING MACHINE LEARNING**

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**Abstract**

The globe uses machine learning in a wide variety of fields. Nothing excludes the healthcare sector. Machine learning may be very useful in determining if certain conditions, such as heart disease and locomotors disorders, are present or not. If foreseen in advance, such information can give doctors valuable insights that will allow them to customize their diagnosis and treatment for each patient. Utilizing machine learning techniques, we try to anticipate potential heart diseases in patients. In comparison to the brain, which has a higher priority position in the human body, the heart is the second main organ. All the organs in the entire body receive blood from its pumping system. The medical sector has done a lot of work predicting the development of cardiac problems. Prediction from additional knowledge and data analytics are useful for prediction from more information and it helps the medical center to predict various diseases. Some of the data mining and machine learning techniques are used to predict heart diseases, such as decision tree, Naïve Bayes, Logistic Regression, SVM and Random Forest

**Keywords**

Decision tree, Naïve Bayes, Logistic Regression, SVM and Random Forest.

**S.No: 13**

**PAPER ID : NCSCD23014**

**INVESTIGATING WHAT EXACTLY IS CONSIDERED TO BE UNETHICAL  
HACKING**

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**Abstract**

In today's technological landscape, hacking plays a crucial role. Being a hacker doesn't require specialised knowledge in any field. Privacy and security can be easily compromised by the widespread practise of hacking. Systems and networks are probed to find their vulnerabilities, and then sensitive information is stolen from such systems. Before accessing and inspecting a security system, you must receive the necessary permissions. Set the parameters of the evaluation to ensure that the ethical hacker stays within the law and the bounds set by the corporation. Report any security holes you find during an assessment to the appropriate people inside the company. Give recommendations on how to fix the problems that have been found. Ethical hackers may be asked to sign a non-disclosure agreement (NDA) and/or agree to other terms and conditions imposed by the organisation being evaluated, depending on the level of confidentiality of the data being analysed.

**Keywords**

Stay legal, Define the scope, Report vulnerabilities, Respect data sensitivity

**S.No: 14**

**PAPER ID : NCSCD23017**

### **AIR POLLUTION USING IOT**

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#### **Abstract**

Internet of Things (IoT) may be a worldwide system of “smart devices” which will sense and connect with their surroundings and interact with users and other systems. Global air pollution is one of the major concerns of our era. The level of pollution has increased with times by lot of things like the increase in population, increased vehicle use, industrialization and urbanization which ends up in harmful effects on human wellbeing by directly affecting health of population exposed to it. Air quality goes down when enough amount of harmful gases present in the air like carbon dioxide, smoke, alcohol, benzene, NH<sub>3</sub>, and NO<sub>2</sub>. In order to analyses we are developing an IOT Based pollution Monitoring System which we'll monitor the Air Quality over an internet server. Existing monitoring systems have inferior precision, low sensitivity, and need laboratory analysis. Therefore, improved monitoring systems are needed. To overcome the issues of existing systems, we propose a threephase pollution monitoring system. It will show the air quality in PPM on the LCD and also as on webpage in order that we will monitor it very easily. In this IOT project, you can monitor the pollution level from anywhere using your computer or mobile device. The system uses MQ2 and MQ7 sensor for monitoring Air Quality. It measures their amount exactly and finds out harmful gases.

#### **Keywords**

IoT, Smart Device, Pollution, Monitoring

**S.No: 15**

**PAPER ID : NCSCD23012**

## **DETECTING COVID 19 SYMPTOMS BY APPLYING CLASSIFICATION ALGORITHMS**

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### **Abstract**

Data mining techniques are used for discovering and extracting useful information from a large dataset. Classification is a type of data mining technique which finds its application in the medical field by predicting the diseases. In the current scenario, COVID-19 is the pandemic disease with higher mortality rate. The main objective of this work is to build a new model for predicting the COVID-19 with the given symptoms using classification technique. The dataset is downloaded from Kaggle repository. The existing classification algorithms such as Support Vector Machine (SVM), Naïve Bayes (NB) and k Nearest Neighbor (KNN) are used for classification. The performance of the classification algorithms is evaluated using metrics such as Accuracy, Precision, Recall, F1 Score and Error Rate. From the experimental results, it is evident that KNN outperforms other classifiers by giving an accuracy of 97.608%.

### **Keyword**

COVID-19, Classification, KNN, Naive Bayes, SVM.

**S.No: 16**

**PAPER ID : NCSCD23015**

**EVALUATION OF ALGORITHMS WITH FEATURES IN MACHINE LEARNING  
FOR THYROID DISEASE DETECTION**

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**Abstract**

The thyroid gland is the key organs in the human body, secreting two hormones that help to regulate the human body's metabolism. Thyroid disease is a severe medical complaint that could developed by high TSH(Thyroid Stimulating Hormone) levels or an infection in the thyroid tissues. Hypothyroidism and hyperthyroidism are two important conditions caused by insufficient thyroid hormone production and excessive thyroid hormone production, respectively. Machine learning model can utilize for precise processing of the data that is generated from different the medical sector and could be used for building a model for the prediction of several diseases. In this study, we used a variety of machine learning algorithm to predict hypothyroidism and hyperthyroidism. Moreover, we identified the most significant features, which can be used to detect thyroid diseases more precisely. After completing the preprocessing and feature selection steps, we applied our modified and original data to several classification models to predict thyroidism. Finally, we found Random Forest is giving the maximum score in all sectors like accuracy, precision, recall, F1 score in our dataset and Naive Bayes is performing very poorly. By analyzing the characteristics and behavior of the dataset, we can identify the most important features of the datasets. In terms of accuracy and other performance evaluation criteria, this study could advocate the use of effective classifiers and features backed by machine learning algorithms for the detection and diagnosis of thyroid disease.

