

Abstract Book of the

GLOBAL CONFLUENCE OF MANAGEMENT HORIZONS

Date:

May 21, 2024

Venue:

GRENOBLE ECOLE DE MANAGEMENT,
Paris, France

Editors:

- Prof. (Dr.) Gurinder Singh
- Prof. (Dr.) Anupama Rajesh
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Preface

Welcome to the "Abstract Book of the GLOBAL CONFLUENCE OF MANAGEMENT HORIZONS" commemorating the 1st High Powered International Conference in France, held on May 21st, 2024. The theme of this pioneering event, "**Converging Futures: Intersecting Management, Engineering, and New Age Technology**," reflected our commitment to exploring synergistic potential at the crossroads of these critical fields.

The GCMH 2024 conference served as a unique platform for fostering academic interactions and collaborations in management and technological advancements. With a focus on the latest research and practical applications, the conference brought together global experts, researchers, academicians, practitioners, and industry leaders. Our aim was to facilitate the exchange of innovative ideas and insights that will drive business growth and navigate the complexities of the modern organizational landscape.

Our sub-themes for the conference were meticulously curated to address the most pressing issues and opportunities in today's fast-evolving environment:

1. **Tech-Infused Management:** AI, Blockchain, Cloud Strategies: Explored how cutting-edge technologies can be seamlessly integrated into management practices to enhance efficiency and strategic decision-making.
2. **Engineered Excellence:** Innovations Driving Business Growth: Delved into technological innovations that are propelling businesses towards unprecedented growth and success.
3. **Digital Dynamics:** Navigating Automation's Impact on Organizations: Analyzed the transformative effects of automation on organizational structures, workflows, and employee roles.
4. **Elegant Leadership:** Resilience Amid Technological Disruption: Discussed the qualities and strategies required for effective leadership in an era of rapid technological change and disruption.

The abstracts compiled in this book represent the diverse and insightful contributions of our esteemed participants. These papers covered a wide range of topics, from the theoretical underpinnings of management and technology to their practical implementations in real-world scenarios. Each submission underwent a rigorous review process to ensure the highest quality and relevance.

We are deeply grateful to all the authors, reviewers, and members of the scientific committee whose efforts made this conference a reality. Their dedication and hard work resulted in a rich program that inspired and engaged all attendees.

Thank you for joining us in this exciting journey of discovery and innovation.

Conference Chairperson: Prof. Gurinder Singh, GCMH 2024

Conference Co-Chair: Prof. Anupama Rajesh, GCMH 2024

Secretariat General: Vedant Patil, GCMH 2024

Table of Contents

Rheumatoid Arthritis Prediction Using Autoimmune Markers	1
Mohd Talha, Meenakshi Srivastava, Namrata Nagpal, Brig Umesh K. Chopra	
India's Economic Transformations: Theoretical Evaluations and Empirical Analysis Since 1990s	2
Navya Sahani	
Navigating the Talent Landscape: The Significance of Talent Management in Today's Business World	3
Preyya Ramane, G. Padmavathy	
Augmented Reality and Consumer Perception: A Comprehensive Study Based on Secondary Data Analysis	4
Nisha Singh, Manisha Joshi	
Impact of Technology Integration and Digital Skills on Attitude Towards Technology Adoption Using the TAM Framework	5
Swati Yadav, Shikha Kapoor, Sandeep Kumar Gupta	
Improving the Security of Wireless Sensor Networks	6
Shagun Tandon, Meenakshi Srivastava, Namrata Nagpal, Brig Umesh K. Chopra	
A Review of Generative AI in Organizational Management: Potential, Challenges, and Future Directions	7
Prateek Khanna	
ANOVA Based Feature Selection Model for Predicting Hepatitis C Virus	8
Shilpi Bisht, Neeraj Bisht, Anshul Srivastava, Anupama Rajesh, Sonalika Srivastava, Bishwajeet Pandey	
Green Finance Practices for Strengthening Sustainable and Inclusive Development: An Emerging Futuristic Perspective	10
Vijit Chaturvedi, Deepti Raturi	
Effect of E-learning Tools and Technology Adoption Behavior on Academic Performance: Mediating Role of Facilitators Engagement	11
Vijit Chaturvedi, Richa Sharma, Archana Shankar, Umang Sahiwal	
Study on the Adoption of DevOps Metrics for Quality Assurance for Employee Management Systems	12
Akash Tomar, Anupama Rajesh, Richa Misra	

Exploring the Interplay of Social Influences, Product Quality, Brand Reputation, and Pricing Strategies in Shaping Consumer Attitudes and Purchase Intentions Toward Luxury Home Appliance Brands in India	13
Pranjal Karpe, Gurinder Singh, Vernika Agarwal	
Bifaceted Breast Cancer Examination via Logistic Regression Model	14
Kunal Dahiya, Anurag Singh, Karan Mansingh	
Empowering Entrepreneurship: Investigating the Adaptive Enterprise Approach in Context to Shark Tank India.....	15
Harshita Dhingra, Samyak Jain, Tanya Jain	
Siamese Neural Network & Computer Vision for Detecting Single Shot Image	16
Ayush Gaur, Shipra Saraswat, Yuvraj Gupta, Vishwas Yadav	
Impact of News and Social Media on Stock Market Sentiment	17
Lakshay Jindal	
Integration of Computerized Accounting in the Indian Finance System for Small, Medium, and Micro (SMMs) Businesses.....	18
Anupama Rajesh, Saksham Gupta, Vedant Patil	
Evolution of Chatbot in Human Resource.....	19
Shikha Kapoor, Janvi Agrawal, Harjot Kaur	
The Role of Virtual Financial Incubators in Fostering Fintech Innovation and Startup Growth	20
Navleen Kaur, Vedant Patil, Saksham Gupta, Lakshay Jindal	
Gamifying Finance: Enhancing User Engagement and Financial Literacy Through Digital Gamification	21
Navleen Kaur, Lakshay Jindal, Saksham Gupta, Vedant Patil	
A Study of Efficient Market Hypothesis in Indian Foreign Exchange Market	22
Gurinder Singh, Namita Sahay, Seema Sahai, Aditi Sharma	
Transformative Effects of Technological Advancements on Mutual Fund Advisory Services	23
Kamesh Tiwari, Meghna Sharma, Deepak Tandon	
Transformational Leadership Skills of Indian Freedom Fighters in Enhancing Dedication at Work.....	24
Vikram Singh, Shikha Kapoor, Sandeep Kumar Gupta	

