Legislative Framework against Organ Trafficking In India

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Abstract: The legislative framework against organ trafficking in India has become an imperative issue in recent years due to the increasing incidence of illegal organ trade within the country. This abstract explores the legislative measures adopted by India to combat organ trafficking, focusing on the key laws, regulations, and initiatives introduced to address this grave concern. It examines the legal provisions pertaining to organ transplantation, the prohibition of organ trade, and the protection of vulnerable individuals from exploitation. The analysis also includes an assessment of the effectiveness of the legislative framework, highlighting the challenges and potential areas for improvement. By understanding the existing laws and their implementation, this abstract aims to contribute to the ongoing discourse on organ trafficking and inform policymakers, lawmakers, and stakeholders about the crucial legislative steps required to combat this heinous crime in India. *Keywords:* Legislative Framework, Organ Trafficking, India

I. Introduction

People used for organ transplants are victims of serious crimes. Basically even against the workers, it is the survivors of the less experienced part of the economy who sometimes research and admire. However, criminalization of organ trafficking exists in all major regions of the world and in many civil and criminal law regulations that concern people. Therefore, men, women and young men and women whose bodies have been exhumed at home and abroad are recognized as survivors of direct crime solely on the basis of body, mind and money.[1]

The State should ensure full recognition of their rights, as well as assistance and protection, as survivors of crimes and serious violations of personal freedom. But so far almost no organization has provided comprehensive, short, medium or long-term assistance, including justice and compensation for these victims, and there will be survivors of the harvest.

Constitution of India

The Constitution of India is the first recognized documen t and aims to provide the framework for the protection of human rights, inform the political and legal system, the r ole and interests of all people and public protection. The bill was announced on 26 November.

It came into force in 1949 and was enacted by the Constitutional Convention on January 26, 1950.[2] This Act repeals the Government of India Act of 1935

[3] and transforms it into the Republic of India. .

This document provides basic rights that ensure certain rights of citizens, including victims of property removal, li sted in Chapters 12

to 35 of Chapter III and equipped with -

1. Right to Justice ((Articles 14 – 18)

The right justice makes everyone equal. rights regardless of religion, gender, race, ethnicity or place of birth. It gu arantees equal employment in civil rights and discrimina tion based on race, religion etc.prevents state discriminat ion in employmentbased employment matters, including deletion of names during this time.

2. Freedom Act (Articles 19 – 22)

The Constitution of India guarantees the fundamental fre edoms of the citizens. The right to freedom of expression includes many rights such as the right to information, th e right to communicate, the right to assemble unarmed, a nd the right to live anywhere in the country.

3. Direct opposition to economic exploitation (Articles 23 – 24)

This freedom refers to the prohibition of human trafficki ng and other forms of immorality.

It also takes into account the prohibition of children on t he production line, so the law prohibits children under 14 from working in dangerous situations.

3. Right to Constitutional Remedy ((Articles 32 - 35) The Constitution provides a remedy in case another pers on violates a fundamental right. Public authorities cannot violate or review human rights. When these rights are vi olated, the injured party can be sued in court. Citizens ca n easily sue to the Supreme Court, which can write their important rights.

Sections 23, 29, 39 of our Constitution of India teach and regulate the assembly of the vulnerable, especially citize ns. Basically,

Article III of the Indian Constitution. and IV. Recognizes the subject of business by clauses, individuals or organiz ations.

L.M. Singhvi Commission Report

"To conceptualize this legislation, a committee of medical and legal experts (headed by Dr. L.M. Singhvi) was set up. The terms of reference of this committee were to clarify: (a) the concept and definition of brain death; (b) the need to enact separate legislation to recognize brain death and the legal, medical, and social implications of such legislation; (c) the safeguards that must be adopted to prevent the misuse of the concept of brain death; and (d) the manner in which the concept of brain death should be utilized to facilitate the availability of human organs

for transplantation." The cabinet approved the report in October 1991. In this report, the Committee suggested that India pass primary and subordinate laws similar to the UK's legislation on transplant,[4] with suitable changes. This legislation would clarify "death" as "brain-stem death" and authorize and accredit hospitals with the competent staff, equipment, and facilities for organ transplantation. before death, a person should be allowed to sign a written authorization for the removal of certain organs. Medical care for donors should encourage living organ donation. The committee also suggested criminalizing the sale of human organs.[5]

II. Judicial decisions and steps taken by the Government of India

Many cases of court-ordered human rights violations have been reported. Part of this study examines several human trafficking cases in which the economic situation of organ trade was identified after a careful analysis of the organ trade violation and its nature, the way it works, the impact and victimization of the harvesting group. Donors and their supporters continue to commit all kinds of crimes. In some cases there is conflicting information, making it difficult to verify their authenticity.

However, the events outlined below will demonstrate the interests of the offenders, the uses and consequences that victims subsequently experience. In addition, it has been tried to show the measures taken by the countries in the fight against human smuggling.

NET CARE Case

In this case, the newspaper advertised and asked for kidney donation and the money was paid.[6] Section 51 Criminal Code Section 105(1) 1977. granted consent without disclosing sufficient medical history of the victim. Donors are asked to stay at home for a period of time to prevent the detainees from leaving and are monitored before being transferred to the country's main airport. They were taken from the airport to the Eastern European country by an accomplice of the suspect. Misled by claiming that the defendants were doctors and unaware of the risks of the treatment, the victims initially promised \$7,000 in compensation but did not receive the money.

In one example, the two victims each received half of the total promised amount; however, the suspect later took the money and never gave it back[7]. Both victims received nothing, one donor received \$500 and the other \$3,500. However, the remaining 7 dollars was not given to but. When the defendant was taken to the suspect's house, he owed food and rent.