**Keywords**

Thyroid Stimulating Hormone, Random Forest, gradient boosting classifier, naive Bayes classifier, logistic regression, K nearest neighbors, and support vector machine algorithm

**S.No: 17**

**PAPER ID : NCSCD23019**

**OPTIMIZED REGION PROPOSAL NETWORK TO DIAGNOSIS AND  
DETECT PLANT DISEASES BASED ON IMAGE SEGMENTATION USING  
MACHINE LEARNING TECHNIQUES**

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**Abstract**

The Plant disease modernization in agricultural land is the main concern for every country, as the food demand is increasing at a fast rate due to an increase in population. Indian economy is extremely dependent of farming productivity. Therefore, in field of cultivation, detection of disease in floras plays an important role. Also, the increased use of expertise today has increased the efficacy and accuracy of noticing diseases in plants and animals. The thought of classification in machine learning techniques deals with the problem of identifying to which set of categories a new population belongs. Our attention is to illuminate the facts about the diseases and how to perceive them promptly with artificial intelligence. It proposes to deliberate the use of Ai techniques to detect diseases in plants robotically. In this research article, the O-RPN(Optimized Region Proposal Network) is utilized to identify and localize the leaves in complex surroundings. O-RPN Algorithm comprises the feature of indications through Chan–Vese (CV) techniques. The CV algorithm based on region shows promising results for segmenting images free of noise and weak edge. Furthermore, different data sets related to plant diseases are compared with CNN and SVM.

**Keywords**

Image Segmentation, Feature Extraction, RPN,CNN,SVM

**S.No: 18**

**PAPER ID : NCSCD23018**

## **ROLE OF WOMEN IN THE ARTIFICIAL INTELLIGENCE SECTOR**

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### **Abstract**

The 2030 agenda for sustainable development was created by the United Nations Member States with focus on global peace and prosperity through 17 Sustainable Development Goals (SDGs). The agenda calls for the active participation and an immediate action plan by all the countries including both developed and developing countries. Emphasis on gender equality is one of the challenging sustainable goals targeting the gender bias in all the fields for progressive economic growth. The recent advanced sector of artificial intelligence (AI) is being evolved with a slightly threat to the gender equality which require for necessary plan of actions for suitable measures at the national and global level to provide beneficial changes for the encouragement of women as AI-powered software recruiters discriminate against women. The UNESCO's Dialogue on Gender Equality concerned towards AI suggested reducing gender bias through women representation globally in advanced technical sectors. There is a need for thorough understanding of AI Ethics Principles and accordingly carry out the tasks by Governments, society and welfare institutions to aware of the importance and motivate the women to adopt the AI technology as one of the career opportunity without considering themselves as unsuitable. The power of AI can be known only when one can able to realize the potential benefits in improving the standard of living conditions. Widening the diversity is the key principle in reaching the equitable outcomes without gender discrimination. The present scenario of gender based biases reflects the greater effect on the product and or service creation in the AI as well as machine learning (ML) space which lead to relatively substantially low involvement of women. The effective measures for the involvement of women may be through support of science, technology, engineering and mathematics (STEM) education, generating inspire female scientists, ensuring gender equitable rewards and equitable opportunity in the field of machine learning and artificial intelligence.

### **Keywords**

Artificial Intelligence, Women, Gender equality, Discrimination, Machine Learning

**S.No: 19**

**PAPER ID : NCSCD23047**

**CONTROLLING MOUSE MOVEMENT USING  
EYE MOVEMENT AND EYE CLOSING FOR CLICK  
AND WHICH CAN BE USEFUL FOR DISABLED PERSONS**

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**Abstract**

Modern human computer interfaces have made significant advancements in hands-free human computer interaction (HCI) technologies. The goal of this research is to create a methodology for computer cursor control for those with physical limitations, such as quadriplegics and amputees. It was suggested Face recognition is done using OpenCV on real-time video data provided by the user. Locating the numerous facial features that can be used for cursor control is done using the 68-point landmark technique. The cursor control is activated or deactivated when the mouth opens or closes depending on the Mouth Aspect Ratio (MAR). By turning the head left, right, up, and down while using the nose tip, the cursor may be moved in all four directions. Eye flickering is identified using the Eye Aspect Ratio (EAR). Left and right clicks, respectively, are indicated by left and right eye blinks. Squinted eyes signify page scrolling, which is useful when using PDFs and other similar materials.