Evolution and Trends in Digital Recruitment: A Bibliometric Analysis	25
Swati Yadav, Shikha Kapoor, Sandeep Kumar Gupta	
A Study on Role of Augmented Reality and IoT in Health Care.....	26
Meenakshi Srivastava	
The Adverse Effects of Technology: Impacts on Human, Originality, Wellness and Employment Dynamics	27
Atul Kumar, Gunjan Agrawal, Sudarshan Singh Chouhan	
Blockchain in Pharmacy: Enhancing Security, Transparency, and Efficiency	28
Zafar Ali, Ankit Raj	
Cognitive Revolution in Indian Education: The Role of Artificial Intelligence.....	29
Silky Sharma, Gurinder Singh	
Evaluating Online Learning Experiences: Sentiment Analysis of Indian Working Professionals' Feedback.....	30
Anadi Trikha	
Navigating the Digital Transformation: The Complexities of Technology Integration in Management	31
Atul Kumar, Sudarshan Singh Chouhan	
Efficacy of Entrepreneurship Education in Institutions of Higher Education.....	32
Vishakha Sambhav, Shikha Kapoor, Puja Gupta	
Technology Management Landscape in Indian Industries: Strategies, Challenges, and Opportunities	33
Sudarshan Singh Chouhan, Atul Kumar, Gunjan Agarwal	
Exploring the Impact of Artificial Intelligence on Personal Finance: Applications, Benefits, and Challenges.....	34
Sandeep Arora, Anupama Rajesh, Richa Misra	
Leadership in the Age of Artificial Intelligence: Intersection of Technology and Human Management	35
Saraswati Chauhan, Rahul Mongia	
From Code to Courtroom: Legal Implications in Tech Management.....	36
Gaurav Arija	

The Ethics of Mind Uploading: Managing Consciousness in a Digital Age	37
Jaskaranjeet Singh	
Enhancing Financial News Sentiment Analysis Using Natural Language Processing Techniques.....	38
Sandeep Arora, Anupama Rajesh, Richa Misra	
Machine Learning-Driven Optimization for Sustainable Smart City Infrastructure Development	39
Kaira Srivastava, Divija Oberoi	
Integrating Internet of Things and AI for Advanced Urban Traffic Management Systems.....	40
Mihika Sanawar, Naina Sharma	
Integrating Blockchain Technology for Enhanced Data Security and Management in Distributed Systems	41
Akshat Pingle, Omkar Gadage	
Advanced Predictive Modeling Techniques for Risk Management in Complex Engineering Projects	42
Mohanish Prakash Bidkar, Aditya Jitendra Jadhav	
Managing Technology Risks in Space Exploration	43
Mr Sanaatan Ratna, Jaskaranjeet Singh	
Leveraging Predictive Analytics for Strategic Risk Management in Global Supply Chains	44
Saeed Mali, Vedant Patil	
Utilizing ANOVA Techniques for Optimizing Resource Allocation in Project Management.....	45
Saniya Borawake, Prajwal Padmawar	
Implementing Six Sigma Methodology to Enhance Ethical Practices in Corporate Governance.....	46
Gayatri Patil, Saakshi Methhe	

Rheumatoid Arthritis Prediction Using Autoimmune Markers

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Abstract

Arthritis is a widespread musculoskeletal condition that affects thousands of individuals, especially Osteoarthritis (OA) & Rheumatoid Arthritis (RA) being the most frequent kinds. Early symptoms include stiffness, pain, and swelling, which can lead to serious immobility if not treated. Furthermore, new discoveries in medicine have produced a range of treatment alternatives, such as drugs, rehabilitation, and in extreme situations, surgery, giving people with arthritis the prospect of improved control and symptom relief. Since osteoarthritis cannot be cured, appropriate medical care and diagnosis can help manage disease for the long term. This paper examines deep learning model like DenseNet-201, ResNet-50, Xception & VGG-19 used for prediction of arthritis like OA & RA, with an emphasis on X-ray imaging & magnetic resonance imaging (MRI) as inputs for assessing OA and RA. The research proposes a more accurate method for early identification of Osteoarthritis (OA) using deep learning and transfer learning models based on Densely Connected Convolutional Networks-201 (DenseNet 201), Visual Geometry Group-19 (VGG-19), Residual Neural Network-50 (ResNet-50) and Xtreme Inception (Xception) form X-ray images. Upon conducting our analysis, we found that every recommended model was more predictively accurate (more than 80%) at identifying osteoarthritis. Nevertheless, with an 89% training accuracy and an 88% testing accuracy, its pretrained Xception model outperformed the others.

Keywords

Arthritis, Deep Learning, Osteoarthritis (OA), Rheumatoid Arthritis (RA), DenseNet-201, ResNet-50, Xception, VGG-19

India's Economic Transformations: Theoretical Evaluations and Empirical Analysis Since 1990s

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Abstract

The study aims to assess how alternative economic models evaluate economic development within the framework of the Rostow model, while also extending its scope to include considerations of gender and religion. Focused on India's economic path since the 1990s, this study utilizes a mixed-method approach, combining qualitative theoretical models with quantitative analysis rooted in empirical evidence. This multidimensional approach seeks to provide a comprehensive understanding of India's economic evolution over recent decades. The findings indicate substantial decreases in income inequality and poverty in India since the 1990s, alongside impressive GDP growth rates that position it among the world's fastest-growing economies. These favorable outcomes are attributed to various policy measures, including economic liberalization and initiatives such as the Mahatma Gandhi National Rural Employment Guarantee Act (MGNREGA). Through systematic assessment of the effectiveness of these policies, this study aims to contribute to discussions on sustainable economic development and provide insights for policymakers and stakeholders.

Keywords

Economic Development, Rostow Model, Role of Gender and Religion

Navigating the Talent Landscape: The Significance of Talent Management in Today's Business World

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Abstract

“Change is the only constant thing” which applies to even business environment. Operating in a dynamic and inexorable environment requires stringent results in bringing about the organizational performance. The efficiency of the organizations depends on the human talent that it entails and the organizations should have clarity in building its own talent management strategy. The problem persisting with the organizations is that they lack the alignment of their business strategy with the talent management pertaining to the contemporary environment, especially in Indian scenario. Hence, the research undertaken has a sample size of 94 HR managers/senior executives from various industries/organizations and is analysed through quantitative approach with structured questionnaire. The survey responses were subjected to Structural Equation Modeling (SEM) analysis in WarpPLS 7.0 software to find the cause and effect relationship of the variables. Percentage analysis was carried out to express the relative data and the outcome of the observations in percentage manner with the help of IBM SPSS 26 software. This research aims to analyze the impact of Leadership on Talent Management components and its impact on talent retention with Organizational Performance to get a hook on the knowledge of the talent management practices in organizations across various industries. The findings reveal that Leadership has a strong impact on Organizational Performance through talent management practices and in turn Talent Retention also has a greater impact on Organizational Performance. The other variables taken like Learning and Development and Career Development were proved to have insignificant relationships with Talent Retention.

Keywords

Career Development, Leadership, Learning and Development, Organizational Performance, Talent Management, Talent Retention

Augmented Reality and Consumer Perception: A Comprehensive Study Based on Secondary Data Analysis

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Abstract

In today's ever-evolving market landscape, businesses grapple with the challenge of capturing consumer attention amidst a myriad of marketing strategies. Augmented Reality (AR) is emerging as a game-changer, transforming traditional methods and presenting innovative opportunities for business-to-consumer (B2C) interactions. By allowing consumers to virtually engage with products in real-time, AR technology redefines the dynamics of product engagement and advertising, promising to reshape brand-consumer relationships. This paper embarks on a comprehensive exploration of AR's pivotal role in shaping consumer perception, with a specific focus on non-physical product interactions. It investigates the impact of AR on customer brand engagement and purchase intent while also addressing concerns related to accessibility and affordability. Drawing upon a systematic literature review spanning from 2010 to 2023, this study synthesizes insights from a multitude of sources to provide a nuanced understanding of AR implementation across various sectors. The articles reviewed are meticulously categorized based on independent variables, offering a holistic perspective on current practices and challenges. By shedding light on the landscape of AR adoption, this paper contributes to the advancement of augmented reality as a transformative force in both consumer perception and market dynamics.

