

# SCHOLARLY SPOTLIGHT

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## INSIDE THE ISSUE

PAGE 5

**Assessing the Effect of Mindful Consumption towards Residents' Well-being with the Mediation...**

PAGE 7

**Examining Online Decision-Making and Consumer Skepticism: A Research Investigation..**

PAGE 9

**The Impact of Artificial Intelligence in Transforming Libraries**

## Journal Publications

# Determination of optimum refactoring sequence for maximizing the maintainability of object-oriented systems using machine learning algorithms

Dr. Sandhya Tarwani; Published in International Journal of System Assurance Engineering and Management [UGC Care Listed, Scopus Indexed, ESCI Indexed]

**R**efactoring is a technique for changing internal attributes without affecting external ones in an optimized manner. Bad smells in the source code can cause various issues, increasing the need for refactoring. In this study, prioritization of classes is initially performed using a newly proposed metric called the Quality Decline Factor (QDF), which considers an appropriate ratio of software metrics along with eleven detected types of bad smells. Next, these

bad smells are addressed by applying refactoring techniques, and changes in the metrics are observed. Subsequently, machine learning algorithms are used to assign weights to each metric, leading to the proposal of another new metric, the Total Refactoring Index (TRI). TRI combines the assigned weights and the effects of metric changes to determine the optimal refactoring sequence. More information at: <https://link.springer.com/article/10.1007/s13198-024-02639-7>



# Cyber Security, Cyber Crime and Measures to Prevent in Libraries

Mr Gulshan Kumar Sachdeva & Mr Mukesh Sachdeva; Published in CPJ Law Journal [UGC Care Listed]

**M**odernisation is an ongoing process of improvement. The field of information and library science has undergone radical upheaval as a result of the Cyber Age. By better servicing their user community, technology for communication and information application enables libraries to fulfil their function as national development centres. In order to meet their information needs, Indian libraries rely heavily on online resources. However, it also gives criminals the chance to operate on this platform, endangering the progress of the country. This paper's goal is to examine the current state of supportive

concerns, such as the rise on cybercrime within India and potential efforts to stop it in library environments. More information at: <https://www.cpj.edu.in/wp-content/uploads/2024/12/Law-Journal-Jan-2025-11-12-2024-min.pdf>



## Mapping the Cyber-security Research: A Comprehensive Bibliometric Analysis

Dr. Poonam Khurana & Dr. Swati Narula; Published in International Journal of Experimental Research & Review [Scopus Indexed]

**T**he present study conducted a bibliometric analysis to synthesise available literature on cybersecurity. The analysis identifies prolific authors, relevant sources, affiliations, nations, trend topics, publication trends, themes, and collaboration patterns among countries. Scopus database was searched using the keyword "cyber security" and the search resulted in 31,852 articles. After the inclusion and exclusion criteria, a total of 733 documents were extracted in a CSV format for analysis. The Biblioshiny web tool of the R-package was used for

analysis. The finding shows an exponential rise in scholarly work on cybersecurity. "Information and computer security" is identified as the most relevant source. Chen H has published most articles and the USA leads the field in terms of publication, global citations, and collaboration with other countries. The trend topics and themes have also been listed. The study would help readers understand the landscape of cybersecurity research, identify key contributors, and guide them in addressing the challenges posed by cyber threats. More information at: <https://orcid.org/0000-0001-5134-9147>



## ISM-fuzzy MICMAC approach for modelling the enablers of sustainability

Dr. Ruchi Shukla; Published in IIMBG Journal of Sustainable Business and Innovation [Scopus Indexed]

**T**he objectives of this study are as follows: R01: to determine the key enablers that encourage the adoption of sustainable practices; R02: to create a structural relationship model between the enablers that have been discovered and R03: to use dependence and driving power to classify and analyse these factors. The study shows that the digital payment and waste treatment as the linkage or mediating variables. Top management commitment (TMC), regulatory framework and transparency are the drivers or independent variables. Green logistics, sustainable packaging

and production are the dependent variables. Further, the resulting hierarchy and contextual linkages among variables shed light on key dimensions for decision-making. Green logistics, sustainable packaging and production are interconnected, playing a significant role, in the framework and influenced by the lower level variables. Transparency should be given due consideration to ensure sustainable competitive advantage. More Information at: <https://www.emerald.com/insight/content/doi/10.1108/ijbsbi-11-2023-0054/full/html>