**S.No: 20**

**PAPER ID : NCSCD23010**

**DATA TRANSMISSION IN MOBILE WIRELESS NETWORKS**

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**Abstract**

Mobile Ad hoc Network which is a wireless mobile nodes collection which forms a short term network without any centralized administration or infrastructure. Ad hoc has become accepted one since it is wireless network and is relatively a new way of multi-hop wireless networking. This is examined to be a very absolute part of the computing environment system, consist of infrastructure-less mobile networks. Each node in MANET makes the information in right way with nearby nodes or indirectly through means of in between the nodes. The extension of ad-hoc network has of credits which go for its self-configuring and self-organizing properties. Where in mobile routers engaged in some routing protocol demand for continue and deciding the routes, where all these nodes in MANET will functions basically. Where the MANETs are infrastructure-less, self-organizing, quickly deployable wireless networks, These MANET are well applicable for the applications engaged in particular communications, outdoor events in regions without the wireless infrastructure, natural disasters and emergencies, and mine site functionalities, military functions, robot data accession and sudden business conferences .

Routes intermediate the nodes in an ad hoc network in general might involve multiple hops and, hence it is well suited to name such networks as “multi-hop wireless ad hoc networks”. MANET consist the nodes is battery functional. Impedance of network production at its higher rate and basic possibilities of network i.e., routing gets influenced by the defect of some other nodes functions. Mobility models is employed for explaining the location, movement pattern, pause distribution, direction of movement, acceleration and speed change over time of the mobile nodes could be described by means of their mobility models.

**Keywords**

MANET, Ad hoc Network, robot data accession, mobile networks

**S.No: 21**

**PAPER ID : NCSCD23013**

**CYBER BULLYING DETECTION ON SOCIAL MEDIA USING SUPERVISED  
MACHINE LEARNING**

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**Abstract**

From the day of internet came into existence, the era of social networking sprouted. In the beginning, no one many have thought the internet would be a host of numerous amazing services the social networking. Today we can say that online application and social networking websites have become a non-separable part of one's life. Many people from diverse age groups spend hours daily on such websites. Despite thought let is emotionally connected through media, these facilities bring along big threats with them such as cyber-attack, which includes include lying. As social networking sites are increasing, cyber bullying is increasing day by day. To identify word similarities in tweets made by bullies and make use of machine learning and can develop an ML model that automatically detects social media bullying actions. However, many social media bullying detection techniques have been implemented, but many of them were textual based. Under this background a motivation, it can help to prevent the happen of cyber bullying if we can develop relevant techniques to discover cyber bullying in social media. A machine learning model is proposed to detect and prevent bullying on twitter. It can use for training and testing social media bullying content.

**Keywords**

Social network, Machine Learning, Cyber Bullying

**S.No: 22**

**PAPER ID : NCSCD23020**

**ARTIFICIAL INTELLIGENCE RESEARCH IN INDIA: A SCIENTOMETRIC  
STUDY**

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**Abstract**

This paper discussed the research publication productivity of artificial intelligence research in India. Artificial intelligence, or AI, is a field of computer science that became established in the 1950s. It was described at the time as a new science which would systematically study the phenomenon of 'intelligence'. The publication data was collected from the Scopus database. The current study intends to investigate the year-wise research productivity in the field of artificial intelligence, including the top 25 leading scientists, various types of documents, top 25 leading institutes, top 25 funding agencies, top 25 journals and top 25 highly cited research papers. In this study was found that, Indian scientists were published 3453 research papers and received 5000 citations and Suri, J.S., was published 41 research papers, and Amity University has published 147 research publications. Also this study found the Department of Science and Technology, Ministry of Science and Technology, India, sponsored 36 funds and the "Intelligence (AI) Applications for COVID-19 Pandemic" article received 625 citations.

**Keywords:**

Artificial Intelligence (AI), Artificial Intelligence Research, Research Publications, Scientometrics.

**S.No: 23**

**PAPER ID : NCSCD23044**

**AN OPTIMIZED AI EDGE DETECTION TECHNIQUES FOR CAR RADIATOR  
USING IMAGE PROCESSING**

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**Abstract**

This Digital world improves the quality and service of the entire business in the cyber world. This Machine world leads people to be very fast and time-consuming. Mechanic worlds are digitalized in terms of visualization. Visualization techniques are used to make the mechanical process very fast and effective. Image processing and Image Segmentation play a vital role in Visualization Techniques. The main objective of the proposed research work is to determine the problem of the car radiator using images. The images are processed by the proposed techniques to improve the quality and efficiency of the prediction of the car radiator. The ultimate aim of this proposed research work is to help the person who doesn't know car radiators. Any person can find out the radiator's deficiency by implementing the proposed research work. People do need to know car radiators and no need for any expert to identify the problem. This proposed research work compared with existing edge detection techniques like Sobel, Robert, Prewitt, Log, and Canny Methods. The Proposed research work proved to be the most effective and efficient edge detection technique compared to the existing edge detection techniques. The outcomes lead to contrast and other existing techniques which uncovered that the proposed framework may come with about 98% to 99% accuracy.

**Keywords:**

Image Processing Techniques, Car Radiator, Edge Detection Techniques headlines and polarize them into three categories of positive, negative and neutral.