Keywords

Augmented Reality, AR, Retailing, Technology, Consumer Attitudes, TAM, Attitude Components, Customer Experience

Impact of Technology Integration and Digital Skills on Attitude Towards Technology Adoption Using the TAM Framework

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Abstract

Background: To stay ahead of the competition and foster innovation in today's digital world, firms must ensure that their personnel management processes include technology. One model that attempts to explain this phenomenon is the "Technology Acceptance Model (TAM)" which lays out a plan for how people in an organization should think about and approach modern technologies, and how digital skills can impact the process. **Objective:** Using the TAM as a framework, this research investigates how Technology Integration and digital skills affect attitudes and behaviors toward digital technology adoption, particularly emphasizing its actual usage of technology. **Methodology:** A quantitative research design was employed, utilizing structural equation modeling (SEM) to analyze responses from a structured questionnaire. The sample comprised 192 professionals across three distinct groups: HR Professionals, Team Leaders/Managers, and Executives. Perceived utility, perceived ease of use, attitudes toward technology, behavioral intentions, and actual system usage were some of the TAM-related factors examined in the study. **Findings:** Results showed that attitudes toward technology are favorably impacted by integration and digital skill, which in turn affects perceived utility and ease of use. These attitudes strongly predict behavioral intentions, leading to actual system use. The model fit indices indicated an excellent fit, and reliability measures such as "Cronbach's Alpha, Composite Reliability, and Average Variance Extracted" confirmed the robustness of the survey instrument. **Conclusion:** The study underscores the importance of effective technology integration and digital skills on user acceptance and utilization of technology and hence adoption of technology. Organizations are advised to enhance these areas to promote successful technology adoption and maximize its benefits in improving organizational performance and employee satisfaction.

Keywords

Technology Acceptance Model, Digital Skill, Technology Integration, Digital Technologies, Organizational Behavior, User Acceptance

Improving the Security of Wireless Sensor Networks

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Abstract

The capacity of Wireless Sensor Networks (WSNs) to autonomously detect and transmit data on temperature, humidity, sound, motion, and other environmental variables has made them indispensable in many industries, including healthcare, manufacturing, and environmental monitoring. Nevertheless, owing to their finite resources, dynamic topologies, and vulnerability to many types of assaults, the extensive use of WSNs has brought about substantial security concerns. The security risks to data confidentiality, integrity, and availability have been intensified by the integration of these networks into the Internet of Things (IoT), which has increased the attack surface. Ensuring dependable functioning, data correctness, and secrecy are the goals of this research, which seeks to investigate and suggest ways to improve WSN security. The paper highlights the need for lightweight, energy-efficient solutions targeted to WSNs through a comprehensive literature analysis that assesses existing security methods and their shortcomings. Intrusion detection systems, safe routing protocols, and advanced encryption methods are some of the possible solutions listed. To proactively identify and address new dangers, it is suggested that machine learning and artificial intelligence be used. Standardized security standards and encouraging collaboration among researchers, developers, and end-users are also highlighted in this study. This research aims to solve the problems of WSNs and ensure the secure deployment and operation of WSNs in critical applications by developing robust and adaptive security solutions that can survive the growing threat landscape.

Keywords

Wireless Sensor Networks (WSNs), WSN Security, Cryptographic Methods, Key Management Schemes, Intrusion Detection Systems, Secure Routing Protocols, Machine Learning, Anomaly Detection

A Review of Generative AI in Organizational Management: Potential, Challenges, and Future Directions

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Abstract

Generative AI (GAI) presents a transformative force for organizational management, offering vast potential to enhance efficiency, improve decision-making, foster innovation, and deliver exceptional customer experiences. This review delves into the current state of knowledge surrounding GAI applications within various organizational functions. It explores the potential benefits of GAI in areas such as automating repetitive tasks, generating data-driven insights, and supporting creative innovation processes. Additionally, the review examines the key challenges and considerations associated with GAI implementation, including ethical concerns, data security and privacy risks, and potential job displacement. Finally, the review outlines key future research directions, emphasizing explainable AI, human-AI collaboration frameworks, the development of ethical frameworks, and longitudinal studies to assess the long-term impact of GAI on organizations and society. By acknowledging both the opportunities and challenges associated with GAI, this review aims to provide a comprehensive resource for organizational leaders and researchers seeking to navigate the rapidly evolving landscape of AI in organizational management.

Keywords

Generative AI, Organizational Management, Review, Potential, Challenges, Future Directions

ANOVA Based Feature Selection Model for Predicting Hepatitis C Virus

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Abstract

The aim of the research is to make precise predictions using machine learning algorithms for HCV detection. Hepatitis C Virus (popularly called HCV) causes various kinds of life-threatening liver cancers. This virus is deadly as more than 80% of patients don't have any signs or symptoms. Hence, a proper system is necessary which may timely and accurately predict HCV. This paper provides a brief literature review in this field which is the motivation to understand the concepts of machine learning methods in predicting results with higher accuracy in comparatively easier ways. We have applied various machine learning algorithms on the 'HCV' dataset, which result in efficient and accurate predictions. The experiments are performed on the 'HCV' Dataset which is imported from "UCI Machine Learning Repository". The dataset contains the laboratory values of Hepatitis C and the blood donors. It has a '615' number of instances, out of which some contain missing values. Out of 615; 533 instances are of blood donors, 7 instances are of suspected cases and the remaining 75 instances contain the data of patients suffering from Hepatitis C. There are a total of '13' attributes present in the dataset. To achieve the best predicting algorithm, the handling of missing data is performed using Linear Regression. Feature selection is the technique that improves the efficiency of a model and reduces model building time. We have implemented the statistical technique Analysis of Variance (ANOVA) for the purpose of selecting important features. The rationale behind choosing ANOVA as a feature selection technique is its efficiency in determining the score of the relationship between two attributes. In our model, the decision tree algorithm predicted with the highest accuracy of '0.9878048780487805' before applying ANOVA. After applying ANOVA, the decision tree algorithm again predicted the results with greatest accuracy i.e. '0.9878048780487805'. This research adds to the field by utilizing machine learning methods to enhance HCV prediction, striving for enhanced accuracy and efficiency. The use of Linear Regression to manage missing data and ANOVA for feature selection introduces potentially innovative approaches within HCV detection. Additionally, the comparative assessment of multiple machine learning algorithms aims to pinpoint the optimal model for HCV prediction, potentially providing direction for future research in analogous settings.

Keywords

Prediction, ANOVA, Linear Regression, Random Forest, SVM, Decision Tree, Gaussian NB, KNN

Green Finance Practices for Strengthening Sustainable and Inclusive Development: An Emerging Futuristic Perspective

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Abstract

Green Financing is an approach that enables countries to promote economic growth combined with environmentally beneficial activities through the development of innovative financial industries. Climate finance is the foundation of global support to address risks associated with climate change. Giving fast pace to climate finance to address climate change risks remains a major challenge in many developing countries, including India. Being one of the world's fastest growing economies, India faces the dual challenge of sustaining economic development while mitigating and adapting to the effects of climate change. In India, forecasts of strong GDP growth add to climate change risks from increased energy consumption, such as increased frequency of droughts, change in rainfall patterns and rising temperatures. Achieving economic growth constrained by its commitment to reduce emissions is therefore a major challenge as well as an opportunity for India. This study is based on secondary data and examine the different aspects of green financing initiatives taken by different sectors i.e. public and private sectors.