In addition, they do not receive medical treatment when they return to their countries. They were warned that if they reported their actions to the police, they would be arrested for their crimes. In addition, a defendant battered the victim after demanding payment. Some have had their kidneys removed after flying to another country.[8]

According to the collected evidence, Netcare CEO and 8 more people were arrested in 2003, including 4 organ transplant specialists, 1 nephrologist, 2 transplant exchanges and 1 translator. Israel, Romania and Brazil.

Evidence also shows that five youths were offered money in exchange for a kidney donation.[9]

Netcare pleaded guilty to 102 crimes in 2010, including using its employees and facilities to perform illegal kidney transplants, fraud, fraud and physical violence. [10] South Africa's state attorney general is meeting with the province. The settlement resulted in a \$3.8 million judgment against the company and a \$4 million fine.

As part of the transaction, charges against Netcare Limited and its manager were dismissed. [11]

Medicus Case

The Medicus facility in Pristina, Kosovo is the center of the illegal organ trade. The Immigration Service first investigated the situation in 2008, suspecting that some foreigners had come to the country due to heart problems. The kidney of a kidney patient who was found to be in poor health was taken at Medicus Hospital. Where fees are to be paid. Upon receiving the news, the police searched the hospital.

The investigation revealed that the organ trading network was set up in 2000 when the owners of medical facilities contacted the Turks to set up an illegal network. Organ donors from various countries such as Israel, Ukraine, Belarus, Turkey, Moldova, Kazakhstan and Russia, organ recipients from various countries such as Germany, Canada, Israel, Poland and the United States. The nationalities of the nine recipients and five senders are unknown. [12]

EULEX is responsible for the prosecution when the case is transferred to Kosovo. [EULEX] Kosovo politicians are also suspected of involvement, which complicates the investigation.[13]

The owner of the clinic was also found guilty of providing illegal medical treatment and was convicted of human trafficking and crimes.[14] Other charges such as abuse of office, grievous bodily harm, fraud and falsification of documents were dismissed. This penalty includes more than eight years in prison and a fine of 10,000 euros.[15] [16]

The Medicus investigation showed that the key to effective decision-making for drug trafficking victims is rapid investigation and arrest, as well as the recovery of all materials and appropriate papers. The review of the anesthesiologist's surgery was decisive in this case.

ROSENBAUM Human Trafficking Network

This human trafficking case was uncovered by an FBI operation called Bid Rig, which targets corrupt workers in the Jewish community in New Jersey for tax evasion and money laundering.

The business began in 1999, but FBI agents did not discover the group until 2008, when a suspect became an informant. [17]

An FBI agent approached Rosenbaum asking him to help arrange a kidney transplant for his relative. Rabbi Rosenbaum promised to find a suitable "donor". Clients paid \$160,000 for the procedure. The FBI sent the first money to a bank account of a nonprofit in Brooklyn. The full indictment revealed that Rosenbaum had been involved in the organ business since 2001.

As for the blood/tissue competition, he teamed up with friends in Israel to find a suitable supplier. Potential "donors" are monitored during pre-transplant testing.

In 2011, Rosenbaum pleaded guilty to violating US law prohibiting the commercial sale of human organs [18] and once conspiring to violate US law.

Illegal evidence was seized from the exchange, and Rosenbaum was eventually sentenced to 30 months in prison.

Rosenbaum could not be charged or convicted of human trafficking as the prosecution was unable to identify the seller at the time and Rosenbaum pleaded guilty. Because of these legal issues, the penalties are relatively small compared to organ trafficking. [19]

GURGAON CASE

U.P. and Haryana Police set up an organization for kidney crimes in Gurgaon. Kidney scam works from the personal address and guest address of Amit Kumar, the head of the network.

The best clinics are in private homes, while the guest house serves as a place for beneficiaries and vendors until a match is found. Sellers who opt for kidney deals are usually unassisted workers and unemployed in the city, while kidney buyers are from different countries such as the USA, UK, Canada, Saudi Arabia and Greece. [20] Professionals often lure shippers to the bottom of the bastion. After a while, they asked for a kidney donation for Rs 30,000 and those who involuntarily refused to have the surgery had their kidneys removed. Studies show that Dr. Amit and his associates have performed 500-600 kidney transplants in nine years. Beneficiaries receive Rs 1.5 million to Rs 2.5 million for a kidney, while donors receive Rs 50,000 to Rs 11.

Three of them were treated when authorities realized that the police were protecting 5,000 beneficiaries. The investigation also led by Dr. Amit, his brother, and others were recently arrested for illegal human organ transplants and have been arrested three times before. However, he was released on bail. Dr Amit and his brother were arrested near Nepal in 2008.

The Federal Bureau of Investigation launched an investigation on February 8, 2008. Dr. Amit was charged under IPC 326, 420, 380 and 120B for illegal purchase, use of dangerous weapons, unreasonable punishment, fraud and causing injury and organ transplant and organ trafficking. [21] In 2013, Amit was charged in four other cases in the CBI court.

Another defendant, who appeared in court in 2008, was also convicted for lack of evidence. Both were sentenced to seven years in prison and a fine of Rs 60 on the grounds that India is a country involved in organ transplants. People travel to parts of India to get kidney transplants from local people. [22] No specific charges were brought against the staff here, Dr. The case against Amit has been sitting here for years. But he focused on the right to life. Those convicted under the Human Transplantation Act 1994 are deemed to have violated various provisions of the International Criminal Court and undermined the entire concept of the Transplantation Act by double

treatment, false statement and torture, or physical threats by various means, and violating the law. all relatives.