**S.No: 24**

**PAPER ID : NCSCD23026**

## **TO IMPLEMENT SUSTAINABLE GREEN COMPUTING**

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### **Abstract**

The concept of green computing has begun to spread in the past few years, gaining increasing popularity. Besides the widespread sensitivity to ecological issues, such interest also stems from economic needs, since both energy costs and electrical requirements of IT industry around the world show a continuously growing trend. The ecologically friendly use of computers and related resources is known as "green computing." Green computing is the study and practice of efficient and eco-friendly computing. The principle behind energy efficient coding is to save power by getting software to make less use of the hardware, rather than continuing to run the same code on hardware that uses less power. In recent years, companies in the computer industry have come to realize that going green is in their best interest, both in terms of public relations and reduced costs. This article will take a look at several green initiatives currently under way in the computer industry, as well as issues that have been raised regarding these initiatives.

### **Keywords:**

Eco Friendly Computing, Energy Efficient Coding, Green Computing, Green IT ,Smart Computing.

**S.No: 25**

**PAPER ID : NCSCD23006**

**A SURVEY OF CYBER SECURITY**

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**Abstract**

Cyber Security plays a vital role within the field of information technology .Securing the data has become a most important challenges today. Once ever we expect concerning the cyber Security the primary factor that arises in our mind is ‘cyber crimes’ that is increasing vastly day by day. Numerous Governments and corporations are taking several measures so as to stop these cyber Crimes. Besides numerous measures cyber security continues to be a awfully huge concern to several. This paper principally focuses on challenges primarily faced by cyber security on the most recent technologies .It additionally focuses on the cyber security techniques, ethics and therefore the trends ever-changing the face of cyber security.

**Keywords:**

cyber security, cyber crime, cyber ethics, network.

**S.No: 26**

**PAPER ID : NCSCD23046**

**A BRIEF STUDY ON PROS AND CONS OF VARIOUS MACHINE  
LEARNING METHODS INVOLVED IN PADDY DISEASE  
PREDICTION**

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**Abstract**

Paddy also known as rice is a staple crop for over half of the world's population. However paddy cultivation is often affected by various diseases that can cause significant yield losses. In order to make a literature review on various image processing techniques that are needed to predict paddy plant diseases we used Meta analysis approach. Twenty five journals from various sources had been selected to analyze various algorithms' pros and cons in order to make a comparison of the system that provides maximum accuracy in identification of various crop diseases. From this study we find out the most common paddy plant diseases are Bacterial Leaf Blight, Brown Spot disease and leaf Blast diseases. The most common classification tools used in the 25 journals are Neural network and Support Vector Machine. This study suggests the researchers to make an advanced research in this field to predict the diseases in crop at early stage and to reduce the suicides that were committed by farmers due to poor yield by developing the system that provides 100 % accuracy in crop disease prediction.

**Keywords**

Support Vector Machine, Convolutional Neural Network, Image Processing Techniques, Meta Analysis.

**S.No: 27**

**PAPER ID : NCSCD23045**

## **INCORPORATION OF AN IMAGE-BASED FACIAL RECOGNITION SYSTEM WITH USER SPECIFICATIONS**

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### **Abstract**

Face recognition has become a major social issue in today's information era. To identify an individual, face recognition uses unique facial characteristics. Users are more likely to adopt face recognition technology if they believe that face recognition platforms can provide adequate privacy protections. Concerns over facial recognition's potential invasion of personal privacy have emerged as one of the most pressing societal issues of the information age. As a result of users' confidence in face recognition platforms' ability to foster safe environments for the use of face technology, the latter has seen increased adoption. Biometric face recognition relies on a person's unique facial characteristics to verify their identity. Most people are still willing to trade some degree of privacy for the convenience of online services and software. In particular, it compares the precision of widely-used methods like PCA and SVM against that of less-popular ones like CNN when it comes to facial identification (Convolutional Neural Network).

### **Keywords**

SVM, Convolutional Neural Network, Principle Component Analysis, Privacy.

**S.No: 28**

**PAPER ID : NCSCD23005**

## **SMART AGRICULTURE SYSTEM USING IOT TECHNOLOGY**

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### **Abstract**

Protein Remote Homology Detection (PRHD) is an idea that plans to find remotely transformative connections between proteins. PRHD research is presently essential for surveying protein designs and capability. Various computational methodologies have been created in late a long time to conquer this challenge which requires steady width qualities to determine the Protein Sequences (PSs). In any case, with just simple information on proteins, recognizing their separation qualities is certainly not a simple errand. Consequently, a concise near survey and correlation of various calculation techniques is fundamental for PRHD. In this paper, a survey of different PRHD techniques with the assistance of various computational strategies is introduced. Furthermore, their advantages and disadvantages are examined in an even structure. In conclusion, the entire review is summed up and future headings are recommended to work on the proficiency of protein arrangement in light of amino corrosive groupings, particularly with low succession character between proteins.

### **Keywords**

Protein Remote Homology Detection (PRHD), Fold Recognition, Machine Learning, Deep Learning.

**S.No: 29**

**PAPER ID : NCSCD23004**

## **IOT BASED WASTE MANAGEMENT FOR SMARTCITY**

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### **Abstract**

Garbage collection is one of the most critical problems faced by Municipal Corporation. While implementing the waste management in cities the biggest challenge is the management of waste in cost optimal way with high performance. The current process of collecting the waste, separating it and transporting the containers everyday which is a complicated process. This paper deals with the concept of waste management and the smart system for waste management with higher benefits to the society. The proposed system for waste management will use various sensors for sensing the type of waste and separate the waste in different categories and actuator to inform the management to collect the waste container. This system will save money and time compared to the already available process of waste management and also improves the society cleanliness.