Keywords

Green Finance, Climate Risk, Climate Finance, Mitigation, Green Economics, Sustainable Development

Effect of E-learning Tools and Technology Adoption Behavior on Academic Performance: Mediating Role of Facilitators Engagement

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Abstract

Since academic performance is dependent on methodology accompanied by role of facilitator and a major challenge being an attitude towards technological adoption it becomes necessary to understand how they are related and affect each other. For the present study, based on convenience sampling collected from academic stalwarts from six different higher educational sectors with university status in the National Capital region in selected cities were collected, making the complete questionnaire from 240 respondents. The research findings have significant implications for effective management and leadership of right educational outcome and will help in providing direction to facilitators, it will also help in identifying right tools and techniques for ensuring right academic performance and behavior. The study thus helps in effectual synchronization of all major stakeholders whether it is learner, facilitator, or e-learning tools. The findings of the study will help in identifying the right interventions for ensuring academic outcome, a promising one.

Keywords

Green Finance, Climate Risk, Climate Finance, Mitigation, Green Economics, Sustainable Development

Study on the Adoption of DevOps Metrics for Quality Assurance for Employee Management Systems

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Abstract

DevOps has been proven effective as a software management strategy in various real-world applications and case studies. DevOps is quickly becoming the standard application development method in the software industry due to its ability to streamline the entire process to reduce costs, ensure flexibility in the final software architecture, and speed up the development and launch processes. Data is becoming increasingly important as a strategic consideration in a DevOps process because the primary goal of a DevOps approach is to gain insights from the operation directly into the development. Therefore, efficient data management techniques are fundamental to the DevOps method. Based on the volume, variety, velocity, variability, and value of the data being managed, DevOps data management falls primarily under the BigData umbrella. As a result, BigData solutions might be used to manage the many artifacts, code, documentation, logs, etc., generated during the DevOps process. This paper's objective is to analyze the results of a program for system analysis, system design, and prototyping, specifically the website for a Python-based knowledge management system prototype that uses an SQLite database.

Keywords

Employee Relationship Management (ERM), DevOps, Structural Equation Modelling (SEM), Unified Modeling Language (UML), International Comparative Service Delivery (ICSR), Quality Assurance, Software as a Service (SaaS)

Exploring the Interplay of Social Influences, Product Quality, Brand Reputation, and Pricing Strategies in Shaping Consumer Attitudes and Purchase Intentions Toward Luxury Home Appliance Brands in India

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Abstract

This research investigates the complex relationship between consumer awareness and purchasing behavior in the luxury home appliance market, focusing on the elements that shape consumer sentiment and intent to purchase. By examining various factors such as social influences, product quality, brand reputation, and pricing strategies, the study aims to understand the determinants influencing consumer attitudes toward high-end home appliance brands and the subsequent impact on purchase intentions. The study employs a mixed-method approach, combining qualitative and quantitative techniques, including interviews and surveys, to gather comprehensive data on consumer preferences within this specific market segment. Social influences, such as peer recommendations and online reviews, play a crucial role in shaping consumer perceptions. Product quality, encompassing durability, functionality, and design, significantly impacts consumer choices, as does the reputation of the brand, which includes factors like heritage, reliability, and customer service. Pricing strategies, including perceived value for money and promotional offers, also influence purchasing decisions. The study's findings are anticipated to provide substantial insights for brand managers and marketers seeking to enhance their strategies in targeting and engaging with consumers in the luxury home appliance sector. By understanding these key motivators, companies can better align their marketing efforts with consumer expectations, ultimately driving brand loyalty and increasing market share. This research contributes to the broader field of consumer behavior by offering empirical evidence on the factors that influence purchasing decisions in the context of luxury domestic appliances, providing a foundation for future studies and practical applications in marketing and brand management.

Keywords

Consumer Awareness, Purchasing Behavior, Luxury Home Appliances, Consumer Sentiment, Purchase Intentions, Social Influences, Brand Reputation, Pricing Strategies

Bifaceted Breast Cancer Examination via Logistic Regression Model

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Abstract

In this machine learning initiative, our focus revolves around the development of a robust breast cancer categorization system using Python, emphasizing the utilization of logistic regression models. The data set, derived from the fine needle aspiration test, encompasses essential metrics like radius, texture, perimeter, area, and smoothness. Our methodology encompasses meticulous stages of machine learning development, from data collection to model evaluation. The paramount challenge addressed by our research work is the accurate classification of breast tumors as benign or malignant. Early detection is crucial for timely medical intervention, and the existing diagnostic methods sometimes lack the precision required for expedited and precise diagnoses. This work aims to enhance the diagnostic accuracy of breast cancer, thereby contributing to improved patient outcomes. Our systematic approach involves comprehensive data collection and preprocessing, ensuring the dataset's suitability for machine learning analysis. We employ data visualization techniques to gain insights into feature distribution and relationships, a pivotal step for well-informed model development. The selection of an appropriate machine learning algorithm is a critical phase, with rigorous evaluation based on performance metrics and dataset compatibility. Model training, implemented with a focus on optimizing hyper parameters, occurs next, followed by the distinctive utilization of Amazon Sage Maker for efficient model development and training in a cloud-based environment. The machine learning model achieved an impressive accuracy of 97.08%, affirming its proficiency in correctly categorizing tumors as either benign or malignant.

Keywords

Breast Cancer, Bifaceted, Regression Model Evaluation

Empowering Entrepreneurship: Investigating the Adaptive Enterprise Approach in Context to Shark Tank India

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Abstract

The global phenomenon of entrepreneurship has attracted significant attention, with platforms such as Shark Tank India serving as critical hubs for the development and exhibition of entrepreneurial talent. This study examines the adaptive enterprise approach, a flexible and adaptable tactic that gives business owners the ability to successfully negotiate the challenges of contemporary business settings. Flexibility, ongoing learning, and quick market adaptation are highlighted by the adaptive enterprise approach as being essential for maintaining competitive advantage. This study looks at how Shark Tank India is a great example of the adaptive enterprise approach, giving aspiring business owners a platform to showcase their creative ideas and get funding. Through an analysis of the show participants' experiences, the study reveals important adaptable tactics used by prosperous entrepreneurs, such as market responsiveness, iterative product development, and strategic pivoting. The study also looks at how investors' involvement and mentoring can help entrepreneurs develop an adaptable mindset. Shark Tank India's interactions between investors and entrepreneurs provide important insights into the resilience, decision-making frameworks, and adaptive processes needed to succeed in unpredictable environments. Through case studies of particular startups that are featured on the show, the adaptive enterprise approach is examined, highlighting real-world applications and results of adaptive strategies. According to the research, the adaptive enterprise strategy greatly fosters an innovative and flexible culture, which in turn helps entrepreneurs succeed. This study highlights the value of flexibility in entrepreneurship and promotes the inclusion of this skill in entrepreneurial practice and instruction. The study provides insightful insights by equating theoretical concepts with actual cases from Shark Tank India.