VISHAL JEET V. Association of India [23]

A public interest petition has been filed under Article 32 of the Constitution [24] At the lawyer's request, specific instructions were sought to investigate areas of sexual harassment and rape against women through the bridge of legal supervision, to rescue and assist sex trafficking victims. with appropriate training in a variety of medical, residential, housing and educational services.[25]

Petition shows that poor parents sold their teenage daughters and children in the hope that, because of their poverty, they would be used only for manual labor or housework.

GAURAV JAIN V. Association of India [26]

This case concerns one of the worst crimes in history, prostitution prevalent in Indian society.

The current document does not explicitly discuss the details. Instead, he asked how Indian society treated child prostitutes. [27]

RAJ BAHADUR Vs.W.B. The State [28]

In this case that occurred in 1953, the court explained the concept of trafficking in human beings by clarifying the meaning of trafficking in human beings.

It means treating women, men and children as commodities and selling them for immorality and otherwise disposing of them.

BANDHUA MUKTI MORCHA V. Association of India [29]

Court clarified the provision of medical facilities for labor victims and directed authorities to Nature's provision of medical assistance to displaced workers under this Act. serious violation of their fundamental rights. The court's decision was based on the outcome of a case involving a debt bondage victim.

PUCL V. T. N. [30]

The court ordered ALJ to quit her job to work on behalf of the victims with care, compassion and empathy.

In addition, the court ordered judges to abide by debt bondage rules.

MC Mehta - Union of India [31]

The court said that the only real solution to the social problem of child labor is education. Lack of access to education is one of the driving forces behind the prevalence of child labour. The court ruled that children under the age of 14 should receive education to support their health and development.

Government of India Initiative

National Transplant Scheme

Government of India is implementing the National Trans plant Scheme to plan fertility and implement the practice under THOA 1994 to increase organ donation. The Prim e Minister emphasized the importance of organ donation in the MANN KI BAAT program launched in October a nd November 2015. This encouraged organ donation in t he country. The National Transplant Program aims to pr ovide life

changing access to our nation's poorest people through o rgan

donation. Tissue banks are established nationwide under

NOTP.

This tissue bank is called Biomaterials Center and was es tablished by

NOTTO in New Delhi. While in the area, a similar bank was set up at ROTTO in Chennai. The main purpose of t he NOTP campaign is to promote organ transplants, livin g and cadaver donations by citizens across the country. 321

The provisions of NOTP are as follows:

A.Establishment of SOTTO in all states and territories B.Establishment of transplant centers and providing fina ncial assistance for Clinical Extraction

C.Assists Medical Transplants by Physicians and Physici ans.

D.Provide adequate training for medical personnel such as surgeons and shift managers.

E. Immunosuppression drugs for patients who become d ebilitated after changing activities.

III. **Other Laws**

A. Prevention of Injustice Act 1956

Offenses Amendment Act 2013 Sections 370 and 370A of the IPC deal with the abuse and abuse of children and torture, including forms of sexual exploitation, sex work or forced sexual exploitation.

B. POCSO, 2012 is a rare law to protect young people fr om harassment and exploitation. It provides an overview of different types of sexual harassment,

including sexual and non-sexual violence. Section

- C. Child Marriage Prohibition Act, 1976 Section
- D. Child Labor Prohibition and Control Act, 1986 E. Child Labor Prohibition Act, 1976.

REFERENCES

- [1]. Director-General of the European Council of Human Rights and Legal Affairs, Trafficking in organs, tissues and brains for the purpose of their extraction (2009).
- [2]. Constitution of India, 1950.
- Government of India Act, 1935. [3].
- The United Kingdom Human Organ Transplants [4]. Act, 1989.
- Ministry of Health and Family [5]. Welfare, "Constitution of a Group to examine the proposal for enactment of legislation for use of human organs and their donation for therapeutic purposes" (February 25, 1991).
- The State V Netcare Kwa-Zulu Ltd. Agreement [24]. [6]. in terms of s. 105(1) of the Criminal Procedure Act [25]. 51 of 1977.
- Jean Allin, "South African hospital apologizes for [7]. organ trafficking," 19 Medical Law Review (2011).
- Fatima Hassan and Sam Sole, "Kidneygate: What [8]. the Netcare Bosses Knew" Mail & Guardian, April 29. 2011. available at < https://mg.co.za/article/2011-04-29-kidneygatewhat-the-netcare-bosses-really-knew/>
- [9]. Assya Pascalev, Jessica de Jong, et. al.. "Trafficking in Human Beings for the Purpose of Organ Removal: A Comprehensive Literature [29]. Dalal, S., Poongodi, M., Lilhore, U. K., Dahan, F., Review" The Hott Project

[10]. South Africa Human Tissue Act, 1983 (Act 65 of 1983.

- S. African hospital group pleads Guilty in Kidney [11]. Scandal" BBC, Nov. 10, 2010, available at: https://www.bbc.com/news/world-africa-11725536
- Eduardo Salcedo-Albaran and Diana M. S. [12]. Cubides, "The "Medicus Case" Organ Trafficking Network in Kosovo" 14 Transnational Criminal Networks (June 2017).
- [13]. European Union Rule of Law Mission in Kosovo.
- Fatos Bytyci, "Kosovo doctor's decision on organ [14]. trade", Thomson Reuters, 24 May 2018, available at (last visited in June) 18, 2022).
- [15]. Tuag Morina and Blerta Iberdemaj, "Kosovo Convits Two in Organ Tradeking Trial," Balkan Transnational Justice, 24 May 2018.
- Die Morina and Blerta Iberdemaj, "Kosovo [16]. Convicts Two in Organ trading Trial" Balkan Transnational Justice, May 24, 2018, available at https://balkaninsight.com/2018/05/24/kosovoorgan-trafficking-medicus-trial-verdict-05-24-2018/
- Nancy Scheper-Hughes, "The Rosenbaum Kidney [17]. trafficking Gang" Counter Punch, Nov. 30, 2011, available at <https://www.counterpunch.org/2011/11/30/the-

rosenbaum-kidney-trafficking-gang/>.