### **Keywords**

IoT, Segregation, Garbage Collection, Sensors, Waste Monitoring and Management.

**S.No: 30**

**PAPER ID : NCSCD23049**

## **BINDING ARTIFICIAL INTELLIGENCE WITH CAPILLIUS**

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com

### **Abstract**

Due to the rapid deployment of IT technology, health care service has entered a new era. Some services such as cardiac monitoring are critical for life and have contributed to saving lives. On the other hand, monitoring hair loss is another interesting health care service. Even though it is not critical for life, people tend to pay much attention to their hair condition. Hair loss is one of the major issues related to the hair condition since excessive and uncared hair loss might lead to bald head. Hair care can be done professionally at the hair care shop but it requires much time and cost. Recently, due to inexpensive smart devices, self-diagnosis on the hair condition has become possible. Still, few applications have been developed to evaluate hair condition. In this paper, we propose a new scheme to evaluate the condition of hair and scalp by extracting diverse features from their microscopy image. The features include hair thickness, hair density and scalp blotch.

Hair loss can occur due to diverse factors, which include genetics, stress, abuse of hair products and poor nutrition. Even environmental changes are reported to cause hair loss. Since excessive and uncared hair loss could lead to bald head, many efforts have been made to remedy or prevent the hair loss. Such efforts include visiting professional hair care shops or using special hair or scalp care products. Since they are usually expensive and inconvenient to the users, there has been an increasing demand for inexpensive and convenient ways to monitor hair and scalp condition.

### **Keywords**

Artificial Intelligence, health care, environmental changes

**S.No: 31**

**PAPER ID : NCSCD23021**

## **DETECTING WEB APPLICATION VULNERABILITIES WITH STATIC ANALYSIS AND DATA MINING**

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### **Abstract**

Although a large research effort on web application security has been going on for more than a decade, the security of web applications continues to be a challenging problem. An important part of that problem derives from vulnerable source code, often written in unsafe languages like PHP. Source code static analysis tools are a solution to find vulnerabilities, but they tend to generate false positives and require considerable effort for programmers to manually fix the code. We explore the use of a combination of methods to discover vulnerabilities in source code with fewer false positives. We combine taint analysis, which finds candidate vulnerabilities, with data mining, to predict the existence of false positives. This approach brings together two orthogonal approaches: humans coding the Knowledge about vulnerabilities (for taint analysis), joined with the seemingly orthogonal approach of automatically obtaining that knowledge (with machine learning, for data mining). Given this enhanced form of detection; we propose doing automatic code correction by inserting fixes in the source code. Our approach was implemented in the WAP tool, and an experimental evaluation was performed with a large set of PHP applications. Our tool found 388 vulnerabilities in 1.4 million lines of code. Its accuracy and precision were approximately 5% better than PhpMiner II's and 45% better than Pixy.

### **Keywords**

Vulnerabilities, Data mining, Taint analysis, false positives, Web application

**S.No: 32**

**PAPER ID : NCSCD23023**

## **IMPLICATION OF MACHINE LEARNING IN HEALTHCARE SECTOR**

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### **Abstract**

Machine Learning (ML) is an application of Artificial Intelligence (AI) that gives the system the capacity to autonomously learn from experience rather than user intervention. This is made possible by the abundance of data that is already available, which enables training rather than programming of machines. It is thought to be a significant technological advancement that can evaluate enormous amounts of data. Modern technology seems to incorporate Artificial Intelligence (AI) or Machine Learning (ML) into almost everything that comes out of the industry. Although not all of human intelligence, some human skills are being applied in Machine Learning (ML) today. By working with intelligent software, ML empowers individuals to accomplish more. To aid in quicker patient diagnosis, Machine Learning is being employed more and more in healthcare. Based on factors including age, socioeconomic standing, and genetic history, ML programmes can forecast health issues, aiding in disease prevention. ML is currently being used in hospitals to precisely identify cancer and tumors in radiology imaging. Large data sets and an algorithm can be used by computers to classify the images from scans. A Machine Learning algorithm has been developed that can diagnose cancer more correctly than the finest pathologist, enabling physicians to decide on a course of therapy more accurately and promptly.

### **Keywords**

Machine Learning, Health Issues, Disease Diagnosis, Technology Advancement

**S.No: 33**

**PAPER ID : NCSCD23030**

## **SECURITY AND PROTECTION IN IOT UTILIZING AI AND BLOCKCHAIN**

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### **Abstract**

Security and protection of the clients have become huge worries because of the association of the Internet of Things (IoT) devices in various applications. Digital dangers are developing at a hazardous speed making the existing security and protection measures insufficient. AI (ML) calculations are utilized to deliver exact results from enormous complex data sets, where the created results can be utilized to foresee and recognize weaknesses in IoT-based frameworks.