Keywords

Entrepreneurship, Shark Tank India, Adaptive Enterprise Approach, Entrepreneurs, Flexibility and Innovation

Siamese Neural Network & Computer Vision for Detecting Single Shot Image

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Abstract

The purpose of this research paper is to explore the innovative use of Siamese Neural Networks (SNNs) for Single Shot Image Recognition, which is very important in the field of computer vision. Traditional image recognition systems consume many datasets for supervised algorithms, thereby resulting in poor recognition of new or unusual objects. In discrepancy, Siamese Neural Networks are designed to learn one axis or multiple axes. Our approach uses a Siamese Neural Network framework to recognize objects or patterns with the use of only one reference image. This framework consists of two weight participating neural networks that take binary input images i.e., the reference and query images, and cipher a similarity score. Siamese Neural Networks learn to reduce the distance of features for the same image, while adding it for different images. The design covers important aspects such as data processing, model framework design, and optimization ways for dependable and effective recognition. We also study data addition, training, and various enhancement ways to enhance the conception capability of the model. The results show the effectiveness of Siamese Neural Networks in Single Shot Image Recognition, enabling accurate recognition indeed with only one reference image. This approach finds operations in retrieval of images, security, robotics, and scripts where fast and accurate recognition of limited visual data is a must-have. Using a Siamese Neural Network, we can achieve better results with limited training data as compared to traditional image recognition systems which uses a large number of datasets.

Keywords

SNN, CNN, Image Recognition, Detection

Impact of News and Social Media on Stock Market Sentiment

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Abstract

This study examines how news and social media significantly affect the stock market sentiment, highlighting how these factors affect investor perceptions and market dynamics. Important financial information is spread by traditional news sources, and investor reactions to good or bad news immediately affect stock prices. Simultaneously, social media sites like Reddit and Twitter provide debates and updates in real time, expanding the reach and pace of information sharing. Events such as the GameStop short squeeze demonstrate how significant market moves can result from the activities of prominent individuals and collective retail investor actions on these platforms. The interaction of social media and news frequently results in feedback loops that increase market volatility. Furthermore, the analysis of sentiment data from both sources is made possible by technology developments in machine learning and algorithmic trading, which shed light on market trends. This essay emphasizes how important it is for analysts and investors to take into account the swift and widespread impact of social media and news in their planning, recognizing their contributions to both long-term financial trends and short-term market swings.

Keywords

News Media, Social-Media, Stock Market Sentiment, Information Dissemination, Market Volatility, Investor Perception

Integration of Computerized Accounting in the Indian Finance System for Small, Medium, and Micro (SMMs) Businesses

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Abstract

Small business owners may experience adverse effects on their company's financial performance and sustainability if their attempts to install computerized accounting systems prove fruitless. A large percentage of Indian workers are employed by small, medium, and micro enterprises (SMMEs); however, only 30% of small firms survive in the long run, with 50% failing within five years. To tackle the challenges of financial loss, selected local businesses such as grocery stores, beauty salons, and food carts successfully implemented automated accounting systems. Company documentation from many SMMEs and semi-structured interviews were used to gather data. Entrepreneurs in Noida who have effectively used an automated bookkeeping system in their enterprise. Google Form and Excel Sheets were used for the analysis. Four themes came to light: computer education and knowledge, corporate growth, accounting systems operations, and managing finances through an efficient accounting system. Immediately seeking outside financial experts to build up computerized accounting systems for their firm is one of the main recommendations made to owners of beauty salons. The potential for small business owners to boost expansion and financial stability, thereby generating jobs in the neighbourhood and encourages economic sustainability while serving as role models for budding entrepreneurs, is one of the implications for positive social change. SMMEs play a crucial part in India's economy, hence their financial solidity is vital. The automation, precision, and efficiency with computerized accounting makes it a groundbreaking solution. SMMEs can gain real-time financial insights, fewer blunders, and higher compliance by freely integrating these tools into the Indian finance atmosphere.

Keywords

Small Business Owners, Financial Performance, Sustainability, Computerized Accounting Systems, Small, Medium, and Micro Enterprises (SMMEs), Financial Loss

Evolution of Chatbot in Human Resource

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Abstract

Artificial intelligence (AI) and machine learning are being used more and more in a variety of industries, including finance, trading, customer relationship management, and communication. Chatbots — AI software or robots that converse with consumers — are also growing in popularity. Open AI's ChatGPT is one such application. A conversational AI model called ChatGPT may be used to produce answers to questions in natural language, such as a person. For HR professionals, it offers several advantages, such as increased analytics, cost-effectiveness, and employee engagement. Additionally, ChatGPT may improve the employee experience by responding to inquiries from staff members more quickly and personally. Additionally, it may be utilized for hiring, employee engagement, training, and other purposes. It can also automate the application review process, reducing.

Keywords

Human Resource Management, Chat GPT, AI

The Role of Virtual Financial Incubators in Fostering Fintech Innovation and Startup Growth

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Abstract

In the rapidly evolving landscape of financial technology (fintech), the emergence of virtual financial incubators presents a novel approach to supporting startup ventures in the fintech sector. This research paper explores the concept of virtual financial incubators and investigates their impact on fostering fintech innovation and facilitating the growth of startup companies. By leveraging digital platforms and technologies, virtual financial incubators offer entrepreneurs access to a wide range of resources, mentorship, funding opportunities, and networking channels without the constraints of physical location. Through a comprehensive review of existing literature, case studies, and empirical analysis, this paper examines the effectiveness of virtual financial incubators in nurturing fintech startups, identifying key success factors, challenges, and opportunities. The findings contribute to a deeper understanding of how virtual financial incubators can drive innovation in finance and technology, facilitate collaboration and knowledge sharing among stakeholders, and ultimately shape the future of the fintech ecosystem.

Keywords

Virtual Financial Incubators, Fintech Innovation, Startup Growth, Trust and Compatibility, Global Reach, Resource Accessibility, Mentorship and Networking, Entrepreneurial Ecosystem and Financial Coaching

Gamifying Finance: Enhancing User Engagement and Financial Literacy Through Digital Gamification

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Abstract

This study investigates how the logics and practices of intermediation that are central to FinTech economies are being reshaped by digital gamification techniques, which integrate video game features (instead of full-fledged games) into apps. First, we contend that gamification highlights socio-technical knowledges that are becoming more and more crucial to the formation of FinTech intermediation, such as behavioral science, digital marketing, and user experience (UX) and user interface (UI) design. Secondly, research on the roles of evolving advanced producer services (APS) complexes in FinTech and financial intermediation currently ignores specialized enterprises that are a feature of gamification. Third, gamified apps are used to create competitive positions as intermediaries that engage users in play and set their behavior. This is in contrast to FinTech methods, which often guarantee customers easy access, low transaction costs, and customized goods and services. We use three firm-level case studies from Asia, where the creation of gamified FinTech apps has been particularly popular, to demonstrate these points.