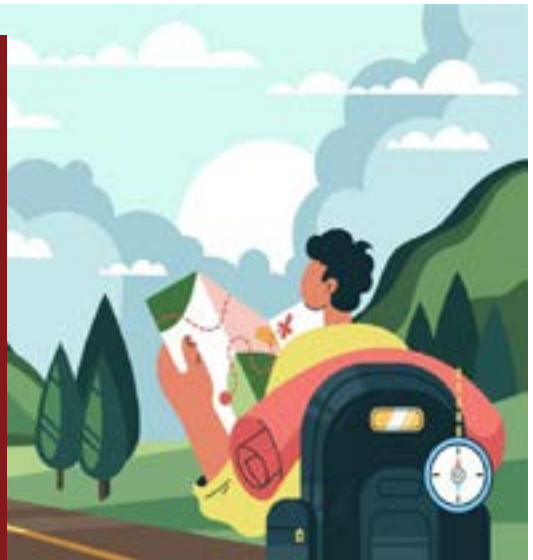
## Teaching through translation: Problems and solution

Dr. Harsha Trivedi; Published in Oriental Renaissance: Innovative, Educational, Natural and Social Sciences

**T**he demands on translation are constantly changing over time. However, its creative nature, the art of re-creation, remains unchanged. The scope and development of translation depend on the level of education

of each nation, and in turn, it effectively influences the social thinking of the nation. This article discusses the problems and solutions in teaching through translation. More Information at: <https://zenodo.org/records/14600439>

# Assessing the Effect of Mindful Consumption towards Residents' Well-being with the Mediation of Brand Loyalty and Self-Brand Connection in Tourism



Dr Shikha Sharma; Published in *Tourism Recreation Research* [Scopus Indexed, SSCI Indexed, ABDC-A Listed]

■ Mindful consumption' in tourism services helps to create a positive experience for the consumer by enabling the latter to effectively utilise the resources available at the tourist destination. While numerous studies have explored the idea of mindful consumption, most of them have largely examined the overarching concepts. In contrast, this study focuses on evaluating the effect of mindful consumption in the tourism sector on the residents' well-being of the tourist destination using Stimulus-Organism-Response (SOR) Theory. A mixed method was used to evaluate the impact

of the antecedents of mindful consumption on residents' well-being of the tourist destination. A qualitative and quantitative study was also conducted to test the proposed conceptual model. The study extends the SOR Theory with new and novel constructs in the context of tourism. It also lists managerial implications for travel agents and providers of tourism services to attract consumers endowed with a high environmentally sustainable attitude and self-consciousness. Read more about it: <https://www.tandfonline.com/doi/full/10.1080/02508281.2024.2445370>

राजकपूर की  
फ़िल्मों की  
वैश्विक  
लोकप्रियता

Dr. Harsha Trivedi;  
Published in *अनहद लोक*  
[UGC Care Listed]



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# Ending the Book Famine-Human Rights, Copyright and Disability

Dr. Tanvi Sehgal; Published in International Journal of Law and Policy Review

**A**ccess to knowledge due to lack of reading materials has been a major hurdle for the disabled. This has not only led to a sense of depravity on their part but has also prevented their assimilation in the human community as an equal. There have been international conventions that have amongst other things provided for rights of the disabled but access to knowledge in specific terms had not been asserted by any international agreement. The WIPO administered "Marrakesh Treaty to Facilitate Access to Published Works for Persons Who are Blind, Visually Impaired or Otherwise Print Disabled, 2013" is the first copyright treaty that has taken an initiative in this direction and has made access to knowledge for the disabled a priority. Copyright law has an important role to play in effective dissemination of knowledge as persistence of copyright often acts as an impediment to liberally access content. This perhaps, adds to the lament of the disabled who already face