- [18]. prohibited procurement, 42 US §274e.
- Adam Janos, "The Grim Truth About Organ [19]. Trafficking" True Crime Blog, August 6, 2021, https://www.aetv.com/realavailable at: crime/organ-trafficking-facts
- [20]. Alistair Scruton, "Gurgaon Kidney Fraud Scandal Shocks Everyone," Thomson Reuters, Jan. 28, 2008.
- [21]. Jeewan Kumar Raut & Others V. CBI (2009) 7 SCC 526.

[22]. Ajay sura, "Gurgaon Kidney Scam: Two Doctors get 7 Years Jail" Times of India, March 22, 2013, available at < https://timesofindia.indiatimes.com/city/gurgaon/ gurgaon-kidney-scam-two-doctors-get-7-yearsjail/articleshow/19129441.cms>

- Vishal jeet V. Union of India, (1990) 3 SCC 318. [23].
- Constitution of India, 1950.
- Anisha Gupta, "Immoral trafficking of women in Children in India A Legal Analysis" Law Finder, May 11, 2015, available at: https://www.lawfinderlive.com/Articles-1/Article8.htm?AspxAutoDetectCookieSupport=1
- [26]. Gaurav Jain V. Association of India, (1997) 8 SCC 114.
- Rights of the Children of Sex Workers" Lex Forti, [27]. December 23. 2020, available at: https://lexforti.com/legal-news/rights-of-thechildren-of-sex-workers/
- [28]. AIR 1953. Cal 522.
 - Vaiyapuri, T., Keshta, I., ... & Simaiya, S.

privacy issues in cyber-physical systems. Transactions on Emerging Telecommunications Technologies, e4771.

- [30]. Dalal, S., Manoharan, P., Lilhore, U. K., Seth, B., Simaiya, S., Hamdi, M., & Raahemifar, K. (2023). [41]. Extremely boosted neural network for more accurate multi-stage Cyber attack prediction in cloud computing environment. Journal of Cloud Computing, 12(1), 1-22.
- [31]. Malik, A., Onyema, E. M., Dalal, S., Kumar, U., [42]. Anand, D., Sharma, A., & Simaiya, S. (2023). Forecasting students' adaptability in online entrepreneurship education using modified ensemble machine learning model. Array, 100303.
- [32]. Shetty, S., & Dalal, S. (2022, December). Bi-Directional Long Short-Term Memory Neural Networks for Music Composition. In 2022 Fourth International Conference on Emerging Research in Electronics, Computer Science and Technology (ICERECT) (pp. 1-6). IEEE.
- [33]. Dalal, S. (2023, April). The Smart Analysis of Poisson Distribution Pattern Based Industrial Automation in Industry 4.0. In 2023 International Conference on Distributed Computing and Electrical Circuits and Electronics (ICDCECE) (pp. 1-6). IEEE.
- [34]. Dalal, S., Seth, B., Radulescu, M., Cilan, T. F., & Serbanescu, L. (2023). Optimized Deep Learning with Learning without Forgetting (LwF) for Weather Classification for Sustainable Transportation and Traffic Safety. Sustainability, 15(7), 6070.
- Onyema, E. M., Lilhore, U. K., Saurabh, P., Dalal, [35]. S., Nwaeze, A. S., Chijindu, A. T., ... & Simaiya, S. (2023). Evaluation of IoT-Enabled hybrid model for genome sequence analysis of patients in healthcare 4.0. Measurement: Sensors, 26, 100679.
- [36]. Dalal, S., Manoharan, P., Lilhore, U. K., Seth, B., Simaiya, S., Hamdi, M., & Raahemifar, K. (2023). [47]. Extremely boosted neural network for more accurate multi-stage Cyber attack prediction in cloud computing environment. Journal of Cloud Computing, 12(1), 1-22.
- [37]. Dalal, S., Goel, P., Onyema, E. M., Alharbi, A., Mahmoud, A., Algarni, M. A., & Awal, H. (2023). of Machine Learning Application for Cardiovascular Disease Risk Prediction. Computational Intelligence and Neuroscience, 2023.
- [38]. Dalal, S., Seth, B., Radulescu, M., Secara, C., & Tolea, C. (2022). Predicting Fraud in Financial Payment Services through Optimized Hyper-Parameter-Tuned XGBoost Model. Mathematics, 10(24), 4679.
- [39]. Dalal, S., Onyema, E. M., & Malik, A. (2022). Hybrid XGBoost model with hyperparameter tuning for prediction of liver disease with better accuracy. World Journal of Gastroenterology, 28(46), 6551-6563.