Keywords

Gamification, Fintech, Intermediation, User Experience (UX), Behavioral Science

A Study of Efficient Market Hypothesis in Indian Foreign Exchange Market

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Abstract

The Efficient Market Hypothesis (EMH) is a significant theory in the financial economics, positing that asset prices fully reflect all available information, thereby rendering it impossible to consistently achieve returns above the market average on a risk-adjusted basis. In the context of the Indian Foreign Exchange Market (IFEM), the study of the EMH holds particular significance given the growing integration of India into the global economy and the increasing prominence of the Indian Rupee (INR) as an international currency. As India's economy continues to expand and its financial markets become more interconnected with global markets, understanding the efficiency of the IFEM becomes essential for policymakers, investors, and market participants alike. The application of EMH within the context of the Indian Foreign Exchange Market (IFEM) is used in this paper to assess the efficiency of the IFEM by examining the nominal daily exchange rates of a basket of four major currencies—USD, EURO, GBP, and YEN—against the Indian Rupee (INR) from January 1st 2009, to December 31st 2023. This paper employs Lo-Mackinlay Variance Ratio Test to investigate the presence of serial correlation in the Forex Market in relation to the exchange rate return which serves as a key indicator of Market inefficiency. To examine the presence of unit root in exchange rate series, Augmented Dickey Fuller (ADF) is utilized which determines the fundamental aspect in time series analysis. The findings of the Variance Ratio and ADF test in the study shows stationarity pattern in the daily exchange rate data and indicates that IFEM operates in accordance with the weak form of EMH. This suggests that there is significant higher variability in short-term returns, indicating that it is not possible to predict the future price movement based on only historical data of exchange rate. This finding shows that the IFEM follows the weak form of Efficient Market Hypothesis.

Keywords

Efficient Market Hypothesis (EMH), Indian Foreign Exchange Market (IEFM), Exchange Rates, Market Efficiency, Lo-Mackinlay Variance Ratio, Augmented Dickey Fuller (ADF)

Transformative Effects of Technological Advancements on Mutual Fund Advisory Services

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Abstract

This study offers an extensive review of existing literature and leverages secondary resources to investigate the impact of technological advancements on mutual fund advisory services. The research delves into the roles of AI, machine learning, and robo-advisors, drawing from scholarly articles, industry reports, and market analyses. Key findings highlight significant changes in advisory practices, such as the automation of routine tasks, enhanced data analytics capabilities, and the development of personalized investment strategies through AI. Additionally, the emergence of robo-advisors has democratized advisory services, making them more accessible to individuals with smaller account balances by offering lower-cost options to a wider audience. However, the study also uncovers challenges associated with these technological innovations. Issues include potential biases in AI systems, cybersecurity threats, and the imperative for advisors to continually update their technological skills. The research underscores that while technological advancements are crucial for the ongoing evolution of mutual fund advisory services, the benefits and efficiencies provided by technology must be balanced with human expertise to ensure sustained success. The study suggests that future research should focus on the primary validation of these findings through real-world data collected from advisors and clients. This could provide deeper insights into the practical implications and effectiveness of these technological advancements in the advisory field. Ultimately, the integration of technology and human expertise is essential for optimizing mutual fund advisory services, ensuring they remain effective and accessible in an increasingly digital landscape.

Keywords

Mutual Fund Advisory, Robo-advisors, Fintech, Industry Disruption, Artificial Intelligence

Transformational Leadership Skills of Indian Freedom Fighters in Enhancing Dedication at Work

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Abstract

It difficult to comprehend escaping your house arrest and escaping to another nation to garner support for India's Freedom struggle, let alone executing the plan in order to overthrow the empire on which the sun never set. Fighters implement what others can't even imagine, especially those fighting for their nation's freedom. Subhas Chandra Bose, the backbone of India's freedom struggle, escaped from his house arrest in Calcutta to Germany in January 1941 and rose as the epitome of courage and conviction, giving rise to Azad Hind Fauj against the British Empire. Similarly, Bhagat Singh, on his way to the gallows in March 1931, announced that the freedom would follow in few years, and aware of the fact that the real fight would begin once India won its freedom. The fight against exploitation, corruption, casteism, nepotism and communalism is still continued. This paper peeps into the leadership skills of selected freedom fighters to analyse how their hope, team work, purposefulness, inner locus of control, respect for women and resourcefulness helped them achieve the impossible mission of Indian independence. The leadership skills of Indian freedom fighters were identified through the literature review. The corporate employees were surveyed for presence of these skills in them through structured questionnaire. Data were collected and analysed. It was found that hope, team work, purposefulness and resourceful have positive correlation with transformational leadership. The limitation in the study was that sample size was over 50 employees in the NCR Delhi region only. The implication of the study is that training program can be designed to enhance the skill sets of employees similar to those of Indian freedom fighters to enhance workers dedication at work. By enhancing those skills through training, an ordinary karmachari can be converted into a karmayogi.

Keywords

Leadership, Hope, Purposefulness, Freedom, Inner Locus of Control, Karamchari, Karmayogi

Evolution and Trends in Digital Recruitment: A Bibliometric Analysis

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Abstract

As a result of the development of new technologies, a wide variety of management themes have become vital, such as "digital recruitment." Given the influence that these technologies have, it is very necessary to carry out full bibliometric research on digital recruitment to collect all the relevant data. This study will contribute to the growth of scientific understanding since it will throw light on the evolution and directions concerned that has happened and is now being undertaken. To analyze the data, the researchers used the VOS viewer program. These have been used to produce and analyze Scopus databases that include data that is consistent across their use. Using bibliometric analysis, 165 Scopus articles that were published between the years 2000 and 2024 were successfully discovered. They highlight the most relevant articles, research issues, various nations, entities, researchers, publications, and trends that are now occurring. During the last 20 years, there has been a rise in the total number of publications. The analysis provides an illustration of the advancement of digitalization in the process of digital recruitment. The research of this period may signify the end of the historical section of the digital recruitment process, the current problem has the potential to be exploited in a variety of different ways.

Keywords

Digital Talent, Digitalization of HR, HR Talent, Digital Recruitment

A Study on Role of Augmented Reality and IoT in Health Care

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Abstract

Augmented reality (AR) is one of the new advancements making advances into a few business sectors, including medical services. Augmented Reality and IoT has proposed numerous smart applications in healthcare domain including wearable access, telemedicine, remote surgery, diagnosis of medical reports, emergency medicine, etc. The aim of applying augmented healthcare application is to improve patient care, increase efficiency, and decrease costs. AR and IoT provides smart solutions for Simulations and Practice, Anatomy Learning, Preoperative Planning, Intraoperative Assistance, Enhanced Patient Education, Physical Therapy, Virtual Consultations, Guidance for Remote Procedures, Real-Time Data Visualization, Exposure Therapy, Cognitive Rehabilitation. The present article aims to review the advances in IoT and AR-based healthcare technologies and explores the strategies being implemented to further develop this field.

Keywords

Augmented Reality, IoT, Health Care, Personalized Health Care, Anatomy Learning, Preoperative Planning, Intraoperative Assistance

The Adverse Effects of Technology: Impacts on Human, Originality, Wellness and Employment Dynamics

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Abstract

The rapid progression of technology has transformed our lifestyles and professional environments, yet it also presents a range of obstacles that can detrimentally influence individuals. Fears surrounding the decline of human originality in the workplace have surfaced as automation and artificial intelligence encroach on tasks traditionally carried out by humans, posing a threat to creativity and uniqueness. Additionally, the constant flow of information and connectivity facilitated by technology can disrupt mental tranquility, resulting in increased stress levels and compromised well-being. In terms of social connections, while technology enables communication across distances, it also risks diminishing the depth and authenticity of human engagements, potentially fostering feelings of seclusion and solitude. Furthermore, the addictive characteristics of technology pose significant challenges to human psychological health, with problems such as internet addiction and reliance becoming more prevalent. Employment security is also a growing apprehension, as automation and artificial intelligence loom over human roles, creating uncertainties and disturbances within the job market. Recognizing and addressing these adverse implications of technology is crucial in navigating the intricate relationship between technology and human welfare.