a severe paucity of reading material. The Marrakesh Treaty responds to this handicap by establishing a set of limitations and exceptions to the traditional copyright law. India, manifested its will to work for the benefit of the disabled by not only being the first country to ratify the Marrakesh Treaty but by also adding two new provisions to its domestic copyright legislation vide the "Copyright (Amendment) Act, 2012". The present article, adopts a descriptive and exploratory methodology to assess whether the law, both international and national comprehensively addresses the needs of the disabled for an equitable access to knowledge or are we still far from achieving that goal? Lastly, an attempt has been made to elicit few shortcomings in the specific provisions of domestic legislation that were adopted to increase the accessibility of reading materials for the disabled in India. More Information at: <https://drive.google.com/file/d/18uoxpci7oSXPqIJ0qVAQvNT63FTNyxB5/view>

## From Intentions to Actions: A Structural Equation Modelling Approach to Understanding Sustainable Consumption Behaviour

Dr Meenakshi Gandhi & Dr Ridhima Sharma; Published in Journal of Cleaner Production [UGC Care Listed, Scopus, SCIE Indexed]

**T**he study offers valuable insights into the factors influencing sustainable consumption and suggest actionable strategies for policymakers and businesses aiming to promote eco-friendly behaviors. The study redefines SCB as meeting societal needs sustainably, shifting focus to daily practices and offering a new evaluation framework. Moral obligation and social norms drive

SCB, aligning with Stern's work on peer influence, highlighting family and peer group roles. Media can drive SCB through targeted campaigns and tools, emphasizing strategic communication's role in fostering sustainable practices. More Information at: <https://www.sciencedirect.com/science/article/abs/pii/S0959652625001179#preview-section-abstract>



# An adaptive deep bayesian network-aided alzheimer disease detection framework with vision transformer-based residual densenet for feature extraction using MRI images

Dr. Neha Verma Malhotra; Published in Network: Computation in neural system [UGC Care Listed, Scopus, SCIE Indexed]

One of the most familiar types of disease is Alzheimer's disease (AD) and it mainly impacts people over the age limit of 60. AD causes irreversible brain damage in humans. It is difficult to recognize the various stages of AD, hence advanced deep learning methods are suggested for recognizing AD in its initial stages. In this experiment, an effective deep model-based AD detection approach is introduced to provide effective treatment to the patient. Initially, an essential MRI is collected from the benchmark resources. After that, the gathered MRIs are provided as input to the feature extraction phase. Also, the



important features in the input image are extracted by Vision Transformer-based Residual DenseNet (ViT-ResDenseNet). Later, the retrieved features are applied to the Alzheimer's detection stage. In this phase, AD is detected using an Adaptive Deep Bayesian Network (Ada-DBN). Additionally, the attributes of Ada-DBN are optimized with the help of Enhanced Golf Optimization Algorithm (EGOA). So, the implemented Alzheimer's detection model