- Optimized LightGBM model for security and [40]. Edeh, M. O., Dalal, S., Obagbuwa, I. C., Prasad, B. V. V., Ninoria, S. Z., Wajid, M. A., & Adesina, A. O. (2022). Bootstrapping random forest and CHAID for prediction of white spot disease among shrimp farmers. Scientific Reports, 12(1), 1-12.
 - Zaki, J., Nayyar, A., Dalal, S., & Ali, Z. H. (2022). House price prediction using hedonic pricing model and machine learning techniques. Concurrency and Computation: Practice and Experience, 34(27), e7342.
 - Dalal, S., Onyema, E., Romero, C., Ndufeiya-Kumasi, L., Maryann, D., Nnedimkpa, A. & Bhatia, T. (2022). Machine learning-based forecasting of potability of drinking water through adaptive boosting model. Open Chemistry, 20(1), 816-828. https://doi.org/10.1515/chem-2022-0187
 - Onyema, E. M., Dalal, S., Romero, C. A. T., Seth, [43]. B., Young, P., & Wajid, M. A. (2022). Design of Intrusion Detection System based on Cyborg intelligence for security of Cloud Network Traffic of Smart Cities. Journal of Cloud Computing, 11(1), 1-20.
 - [44]. Dalal, S., Onyema, E. M., Kumar, P., Maryann, D. C., Roselyn, A. O., & Obichili, M. I. (2022). A Hybrid machine learning model for timely prediction of breast cancer. International Journal of Modeling, Simulation, and Scientific Computing, 2023, 1-21.
 - [45]. Dalal, S., Seth, B., Jaglan, V., Malik, M., Dahiya, N., Rani, U., ... & Hu, Y. C. (2022). An adaptive traffic routing approach toward load balancing and congestion control in Cloud-MANET ad hoc networks. Soft Computing, 26(11), 5377-5388.
 - [46]. Edeh, M. O., Dalal, S., Dhaou, I. B., Agubosim, C. C., Umoke, C. C., Richard-Nnabu, N. E., & Dahiya, N. (2022). Artificial Intelligence-Based Ensemble Learning Model for Prediction of Hepatitis C Disease. Frontiers in Public Health, 847.
 - Seth, B., Dalal, S., Jaglan, V., Le, D. N., Mohan, S., & Srivastava, G. (2022). Integrating encryption techniques for secure data storage in the cloud. Transactions on Emerging Telecommunications Technologies, 33(4), e4108.
 - Malik, M., Nandal, R., Dalal, S., Maan, U., & Le, [48]. D. N. An efficient driver behavioral pattern analysis based on fuzzy logical feature selection and classification in big data analysis. Journal of Intelligent & Fuzzy Systems, 43(3), 3283-3292.
 - [49]. Malik, M., Nandal, R., Dalal, S., Jalglan, V., & Le, D. N. (2022). Deriving driver behavioral pattern analysis and performance using neural network approaches. Intelligent Automation & Soft Computing, 32(1), 87-99.
 - [50]. Shetty, S., & Dalal, S. (2022, December). Bi-Directional Long Short-Term Memory Neural Networks for Music Composition. In 2022 Fourth International Conference on Emerging Research in Electronics, Computer Science and Technology (ICERECT) (pp. 1-6). IEEE.

- [51]. Onyema, E. M., Shukla, P. K., Dalal, S., Mathur, [65]. Seth, B., Dalal, S., & Dahiya, N. (2021). Practical M. N., Zakariah, M., & Tiwari, B. (2021). Enhancement of patient facial recognition through deep learning algorithm: ConvNet. Journal of Healthcare Engineering, 2021.
- [52]. Dalal, S., & Khalaf, O. I. (2021). Prediction of occupation stress by implementing convolutional neural network techniques. Journal of Cases on Information Technology (JCIT), 23(3), 27-42.
- [53]. Dalal, S., Jaglan, V., & Le, D.-N. (Eds.). (2021). Green Internet of Things for Smart Cities: Concepts, Implications, and Challenges (1st ed.). [67]. CRC Press. https://doi.org/10.1201/9781003032397.
- [54]. Dahiya, N., Dalal, S., & Jaglan, V. (2021). 8 Mobility in Green Management IoT. Green Internet of Things for Smart Cities: Concepts, Implications, and Challenges, 125.
- [55]. Dahiya, N., Dalal, S., & Jaglan, V. (2021). 7 Efficient Green Solution. Green Internet of Things for Smart Cities: Concepts, Implications, and Challenges, 113.
- [56]. Seth, B., Dalal, S., & Dahiya, N. (2021). 4 Practical [69]. Implications. Green Internet of Things for Smart Cities: Concepts, Implications, and Challenges, 61.
- [57]. Malik, M., Nandal, R., Dalal, S., Jalglan, V., & Le, D. N. (2021). Driving pattern profiling and [70]. classification using deep learning. Intelligent Automation & Soft Computing, 28(3), 887-906.
- Jindal, U., Dalal, S., Rajesh, G., Sama, N. U., [58]. Jhanjhi, N. Z., & Humayun, M. (2021). An integrated approach on verification of signatures using multiple classifiers (SVM and Decision Tree): A multi-classification approach.
- [59]. Seth, B., Dalal, S., Le, D. N., Jaglan, V., Dahiya, N., Agrawal, A., ... & Verma, K. D. (2021). Secure Cloud Data Storage System Using Hybrid Paillier-Blowfish Algorithm. Computers, Materials & Continua, 67(1), 779-798.
- [60]. Vijarania, M., Dahiya, N., Dalal, S., & Jaglan, V. (2021). WSN Based Efficient Multi-Metric Routing for IoT Networks. In Green Internet of Things for Smart Cities (pp. 249-262). CRC Press.
- [61]. Goel, M., Hayat, A., Husain, A., & Dalal, S. (2021). Green-IoT (G-IoT) Architectures and Their [74]. Applications in the Smart City. In Green Internet of Things for Smart Cities (pp. 47-59). CRC Press.
- [62]. Chawla, N., & Dalal, S. (2021). Edge AI with Wearable IoT: A Review on Leveraging Edge Intelligence in Wearables for Smart Healthcare. Green Internet of Things for Smart Cities, 205-231.
- [63]. Dahiya, N., Dalal, S., & Jaglan, V. (2021). Efficient Green Solution for a Balanced Energy Consumption and Delay in the IoT-Fog-Cloud Computing. In Green Internet of Things for Smart Cities (pp. 113-123). CRC Press.
- [64]. Dahiya, N., Dalal, S., & Jaglan, V. (2021). Mobility Management in Green IoT. In Green Internet of Things for Smart Cities (pp. 125-134). [77]. CRC Press.