Moreover, Blockchain (BC) procedures are becoming famous in current IoT applications to address security and protection issues. A few investigations have been led on either ML calculations. These investigations target security or protection issues utilizing ML calculations, subsequently representing a need for a consolidated review on endeavors made lately tending to both security and protection issues utilizing ML calculations. In this paper, we give a rundown of examination endeavors made before barely any years, beginning from 2008 to 2019, tending to security and protection issues utilizing ML calculations in the IoT area. To begin with, we examine and order different security and protection issues detailed in the beyond twelve years in the IoT space. We then, at that point, group the writing on security and protection endeavors based on ML calculations in the IoT space. We recognize and enlighten a few difficulties also, future exploration headings utilizing ML calculations to address security and protection issues in the IoT area.

### **Keywords**

Security and Protection, Blockchain, network safety, Web of things, AI

**S.No: 34**

**PAPER ID : NCSCD23031**

## **A STUDY ON QR CODE BASED DATA SECURITY IN CLOUD USING VISUAL CRYPTOGRAPHY**

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### **Abstract**

In cloud data storage raises serious security issues. In comparison to classical cryptography, visual cryptography is a simple, secure, and covert encryption method for communicating private images. With the help of Visual Cryptography (VC), images can be divided into many shares and then decoded by adding the shares together without the need for expensive traditional cryptanalysis. The secure QR code schema based on visual cryptography was developed in this research as a solution to the information security issue with QR codes. In this study, using visual cryptography approaches, to improve the security and quality of visual images, we have suggested a method of secure QR code schema for increasing the data's security over cloud.

### **Keywords**

QR code, Visual cryptography, Secret sharing, Encryption, Decryption, etc.

**S.No: 35**

**PAPER ID : NCSCD23032**

## **FOUNDATIONS AND IMPLICATIONS OF PRESCRIPTION MEDICATIONS**

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### **Abstract**

Patient damage from drug interactions can be prevented. Either a drug targeting effect which also causes poisoning or a reduced drug impact that results in patient harm could harm people. Substances should be taken into account when prescribing new medications as well as when determining the diagnostic test of problems (for combinations that have previously arisen).

Drug interaction software checkers are readily accessible, although their study explored the effects is restricted.

An alteration in a drug's action or adverse effects brought on by concurrent administration with a meal, drink, supplement, or other drug is known as a drug interaction. Researchers submit themselves to the chance of potentially harmful interactions every time a drug is used in conjunction with another prescription medication, over-the-counter medication, food item, or herb. With more drugs taken, there is a higher chance of a particular medication.

Drug interactions can cause less patient damage if:

- Employing a customised formulary, using few drugs, and becoming knowledgeable about them.
- Identifying medicines that are key interaction-causing agents
- Pinpointing the medicines that are the main cause of complications
- using the concepts of pharmaceutical sciences

### **Keywords**

Clinical features, pharmacology, harm to patients, medication interactions, and patient compliance

**S.No: 36**

**PAPER ID : NCSCD23033**

## **DNA SEQUENCE CLASSIFIER**

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### **Abstract**

Deoxyribonucleic acid (DNA) is a biological macromolecule. Its main function is information storage. At present, the advancement of sequencing technology had caused DNA sequence data to grow at an explosive rate, which has also pushed the study of DNA sequences in the wave of big data. Moreover, machine learning is a powerful technique for analyzing largescale data and learns spontaneously to gain knowledge. It has been widely used in DNA sequence data analysis and obtained a lot of research achievements. Firstly, the project introduces the development process of sequencing technology, expounds on the concept of DNA sequence data structure and sequence similarity. Then we analyze the basic process of data mining, summary several major machine learning algorithms, and put forward the challenges faced by machine learning algorithms in the mining of biological sequence data and possible solutions in the future. This project analysis the human DNA sequence with various classification algorithms and generate report of all the algorithms to compare the accuracy of every algorithm. Then with the algorithm that produces best accuracy the data will trained with that particular model. Once the model is trained the model is then used in chimpanzee DNA sequence and dog DNA ssequence to compare the accuracy of the model with human DNA. The project uses HTML, CSS and JS as front end to display the reports in the webpage

### **Keywords**

Clinical features, pharmacology, harm to patients, medication interactions, and patient compliance

**S.No: 37**

**PAPER ID : NCSCD23036**

## **REVIEW ON NETWORK SECURITY CONCEPTS AND ATTACKS IN VANET**

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### **Abstract**

Network security is the extreme critical issue in ensuring safe transmission of information through the internet. As we are moving towards the digital data age, Network security issues play a important role in Technology. In this digital age more number of users are connected to the internet, so it attracts a lot of cyber-criminals. It comprises approval of access to information in a network, controlled by the network administrator. In this digital era of technology network security not only requires ensuring the security of end systems but of the entire network. In recent Emerging Technologies such as Vehicular Ad-Hoc Networks (VANET) has the potential to improve the safety and efficiency of future highways and state roads. While during with communication process security plays a vital role for VANET application. In this paper, an attempt has been made to review the various Network Security and Cryptographic concepts which are related to VANET. This research paper provides a review of existing literature concerning the preservation of privacy and confidentiality, with a focus on recent trends in VANET.