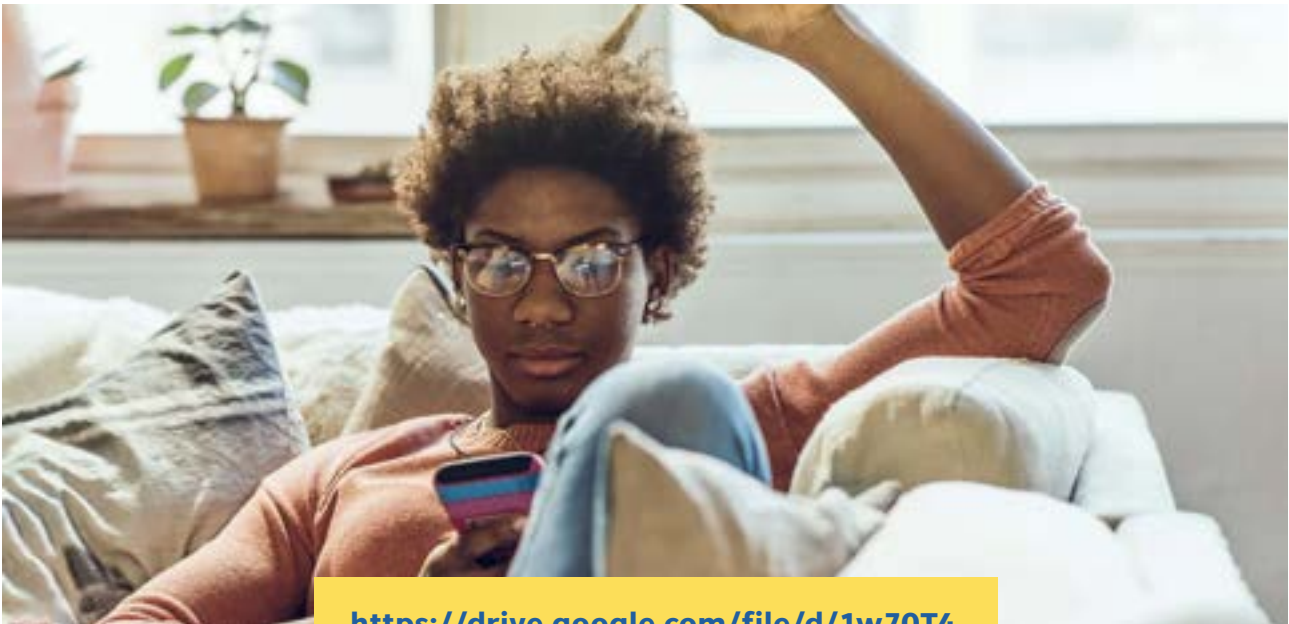
accomplishes relatively higher reliability than existing techniques. More Information at: <https://www.tandfonline.com/doi/full/10.1080/0954898X.2024.2435491>

## Examining Online Decision-Making and Consumer Skepticism: A Research Investigation among Millennials

Dr. Avantika Raina; Published in Journal of Xidian University [UGC Care Listed, Scopus Indexed]

The primary objective of this study is to delve into the multifaceted nature of skepticism measures and their relationship with decision-making in online shopping. Utilizing existing literature, conceptual definitions, and exploratory methodologies, the research aims to discern dimensions and items

within each subscale. Grounded in theory, the construct of skepticism is thoroughly specified. The study draws upon Festinger's theory of cognitive dissonance (1957) and the consumer decision-making model by Howard and Sheth (1969) as its theoretical foundation. Through the analysis of data gathered from 428 respondents across



<https://drive.google.com/file/d/1w70T4Kv6t1U4YZcNRaxumLcCxVAGNsYY/view>

diverse locations in northern India, the research employs both exploratory and confirmatory factor analyses, along with structural equation modelling.

The outcomes validate the construct of consumer skepticism and unveil a negative correlation between skepticism and decisions made in online purchases.

## Conv1D-LSTM: Autonomous Breast Cancer Detection Using a One-Dimensional Convolutional Neural Network with Long Short-Term Memory

Dr. Neha Goel; Published in IEEE Access [UGC Care Listed, Scopus, SCIE Indexed]

**B**reast cancer is an increasingly serious problem in contemporary society, with millions of women and men worldwide affected by the disease. While traditional cancer detection strategies are at times effective, they typically require costly and time-intensive methods for implementation. The major drawback of using conventional methods for identifying breast cancer using the available data sets is that a single algorithm is not sufficient for accurate breast cancer diagnosis due to the heterogeneity of tumors, diverse data types, pattern complexity, feature engineering and dataset overfitting. The aim is to surpass the constraints of the conventional models and develop a hybrid model. The

idea is to attain higher accuracy and lower computational time than existing models. This paper introduces a new method for detecting breast cancer using a one-dimensional convolutional neural network (1D CNN) and long short-term memory (LSTM). The model combines the strengths of both approaches, extracting sequential features from local data and modeling temporal dependencies and relationships. To detect and classify breast cancer, the 1D CNN and LSTM are used to automatically extract and analyze features from distinguishing features from a real dataset generated from mammography reports. More Information at: <https://ieeexplore.ieee.org/document/10788715>





## Conferences



### **Ensemble Machine Learning Model for Predicting Postpartum Depression Disorder**

Paper Presented by Dr. Sandhya Tarwani, at 2024 IEEE Region 10 Symposium (TENSYP) NSUT Delhi