Keywords

Technology, Creativity, Mental Well-being, Social Relationships, Human Mind, Employment Stability

Blockchain in Pharmacy: Enhancing Security, Transparency, and Efficiency

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Abstract

The pharmaceutical industry faces significant challenges in ensuring drug security, supply chain transparency, and overall efficiency. Counterfeit drugs pose a major threat to patient safety, while fragmented traceability data hinders effective monitoring. Blockchain technology, with its core principles of decentralization, immutability, and transparency, offers a promising solution. Blockchain can enhance drug security by creating a tamper-proof record of a medication's journey from manufacturing to dispensing. Cryptographic techniques secure data, safeguarding against unauthorized access and manipulation. This not only protects sensitive patient information but also safeguards intellectual property. Furthermore, blockchain promotes supply chain transparency by providing a shared ledger accessible to authorized participants. Every step in the drug's lifecycle is documented, enabling real-time tracking and verification of authenticity. This transparency fosters trust among stakeholders and empowers regulatory bodies to enforce compliance more effectively. Blockchain can improve efficiency within the pharmaceutical industry. Streamlined data exchange and automated verification mechanisms can expedite regulatory processes and optimize inventory management. Additionally, smart contracts can automate transactions, reducing administrative burdens and facilitating faster product movement. By analysing the potential of blockchain to address critical challenges in security, transparency, and efficiency, this transformative technology can reshape the future of pharmaceuticals.

Keywords

Blockchain in Pharmacy, Drug Security, Supply Chain Transparency, Pharmaceutical Efficiency, Counterfeit Drugs, Traceability, Decentralization Cryptographic Techniques

Cognitive Revolution in Indian Education: The Role of Artificial Intelligence

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Abstract

The integration of Artificial Intelligence (AI) in Indian education is rapidly reshaping the educational landscape. This study investigates how AI can be effectively incorporated into the Indian education system to enhance personalized learning experiences for students. It also explores the key cognitive and metacognitive skills that can be fostered through AI-assisted educational platforms in India. Additionally, the research delves into how the implementation of AI-driven education tools impacts educators' roles and pedagogical approaches in the Indian context. It identifies challenges and ethical considerations related to the widespread adoption of AI in Indian classrooms and suggests ways to mitigate these issues for equitable access and positive student outcomes. Furthermore, it examines how AI-powered educational technologies can be tailored to accommodate India's diverse cultural and linguistic landscape, ensuring inclusivity and cultural sensitivity while promoting cognitive growth. Using an investigative approach, the research interviewed 100 respondents from leading Indian educational institutions that have developed AI-centric educational applications. Grounded theory analysis revealed the potential benefits of individualized learning, recommendation systems, and adaptive assessments in improving student learning and supporting educators. The study highlights the contrasting perspectives between AI-focused educational technology companies and experts in an emerging economy, showcasing AI's untapped potential that these companies can leverage. Ultimately, this research sheds light on the transformative impact of AI in Indian education, emphasizing its ability to revolutionize pedagogy and learning methods, bridging the gap between traditional education and a technology-driven educational future.

Keywords

Cognitive Revolution, Indian Education, Artificial Intelligence, Learning Enhancement, Pedagogical Transformation

Evaluating Online Learning Experiences: Sentiment Analysis of Indian Working Professionals' Feedback

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Abstract

This study presents a comprehensive analysis of sentiment derived from feedback provided by online MBA learners regarding their educational experience, leveraging the power of R programming. Through natural language processing techniques and sentiment analysis algorithms implemented in R, sentiments have been scrutinised, aiming to discern patterns, trends, and insights regarding their online degree experience. Results from the sentiment analysis revealed a nuanced understanding of the learners' perceptions and sentiments towards various aspects of their online MBA journey, including course content, instructor support, learning platform usability, networking opportunities, and overall program satisfaction. Through visualisations and statistical summaries generated using R, an in-depth analysis of sentiment trends and highlighted notable findings gleaned from the feedback data are presented.

Keywords

Sentiment Analysis (SA), Natural Language Processing (NLP), Online Education, Professional Education, Qualitative Data

Navigating the Digital Transformation: The Complexities of Technology Integration in Management

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Abstract

The evolution of control can be traced back to when humans began living in groups. It can be said that management relies on leadership, which is important for the cooperation of group members in planning the necessities of life. However, as the intellect, knowledge, and interactions of mankind with their surroundings evolved, so did the advancement of management to cope with the skills needed to thrive with the demands of humanity. The rapid advancement of technologies such as artificial intelligence, automation, and data analytics is transforming the landscape of business management. Though these are seen as advancements in management, the foundations of such progress are seen from the 19th century. This study examines how the integration of these emerging technologies is reshaping managerial decision-making, workforce management, and organizational structures. The digital transformation is profoundly impacting the way organizations operate and manage their resources. This paper investigates the strategies and best practices for effectively integrating technology into management processes. It analyses the factors that influence the successful adoption and implementation of digital tools, including change management, employee engagement, and the alignment of technology with organizational goals and the impact of management does not end with organizational structure but it is also integrated into our society welfare such as healthcare. The context of doctors and machines has seen significant advancements. Management practices in this area focus on optimizing the synergy between human expertise and technological capabilities to improve patient care, operational efficiency, and overall healthcare outcomes. However, the integration of technology in management also comes with its pros and cons. On the positive side, technology can lead to improved efficiency, innovation, and competitive advantage. It enables better decision-making through data-driven insights and enhances workforce management by automating routine tasks. Conversely, challenges include the risk of technological dependence, the need for continuous upskilling of employees, potential job displacement, and the complexities of change management. Additionally, aligning technology with organizational goals requires careful planning and strategic vision to ensure that the technology enhances rather than hinders business operations. This study underscores the importance of a balanced approach to technology integration, emphasizing both the potential benefits and the challenges. Managers must navigate these complexities to effectively leverage technology for sustainable growth and success.

Keywords

Management, Leadership, Artificial Intelligence, Automation, Organizational Efficiency, Innovation, Digital Transformation

Efficacy of Entrepreneurship Education in Institutions of Higher Education

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Abstract

Entrepreneurship is a global phenomenon, with the rise of fresh and creative company start-ups having a favourable influence on economic growth all over the world. These recently established small enterprises contribute significantly to the creation of jobs and persuade policymakers to acknowledge and encourage entrepreneurial start-up activity because of its beneficial effects on the economy. India is concerned with encouraging entrepreneurship among all people in order to produce prosperous businesspeople. Very little is known about the efficacy of entrepreneurship education in our nation, despite the fact that the government and Higher Education Institutions (HEIs) have launched a number of entrepreneurship programmes to encourage this trend. There will be two stages to this case study-based research project. The descriptive and evaluative phase is the initial stage. The mapping of current institutional supports and learning within HEIs will be the main focus of this research. To better understand the learning experiences that support becoming successful entrepreneurs, data research regarding the learning process within HEIs will be evaluated from both internal and external perspectives. The exploratory phase, which is the second stage, is when the concepts, categories, and propositions from the phenomena are developed in order to create the entrepreneurial learning theory.