- Implications of Green Internet of Things (G-IoT) for Smart Cities. In Green Internet of Things for Smart Cities (pp. 61-81). CRC Press.
- [66]. Dalal, S., Agrawal, A., Dahiya, N., & Verma, J. (2020, July). Software Process Improvement Assessment for Cloud Application Based on Fuzzy Analytical Hierarchy Process Method. In International Conference on Computational Science and Its Applications (pp. 989-1001). Springer, Cham.
- Seth, B., Dalal, S., Jaglan, V., Le, D. N., Mohan, S., & Srivastava, G. (2020). Integrating encryption techniques for secure data storage in the cloud. Transactions on Emerging Telecommunications Technologies.
- Hooda, M., & Shravankumar Bachu, P. (2020). [68]. Artificial Intelligence Technique for Detecting Bone Irregularity Using Fastai. In International Conference on Industrial Engineering and Operations Management Dubai, UAE (pp. 2392-2399).
 - Arora, S., & Dalal, S. (2019). An optimized cloud architecture for integrity verification. Journal of Computational and Theoretical Nanoscience, 16(12), 5067-5072.
 - Arora, S., & Dalal, S. (2019). Trust Evaluation Factors in Cloud Computing with Open Stack. Journal of Computational and Theoretical Nanoscience, 16(12), 5073-5077.
- [71]. Shakti Arora, S. (2019). DDoS Attacks Simulation in Cloud Computing Environment. International Journal of Innovative Technology and Exploring Engineering, 9(1), 414-417.
- [72]. Shakti Arora, S. (2019). Integrity Verification Mechanisms Adopted in Cloud Environment. International Journal of Engineering and Advanced Technology (IJEAT), 8, 1713-1717.
- [73]. Sudha, B., Dalal, S., & Srinivasan, K. (2019). Early Detection of Glaucoma Disease in Retinal Fundus Images Using Spatial FCM with Level Set Segmentation. International Journal of Engineering and Advanced Technology (IJEAT), 8(5C), 1342-1349.
- Sikri, A., Dalal, S., Singh, N. P., & Le, D. N. (2019). Mapping of e-Wallets With Features. Cyber Security in Parallel and Distributed Computing: Concepts, Techniques, Applications and Case Studies, 245-261.
- [75]. Seth, B., Dalal, S., & Kumar, R. (2019). Hybrid homomorphic encryption scheme for secure cloud data storage. In Recent Advances in Computational Intelligence (pp. 71-92). Springer, Cham.
- Seth, B., Dalal, S., & Kumar, R. (2019). Securing [76]. bioinformatics cloud for big data: Budding buzzword or a glance of the future. In Recent advances in computational intelligence (pp. 121-147). Springer, Cham.
 - Jindal, U., & Dalal, S. (2019). A hybrid approach to authentication of signature using DTSVM. In

Emerging Trends in Expert Applications and Security (pp. 327-335). Springer, Singapore.

- [78]. Le, D. N., Seth, B., & Dalal, S. (2018). A hybrid approach of secret sharing with fragmentation and encryption in cloud environment for securing outsourced medical database: a revolutionary approach. Journal of Cyber Security and Mobility, 7(4), 379-408.
- [79]. Sikri, A., Dalal, S., Singh, N. P., & Dahiya, N. (2018). Data Mining and its Various Concepts. Kalpa Publications in Engineering, 2, 95-102.
- [80]. Sameer Nagpal, S. (2018). Analysis of LrMu Power Algorithm in the Cloud Computing Environment using CloudSim Toolkit. International Journal of Research in Electronics and Computer Engineering (IJRECE), 6(3), 1175-1177.
- [81]. Nagpal, S., Dahiya, N., & Dalal, S. (2018). Comparative Analysis of the Power Consumption Techniques in the Cloud Computing Environment. Journal Homepage: http://www.ijmra.us, 8(8), 1.
- [82]. Kumar, N., Dalal, S., & Dahiya, N. (2018). Approach of Lion Optimization Algorithm for Efficient Load Balancing in Cloud Computing. Journal Homepage: http://www.ijmra.us, 8(8), 1.
- [83]. Sameer Nagpal, S. (2018). Comparison of Task Scheduling in Cloud Computing Using various Optimization Algorithms. Journal of Computational Information Systems, 14(4), 43-57.
- [84]. Arora, S., & Dalal, S. (2018). Hybrid algorithm designed for handling remote integrity check mechanism over dynamic cloud environment. International Journal of Engineering & Technology, 7(2.4), 161-164.
- [85]. Kukreja, S., & Dalal, S. (2018). Modified drosophila optimization algorithm for managing re-sources in cloud environment. International Journal of Engineering & Technology, 7(2.4), 165-169.
- [86]. Jindal, U., Dalal, S., & Dahiya, N. (2018). A combine approach of preprocessing in integrated signature verification (ISV). International Journal of Engineering & Technology, 7(1.2), 155-159.
- [87]. Nagpal, S., Dahiya, N., & Dalal, S. (2018). Comparison of Task Scheduling in Cloud Computing Using various Optimization Algorithms. Journal of Computational Information Systems ISSN, 1553-9105.
- [88]. Jindal, U., Dalal, S., & Dahiya, N. (2018). A combine approach of preprocessing in integrated signature verification (ISV). International Journal of Engineering & Technology, 7(1.2), 155-159
- [89]. Shakti Arora, S. (2018). Resolving problem of Trust context in Cloud Computing. International Journal of Engineering Research in Computer Science and Engineering (IJERCSE), 5(1), 138-142.
- [90]. Dalal, S., Dahiya, N., & Jaglan, V. (2018). Efficient tuning of COCOMO model cost drivers through generalized reduced gradient (GRG)

nonlinear optimization with best-fit analysis. In Progress in Advanced Computing and Intelligent Engineering (pp. 347-354). Springer, Singapore