<https://ieeexplore.ieee.org/document/10752305>



### **The Impact of Artificial Intelligence in Transforming Libraries**

Paper Presented by Mr Gulshan Sachdeva, at Online Conference on Libraries, Education and AI, Punjab

[https://drive.google.com/file/d/1NYYgMkz6F-xsPNYrX-loSt5Rm\\_P4ddLkx/view](https://drive.google.com/file/d/1NYYgMkz6F-xsPNYrX-loSt5Rm_P4ddLkx/view)



### **Environment volatility and asset response in India: A study on Nifty, Gold and Bitcoin**

Paper Presented by Ms. Priyanka Gupta & Dr Ramanpreet singh at International conference in multidisciplinary concepts in Management, GL Bajaj institute of technology and management, Greater noida



## A Comparative Analysis of Machine Learning and Deep Learning Approaches in Deepfake Detection

Paper Presented by Dr. Sandhya Tarwani, at 2024 IEEE Region 10 Symposium (TENSYP), NSUT Delhi

<https://ieeexplore.ieee.org/document/10752209>



## Rethinking Work : Augmented Intelligence - A review and Research Agenda.

Paper Presented by Ms. Suruchi Chopra at AIMS conference, IIM Kozhikode



## Artificial Intelligence in E- governance- Enhancing efficiency and Transparency

Paper Presented by Dr. Deepti Chopra at 2nd International Conference on Computational Research and Data Analytics (ICCRDA -2025), Duy Tan University, Da Nang Vietnam



## Real-Time Wrong-Way Vehicle Detection System with Automatic Number Plate Recognition for Enhanced Road Safety

Paper Presented by Dr. Sandhya Tarwani, at 2024 15th International Conference on Computing Communication and Networking Technologies (ICCCNT), IIT Mandi



## GitaVerse: The Ultimate Solution

Paper Presented by Dr. Deepti Chopra at 2nd International Conference on Computational Research and Data Analytics (ICCRDA -2025), Duy Tan University, Da Nang Vietnam

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## Book Chapters

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### **Role of Neuromarketing in Modern Consumer Behavior - Systematic Literature Review: Exploring Neuroscience Techniques and Ethical Considerations in Consumer Decision-Making**

**Author: Dr Shikha Sharma; Published by IGI Global [Scopus Indexed]**



**T**his systematic literature review explores neuromarketing's role in understanding consumer behavior by employing neuroscience techniques like fMRI, EEG, eye-tracking, and physiological measurements. These tools uncover subconscious processes influencing decision-making, brand loyalty, and advertising effectiveness. Over the past two decades, neuromarketing has illuminated the neural mechanisms behind consumer behavior, emphasizing the interaction between emotional and rational factors. Key findings suggest that neuromarketing provides deeper insights into consumer decisions by analyzing emotional and cognitive drivers. Familiar

brands activate brain regions associated with positive emotions, fostering loyalty, while emotionally resonant ads enhance recall and purchase intentions. Neuromarketing also highlights that psychological factors, such as perceived fairness and brand reputation, impact price perception. However, ethical concerns, including privacy risks and manipulation potential, underscore the need for guidelines and further research on long-term effects. More Information at: <https://www.igi-global.com/book/decoding-consumer-behavior-using-insight/352049#table-of-contents>

### **E-Insurance Evolution: Unraveling the Impact of Perceived Risk and Ease of Use on Customer Adoption**

**Author: Dr. Ruchi Shukla; Published by Bloomsbury**



# Developments, Hardships, and Prospective Directions in the Field of Neuroscience and Neurological Machine Learning for Behavioral Evaluation

Authors: Dr Ridhima Sharma & Dr Timcy Sachdeva; Published by IGI Global [Scopus Indexed]



overcomes the aforementioned deficiencies—consistent monitoring and early identification in mental health—through automation. This research will ultimately address AI-related concerns regarding the longitudinal monitoring of individuals with mental illnesses. Neurocognitive testing may leverage machine learning to significantly advance the evaluation and early management