### **Keywords**

Network Security, Cryptography, Encryption, Privacy, Attacks, VANET

**S.No: 38**

**PAPER ID : NCSCD23037**

## **COVID-19 PATIENT PREDICTION USING BOOSTED SUPPORT VECTOR MACHINE WITH NON-IMAGING INPUTS**

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### **Abstract**

In the year 2019, a new disease known as novel corona virus had started spreading from china to all over the world. The situation becomes very crucial had been spreading all over the countries in world. A lot of people in the world got affected by the disease and we are in the condition of preparing many hospitals and medications to the people who are affected by the disease. The current method used to find people who are affected by the disease are very slow and less performing as compared to the huge population. The proposed method gives the actual number of patients who had been affected by the novel corona virus by using machine learning algorithm. A set of data has been given to the algorithm like patient's medical records and past and present patient records. The proposed algorithm finds whether the patient is affected by corona virus or not. The proposed method gives better results than the previous method.

### **Keywords**

Support Vector Machine, Non-Imaging Inputs, Machine Learning

**S.No: 39**

**PAPER ID : NCSCD23038**

## **STRATEGIC POLICY ANALYSIS ON CYBER SECURITY AND SUSTAINABLE DEVELOPMENT**

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### **Abstract**

One of the most important growth drivers for long-term economic development is information technology. More specifically, cyber security is now seen as one of the most important factors in maintaining global sustainable development. It has shown how the United Nations Sustainable development goals have prioritised cyber security and a secure and reliable online environment (UNSDG). To achieve the objectives outlined in the United Nations Sustainable Development Goals, trust in ICT is essential. The goals of sustainable development would be challenging to attain in the absence of a secure cyberspace. The study emphasises the role of the state, industry, and other non-state players as a catalyst for better cyber security norms. The goal of India's cyber security strategy is to create a safe and reliable online environment for people, organisations, and the government. Through a combination of institutional structures, people, processes, technology, and cooperation, the mission of the cyber security policy seeks to protect information and information infrastructure in cyberspace, build capabilities to prevent and respond to cyber threats, reduce vulnerabilities, and minimise damage from cyber incidents. This is the primary impetus behind sustainable growth in the current technological era.

### **Keywords**

Cyber Security, Strategic Policy, Cyber Threats, Sustainability.

**S.No: 40**

**PAPER ID : NCSCD23039**

## **A PROBABILISTIC DEPENDENT MATRIX WITH ATTRIBUTES USING THE MULTI MODEL TO PREDICT ADVERSE DRUG-DRUG INTERACTIONS**

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### **Abstract**

The public's health is seriously endangered by adverse drug-drug interactions (ADDI). Regardless of the early development period of pharmaceutical research systematically implementing the detection of ADDIs, many possible ADDIs are all still experimentally studied by accidents, resulting in a significant amount of sickness and fatality. For ADDI prognosis, numerous computing models have been built. Despite the fact that many medicines frequently have stimulatory activity and have a significant degree of mutual dependence in treatments, which contain necessary details about ADDIs and are advantageous for ADDI prediction, they do not take drug reliance into account. In this study, we develop a dependency infrastructure to simulate addictions and provide a probabilistic dependent matrix tri-factorization attribute supervised learning approach for ADDI prognosis. In order to represent the harmful interactions between pharmaceuticals, PDMTF specifically incorporates two pharmacological features, molecular structure and natural consequence, and their connection. The interdependent system is represented by a relying matrix that is produced from first constructing the row specificity matrix of the estimated property matrices and then formalising it using the comparable biochemical structures found in various pharmaceuticals. In the meantime, a powerful alternating algorithm is being developed to address the PDMTF efficiency issue. Investigations show that the suggested model performs better than eight baseline models and its two modifications.

### **Keywords**

Drug reliant, characteristic monitoring, adverse drug-drug interactions, and probabilistic matrix tri-factorization.

**S.No: 41**

**PAPER ID : NCSCD23042**

## **A NOVEL SURVEY ON WORKFLOW SCHEDULING IN CLOUD COMPUTING USING VARIOUS OPTIMIZATION TECHNIQUES**

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### **Abstract**

Cloud computing plays a great role in executing the workflow-based application in service-based manner. Workflow applications require number of interdependent sub-tasks in base class parent class relationship which needs to be executed for the given problems. Scheduling technology helps data base centers by allocating various ram or processing machines for various jobs. Scheduling algorithms vary based on the different methods of task. Workflow scheduling must follow the dependency constraints during allocation of resources. In this work, different workflow scheduling algorithms with optimization techniques have been surveyed. It is known that need for the user to be satisfied with the QoS parameters, the purpose of optimization techniques includes optimizing parameters like cost, time, reliability, availability, load balancing and energy efficiency.

### **Keywords**

Workflow Scheduling, Scientific Cloud, Evolutionary Algorithms, Optimization Techniques, Cloud Scheduling.

**S.No: 42**

**PAPER ID : NCSCD23043**

## **BASED ON INTEGRATED SIMILARITY AND SEMI-SUPERVISED LEARNING, PROGNOSTICATING DRUG-DRUG INTERACTIONS**

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### **Abstract**

A relationship between two medications in which one drug's pharmaceutical characteristics are influenced by someone else is known as a drug-drug interaction (DDI). Optimistic DDIs frequently help individuals have better treatment effect, however unfavourable DDIs are the main reason for adverse clinical events, and can potentially lead to the drug being taken off the market and death of the patient. As a result, DDI identification seems to have become essential in the creation of new drugs and the management of disease. We present a unique approach to predict DDIs in this paper that integrates resemblance and semi-supervised learning. The mutual information method is used by resemblance and semi-supervised learning to combine the drug's biochemical, pharmacological, and phenotypic information in order to see how similar the pharmaceuticals' components exist. Additionally, the kernel similarity of medicines' Gaussian Interacting Patterns is determined using known DDIs. The Regularized Least Squares classifier is used to determine the association probability ratings of drug-drug pairings using a semi-supervised learning approach. In terms of the 5-fold, 10-fold cross validation is a procedure used to estimate the skill of the model on new data and genetic alterations drug validation, DDI-IS-SL can outperform other comparison methodologies in terms of classification results. Moreover, DDI-IS-SL takes less time on overall to construct than other comparable approaches. Case studies also show how well the DDI-IS-SL performs in real-world scenarios.