- [91]. Seth, B., & Dalal, S. (2018). Analytical assessment of security mechanisms of cloud environment. In Progress in Advanced Computing and Intelligent Engineering (pp. 211-220). Springer, Singapore.
- [92]. Kukreja, S., & Dalal, S. (2018). Performance analysis of cloud resource provisioning algorithms. In Progress in Advanced Computing and Intelligent Engineering (pp. 593-602). Springer, Singapore.
- [93]. Rani, U., Dalal, S., & Kumar, J. (2018). Optimizing performance of fuzzy decision support system with multiple parameter dependency for cloud provider evaluation. Int. J. Eng. Technol, 7(1.2), 61-65.
- [94]. Dahiya, N., Dalal, S., & Khatri, S. (2017). An Enhanced Bat Algorithm for Data Clustering Problems. International Journal of Advanced Research in Computer Science, 8(3).
- [95]. Dahiya, N., Dalal, S., & Khatri, S. (2017). Data clustering and its Application to numerical function optimization algorithm. International Journal of Advanced Research in Computer Science, 8(1).
- [96]. Arora, S., & Dalal, S. (2017). Adaptive Model For Integrity Verification In Cloud Computing System. International Journal of Advanced Research in Computer Science, 8(1), 233-236.
- [97]. Neeraj Dahiya, S. (2017). Numerical Function Optimization: Model, Procedure And Uses. International Journal of Engineering Science and Technology (IJEST), 9(4), 266-270.
- [98]. Dahiya, N., Dalal, S., & Khatri, S. (2016). Refinement with Image clustering using Self-Organizing Map and Numerical Function Optimization. International Journal of Computer Science and Information Security, 14(11), 909.
- [99]. Neeraj Dahiya, S. (2016). A Review on Numerical function optimization Algorithm and its Applications to Data Clustering & Classification. International Journal of Recent Research Aspects, 3(3), 115-121.
- [100]. Arora, S., & Dalal, S. (2016). Novel Approach of Integrity Verification in Dynamic Cloud Environment. International Journal of Computer Science and Information Security, 14(8), 207.
- [101]. Dalal, S., & Kukreja, S. (2016). Genetic Algorithm based Novel approach for Load Balancing problem in Cloud environment. International Journal of computer science and information security, 14(7), 88.
- [102]. Arora, S., & Dalal, S. (2016). Study of Integrity Based Algorithm in Decentralized Cloud Computing Environment. International Journal of Institutional & Industrial Research, 1(1), 15-17.
- [103]. Vishakha, S. D. (2016). Performance Analysis of Cloud Load Balancing Algorithms. International Journal of Institutional and Industrial Research, 1(01), 1-5.

- [104]. Dalal, S., & Jindal, U. (2016, March). Performance of integrated signature verification approach. In 2016 3rd International Conference on Computing [118]. Simi Gupta, D., & Dalal, S. (2014). Efficient for Sustainable Global Development (INDIACom) (pp. 3369-3373). IEEE.
- [105]. Dahiya, N., Dalal, S., & Tanwar, G. (2016, March). Refining of image using self-organizing map with clustering. In AIP Conference Proceedings (Vol. 1715, No. 1, p. 020064). AIP Publishing LLC.
- [106]. Dahiya, N., Dalal, S., & Khatri, S. (2016). A Review on Numerical function optimization Algorithm and its Applications to Data Clustering & Classification. International Journal of Recent Research Aspects, 3(3), 111-115.
- [107]. Arora, S., & Dalal, S. (2016). Enhanced Privacy Preserving Access Control in the Cloud. International Journal of Recent Research Aspects, 3(4), 66-70.
- [108]. Dahiya, N., Dalal, S., Khatri, S., & Kumar, Y. (2016). Cat Swarm Optimization: Applications And Experimental Illustrations To Data Clustering. International Journal of Control Theory and Applications, 9(41), 759-765.
- [109]. Rani, U., & Dalal, S. (2016). Neural Network Applications in Design Process of Decision Support System. International Journal of Recent Research Aspects, 4(2), 40-44.
- [110]. Seth, B., & Dalal, S. (2016). Designing Hybrid Security Architecture in Multi Cloud System. International Journal of Control Theory and Applications, 9(41), 767-776.
- [111]. Seth, B., & Dalal, S. (2016). Analysis of cryptographic approaches. International Journal of Recent Research Aspect, 3(1), 21-24.
- [112]. Jindal, U., & Dalal, S. (2016). Survey on Signature verification and recognition using SIFT and its variant. International Journal of Recent Research Aspects, 3(3), 26-29.
- [113]. Sharma, D., Sharma, K., & Dalal, S. (2014). Optimized load balancing in grid computing using tentative ant colony algorithm. International Journal of Recent Research Aspects, 1(1), 35-39.
- [114]. Jindal, K., Dalal, S., & Sharma, K. K. (2014, February). Analyzing spoofing attacks in wireless networks. In 2014 Fourth International Conference on Advanced Computing & Communication Technologies (pp. 398-402). IEEE.
- [115]. Dalal, Surjeet & Srinivasan, S, Approach of multi agent system in controlling bullwhip effect of supply chain management system using case based reasoning, Department of Computer Science, Suresh Gyan Vihar University, 20/01/2014, http://hdl.handle.net/10603/36464
- [116]. Sharma, S., & Dalal, S. (2014). Recognition and identification schemes for the development of Eigen feature extraction based iris recognition system. International Journal of Recent Research Aspects ISSN, 2349-7688.
- [117]. Sharma, P., Sharma, K., & Dalal, S. (2014). [131]. Dalal, Surjeet, Keshav Jindal, and Monika Nirwal. Preventing Sybil Attack in MANET using Super

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nodes approach. International Journal of Recent Research Aspects, 1(1), 30-34.