This study examines the current state of neuroscience, emphasizing the use of machine learning to improve behavioral assessment and its therapeutic applications. Progress in neuroscience has facilitated the comprehension of cognitive aging, neurological illnesses, and the essential function of cognition in detecting cognitive declines. The increasing potential of neurological machine learning likely of cognitive health, hence facilitating future research to enhance and broaden the capabilities of neurolearning and cognitive neuropsychology. More information at: <https://www.igi-global.com/chapter/developments-hardships-and-prospective-directions-in-the-field-of-neuroscience-and-neurological-machine-learning-for-behavioral-evaluation/367720>

## Leveraging Artificial Intelligence in Neuropsychological Assessment: Transforming Employee Selection and Performance Evaluation

Author: Dr. Aashu Aggarwal; Published by IGI Global

The integration of Artificial Intelligence (AI) in Human Resource (HR) procedures has fostered a culture of data-driven decision-making. Leveraging AI technologies enables companies to optimize employee selection and performance evaluation through enhanced neuropsychological assessments of candidates. Neuropsychological assessment focuses on analyzing a candidate's cognitive, emotional, and psychological functioning

to determine their capability to perform a specific role. Using modern AI tools helps organizations experience a paradigmatic shift toward a more responsive, and strategic approach to HR management. The present study analyses the role of AI in neuropsychological assessment within employee selection and performance evaluation exploring its potential benefits and challenges. Through a comprehensive review of current research on the latest



advancements and evolving trends in AI. HR practices and neuropsychological assessment, this study aims to provide HR professionals with detailed insights into the various tools that can be used for transforming HR processes. More Information at: <https://www.igi-global.com/chapter/leveraging-artificial-intelligence-in-neuropsychological-assessment/367707>

## Hey Friend I Am a Spiritual Robot! How May I Help You!: Integrating Spiritual Robotics in College Counseling

Author: Dr. Aashu Aggarwal; Published by IGI Global

Increasing depression and stress among the students are becoming the global concern, necessitating immediate intervention. On the other hand, spiritual robots are becoming novel perspective in addressing emotional and spiritual needs of users. By leveraging advanced AI technology, these robots can offer personalized guidance, facilitate mindfulness practices, and help students navigate their mental health challenges in college and personal settings. The traditional counselling methods can be reframed through the integration of spiritual robots, which may enhance accessibility and engagement for students, particularly those who may feel hesitant to seek help from human counselors. This chapter presents a novel perspective on how spiritual robots can enhance the well-being of students at college and help them perform better at



educational as well as personal level. More Information at: <https://www.igi-global.com/chapter/hey-friend-i-am-a-spiritual-robot-how-may-i-help-you/367710>

## Content Creators Influencing Travel Decision: A Probe into The Motivations Driving Modern-Day Explorers

Author: Dr Sumedha Dhasmana; Published by Khama Publishers

## Book Publications



### Business marketing

**Author: Ms Priyanka Gupta; Published by Department of Distance and Continuing Education Campus of Open Learning/School of Open Learning, University of Delhi, Delhi-110007**

### Applied Natural Language Processing with PyTorch 2.0'

**Author: Dr Deepti chopra; Published by Orange Ava Publisher**

[https://www.amazon.com/Applied-Natural-Language-Processing-PyTorch-ebook/dp/B0DV4JW4LB?ref\\_=ast\\_author\\_dp](https://www.amazon.com/Applied-Natural-Language-Processing-PyTorch-ebook/dp/B0DV4JW4LB?ref_=ast_author_dp)

### Business Analytics

**Authors: Ms Ashima Bhatnagar Bhatia & Dr Kirti Dhingra; Published by VIPS-TC**



John Dewey

*Every great advance in science has issued from a new audacity of imagination.*



## Patents

S.NO.	Faculty Name	Year of Patent	Details	Department
1.	Dr. Ruchi Shukla	2024	Energy-efficient IOT Sensor Module for Agriculture Monitoring	VSBS
2.	Dr Ridhima Sharma	2024	AI Based Supply chain Alerting Device	VSBS
3.	Dr Swati Narula	2024	Cooling device	VSBS
3.	Dr Ridhima Sharma Dr Vaishali Billa	2025	A System and Method for Forecasting and Optimising Employee Productivity using Real-time Data	VSBS VSJMC