### **Keywords**

Interactions between drugs, Regularized least squares classifier, similarity of the kernel for the Gaussian interaction profile.

**S.No: 43**

**PAPER ID : NCSCD23048**

## **SCRUTINY OF THE IMPACT OF BUSINESS ANALYTICS ON INNOVATION: A REVIEW**

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### **Abstract**

Advances in big data and business analytics (BA) have presented organizations with unprecedented opportunities for transformation. A unique and unique vision from BA enables companies to further develop new or existing products and services. Studies have investigated the mechanisms by which BA contributes to the innovation success of firms. This study aims to fill this gap. From an information processing and utilization perspective, research models are proposed and empirically validated using collected data. Key findings suggest that BA directly improves environmental scanning. This helps companies improve their innovation in terms of novelty and meaning of new products. However, the impact of BA contributions is amplified by the intermediary of a data-driven culture within the organization. A data-driven culture directly impacts product novelty, but indirectly through environmental scanning, impacts product meaning. The results also confirm that scanning environmental conditions directly contributes to the novelty and significance of new products, which increases their competitive advantage. Model test results also show that innovation success can be affected by many other factors that need to be addressed in addition to BA applications.

### **Keywords**

Innovation, Big Data, Business Analytics, Data-Driven Culture.

**S.No: 44**

**PAPER ID : NCSCD23050**

**A STUDY ON APPLICATIONS OF NEUROMARKETING IN  
CONSUMER BUYING BEHAVIOUR AND SUSTAINABILITY WITH  
RESPECT TO FMCG PRODUCTS**

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**Abstract**

The rising demand for exploring what is inside consumers' brains and the growth of neuroscience stimulated research efforts to explore the subtle centers in the consumer's brain that is responsible for making-decisions. Neuromarketing is the study of how people's brains respond to advertising and other brand-related messages by scientifically monitoring brainwave activity, eye tracking and skin response. These neuromarketing techniques are used to study the brain to predict consumer decision-making behaviour. It's also possible to use neuromarketing to try to manipulate consumer behaviour. So these are people's emotional and cognitive responses to media or marketing stimuli. In this paper, we are going to look through the impact of neuromarketing and its influence on consumer behaviour in FMCG products. This helps to know about the customer's preferences for their product and thus Neuromarketing supports in sustainability through sustainable consumption, adoption of green technologies and sustainable customer decisions, bringing a new perspective to marketing research.

**Keywords**

Neuromarketing, Consumer behaviour, FMCG products.



### ***About the College***

PSG College of Arts & Science, named after Philanthropist Shri. P. S. Govindasamy Naidu was established in the year 1947, with a mission to set education on a noble perch accessible to all in pursuit of knowledge and world class education. The College embodies a rich tradition of excellence in teaching and research and has thus infused dynamism and knowledge to numerous learners over several decades, with utmost commitment. PSGCAS, one of the foremost Institutions of higher learning in Tamilnadu, was granted Autonomy (one among the nine Colleges in the Country) by the UGC in 1978 during the first phase itself, while still being affiliated to Madras University. The College was then affiliated to the Bharathiar University in 1982. The College is NAAC accredited; ISO certified, Ranked under NIRF and is the recipient of many National and International awards and recognitions.

### ***About the Department***

Department of Computer Science (UA) was established in the year 1985 with the objective of imparting quality education in the field of Computer Science. The UG & PG courses were started with the aim to develop core competence in Computer Science and prepare the students to carry out development work, as well as take up challenges in research. The driving mission for the department is to advance the frontiers of research in computer science and automation and offer world-class pedagogical and research experience to its students.

### ***About PSG CARE***

The PSG Center for Academic Research and Excellence was found in October, 2015 by the PSG & Sons Charities Trust with a mission to promote teaching excellence in all the colleges under the Trust. Toward this end, CARE will encourage the use of learner-centric pedagogical practices that facilitate effective learning and will foster dialogue and reflection on effective teaching through workshops, seminars, one-to-one consultation and other activities. The center also focuses on creating and sustaining effective faculty student relationships.

### ***About the Conference***

The **National Conference on Sustainable Computing and Development (NCSCD-2023)** aims to provide a global platform to the researchers, academicians, industrial experts and students for sharing and showcasing their discoveries/findings/innovations through online mode. This is a multidisciplinary, virtual conference integrates the field of computer science with sustainable development goals. In this conference the researchers, academicians and industrial experts will address new challenges and share solutions at the interface of technology, information, and complex systems, and discuss future research directions. The Proceedings of the conference will be published with ISBN number.