- broker scheduling in Cloud Computing. International Journal of Recent Research Aspects, 1(2), 74-77.
- [119]. Sharma, S., & Dalal, S. (2014). Feature Recognition from Histogram and Eigen Algorithm in Digital Image Processing.
- [120]. Mittal, A., & Dalal, S. (2014). Implying p-Cure algorithm in case retrieval stage of the case-based reasoning. International Journal of Recent Research Aspects, 3(3), 91-98.
- [121]. Mittal, A., Sharma, K. K., & Dalal, S. (2014). Approach of BPEL in supply chain activities for managing bullwhip effect of SCM system. Int. J. Res. Asp. Eng. Manag, 1(2), 26-30.
- [122]. Sharma, P., & Dalal, S. (2014). Shortest Path Algorithms Technique for Nearly Acyclic Graphs. International Journal of Recent Research Aspects, 3(3), 36-39.
- [123]. Dalal, S., Jaglan, V., & Sharma, K. K. (2014). Designing architecture of demand forecasting tool using multi-agent system. International Journal of Advanced Research in Engineering and Applied Sciences, 3(1), 11-20.
- [124]. Sheikh, M., Sharma, K., & Dalal, S. (2014). Efficient method for WiMAX soft handover in **VOIP** and IPTV. International Journal of Research Aspects of Engineering & Management, 1(2), 5-48.
- [125]. Kumar, S., & Dalal, S. (2014). Optimizing Intrusion Detection System using Genetic Algorithm. International Journal of Research Aspects of Engineering and Management ISSN, 2348-6627.
- [126]. Mittal, A., Sharma, K. K., & Dalal, S. (2014). Applying clustering algorithm in case retrieval phase of the case-based reasoning. International Journal of Research Aspects of Engineering and Management, 1(2), 14-16.
- [127]. Dalal, S., Jaglan, V., & Sharma, K. K. (2014). Integrating Multi-case-base-reasoning with Distributed case-based reasoning. International Journal of Advanced Research in IT and Engineering ISSN, 2278-6244.
- [128]. Saini, A., Sharma, K. K., & Dalal, S. (2014). A survey on outlier detection in WSN. International Journal of Research Aspects of Engineering and Management ISSN, 2348-6627.
- [129]. Sharma, P., Sharma, D. K., & Dalal, S. (2014). Preventing Sybil Attack In MANET Using Super Node Using Approach. International Journal of Recent Research Aspects, ISSN, 2349-7688.
- [130]. Chahar, P., & Dalal, S. (2013). Deadlock resolution techniques: an overview. International Journal of Scientific and Research Publications, 3(7), 1-5.
- "Developing Flexible Decision Support Systems

Using Case-Base Reasoning System." International Journal of Engineering and Management Research (IJEMR) 3.4 (2013): 13-17.

- [132]. Dalal, S., & Sharma, K. K. (2013). Simulating supply chain activities in multi-agent based supply chain management system with plasma simulator. International journal of Computer Science & Communication, 4(1), 80-85.
- [133]. Dalal, S., Tanwar, G., & Alhawat, N. (2013). Designing CBRBDI agent for implementing supply chain system. system, 3(1), 1288-1292.
- [134]. Dalal, S., & Athavale, V. (2012). Challenging Bullwhip Effect of Supply Chain Through Case Based Multi Agent System: A Review. International Journal of Advanced Research in Computer Science and Software Engineering, 2(12), 267-272.
- [135]. Dalal, S., Tanwar, G., & Jindal, K. (2012). Agent [142]. Dalal, S., Athavale, V., & Jindal, K. (2011). Case Oriented Programming In Trading System Automation. International Journal of Research in IT, Management and Engineering, 2(8), 51-59.
- [136]. Dalal, Surjeet, and Vijay Athavale. "Analysing Supply Chain Strategy Using Case-Based Reasoning." Journal of Supply Chain Management Systems 1.3 (2012).
- [137]. Jindal, K., Dalal, S., & Jaglan, V. (2012). Comparative Study On IEEE 802.11 Wireless Local Area Network Securities. International Journal of Advanced Research in Computer Science, 3(1).
- [138]. Jindal, K., Dalal, S., & Tanwar, G. (2012). Congestion Control Framework in Ad-Hoc Wireless using Neural Networks in QoS.

International Journal of Research in Computer Engineering and Electronics, ISSN, 15-18.

- [139]. Dalal, S., Athavale, V., & Jindal, K. (2012). Designing Case-based reasoning applications with Colibri Studio. International Journal of Research in Computer Engineering and Electronics, 1(1), 15-18.
- [140]. Jaglan, V., Dalal, S., & Srinivasan, S. (2011). Improving performance of business intelligence through case based reasoning. International Journal of Engineering Science and Technology, 3(4), 2880-2886.
- [141]. Jaglan, V., Dalai, S., & Srinivasan, S. (2011). Enhancing security of agent-oriented techniques programs code using jar files. International Journal on Computer Science and Engineering, 3(4), 1627-1632.
- retrieval optimization of Case-based reasoning through Knowledge-intensive Similarity measures. Int. J. Comput. Appl, 34(3), 12-18.
- [143], Surjeet Dalal, V., & Kumar, S. (2010). Designing of business tool using intelligent agent. In National Conference Advanced Computing & Communication tech ACCT (pp. 751-754)..
- [144]. National Organ Transplant Programme, Ministry of Health and Family Welfare, July 27, 2021, available at: https://www.pib.gov.in/PressReleasePage.aspx?P RID=1739456#:~:text=The%20Government%20o f%20India%20is,Territories%20(UTs)including% 20Karnataka.