Keywords

Entrepreneurship, Entrepreneurship Education, Efficacy

Technology Management Landscape in Indian Industries: Strategies, Challenges, and Opportunities

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Abstract

In India, information technology (IT) plays a crucial role in facilitating knowledge management (KM) within various industries. This study delves into the IT strategies employed for KM in sectors such as software, pharmaceuticals, and petroleum, encompassing both private and public domains. While Indian firms have adopted diverse IT tools, including the internet, the study reveals shortcomings in fully leveraging these tools, particularly KM software. Consequently, there's a pressing need for robust IT strategies to enhance KM effectiveness across Indian industries. In a developing nation like India, technology management assumes paramount importance in responding to global competition. This research scrutinizes the existing state of technology within Indian industries and the innovation capabilities within higher education institutions. It stresses the necessity for collaborative efforts among the government, industry, and academia to prioritize technology management. Such concerted endeavours are believed to bolster the nation's competitiveness and innovation prowess on the global stage. Since 1966, Indian government policies have imposed restrictions on technology imports, compelling large firms to focus on internal research and development (R&D). This study investigates how Indian companies have navigated these restrictions by judiciously allocating R&D resources among competing projects. Despite economic constraints, Indian firms exhibit exploratory efforts in R&D management, necessitating advanced planning for technology imports. The auto component industry in India has witnessed significant growth, propelled by liberalization and international partnerships. This study examines strategic technology management (STM) practices in two case organizations within this industry. The findings underscore varied technology strategies and a strong alignment between business and technology strategies. The study emphasizes the need for in-house capability development alongside technology acquisition for enhanced business performance. In India, technology management practices, particularly among Chief Technology Officers (CTOs), are evolving. Leveraging natural language processing (NLP) techniques, this study analyses the disparity between academic knowledge and practical views on technology management. The findings highlight the escalating importance of CTOs in top management, with practices tailored to organizational needs.

Keywords

Technology Management, Automobile Industry, Technology Transfer, Innovation, India, Developing Countries, Strategic Framework

Exploring the Impact of Artificial Intelligence on Personal Finance: Applications, Benefits, and Challenges

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Abstract

Artificial intelligence (AI) is revolutionizing personal finance by automating and optimizing various financial activities. This paper explores the applications of AI in personal finance, focusing on saving, buying, lending, and payments. The objective is to provide a comprehensive overview of how AI technologies such as robo-advisors, algorithmic trading, e-commerce personalization, and online lending platforms are transforming financial services. The methodology involves a literature review of academic sources, industry reports, and case studies to gather insights into the current state and future potential of AI in personal finance. The findings indicate that AI enhances efficiency, security, and personalization in financial services, leading to improved user experiences and operational efficiencies. However, the adoption of AI also presents challenges, including high implementation costs, ethical concerns, and potential job displacement. The paper concludes that while AI offers significant benefits, it is crucial for organizations to address these challenges to ensure sustainable and ethical AI integration in personal finance.

Keywords

Artificial Intelligence, Personal Finance, Robo-Advisors, Algorithmic Trading, E-Commerce, Online Lending, UPI, E-Wallets

Leadership in the Age of Artificial Intelligence: Intersection of Technology and Human Management

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Abstract

Over the last few decades, innovation and rapid growth have resulted in significant change in both business and technology. People now depend more than ever on computers and automation in their personal as well as professional lives. The COVID-19 epidemic made organizations and individuals dependent on technology and all of its advantages, underscoring the increasing demand for creative leaders. Business and technology are becoming top priorities for both new and established organizations as they plan, strategize, and operate in the context of the emerging new normal. As artificial intelligence becomes more and more integrated into the workplace, leaders will need to adjust to the new opportunities and difficulties the technology represents. By automating specific tasks and services, the workplace's adoption of AI technology is revolutionizing the workforce. This study employs a mixed-methods approach, combining quantitative and qualitative research to provide a comprehensive understanding of leadership in the age of AI. Data will be collected through structured surveys and in-depth interviews with leaders and employees from various industries that have integrated AI into their operations. The survey will target 130 leaders and 250 employees from different sectors, ensuring a diverse representation of perspectives. Interviews will be conducted with a subset of 25 leaders to gain deeper insights. In actuality, AI automation will probably create new employment while also making some vulnerable, but one thing is for sure: the skill sets needed for the workforce of the future are evolving. To the greatest extent feasible, industry leaders should foresee these shifts and create plans to reskill or upskill their employees so that they are able to adjust to the new demands of the workplace. Leaders can use that assessment to identify areas for growth and create focused programs to improve their leadership skills. As AI technology becomes more prevalent in the workplace, managers must acquire new competencies like programming and data analysis and make sure that their workforce is ready to adjust to the changing demands of their jobs.

Keywords

Innovation, Leadership, Business, AI, Leaders, Technology, Workfork

From Code to Courtroom: Legal Implications in Tech Management

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Abstract

The rapid advancement of technology presents a complex challenge for tech managers. Balancing innovation with legal compliance requires navigating a dynamic legal landscape. This Paper explores this intricate relationship, highlighting the critical legal considerations for tech managers. The paper lays the groundwork by outlining the legal frameworks governing tech development and use. Data privacy regulations, intellectual property laws, and cybersecurity standards form the foundation for responsible tech practices. These frameworks ensure user data protection, incentivize innovation, and safeguard information systems. Delving deeper, the Paper explores legal considerations in specific tech domains like AI and block chain. Biases in AI algorithms and the decentralized nature of block chain necessitate legal responses to address issues like fairness, accountability, and regulatory oversight. The paper then examines legal tech as a valuable tool for tech managers. Legal tech solutions streamline compliance processes, automate tasks like contract management, and facilitate data privacy governance. These tools empower tech managers to proactively address legal risks and ensure legal compliance. In conclusion, the paper emphasizes the importance of fostering a culture of legal awareness within tech management teams. By understanding the legal ramifications of their decisions, tech managers can drive innovation responsibly, mitigate legal risks, and ensure their organizations' long-term success in the ever-changing technological landscape.

Keywords

Tech Management, Legal Tech, Data Privacy Regulations (e.g. DPDPA, GDPR), Artificial Intelligence (AI), Block Chain, Cybersecurity Standards, Intellectual Property Law, Legal Compliance

The Ethics of Mind Uploading: Managing Consciousness in a Digital Age

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Abstract

This research paper investigates the ethical and philosophical complexities surrounding mind uploading, the hypothetical transfer of human consciousness to a non-biological substrate like a computer simulation. The paper explores the concept of consciousness, drawing on theories from cognitive science and philosophy of mind. It examines integrated information theory and global workspace theory as potential frameworks for understanding the neural correlates of consciousness. Technical aspects of mind uploading are then addressed, including brain scanning and emulation methods. Challenges such as preserving qualia, the subjective experience of sensory data, in a digital format are discussed. The limitations of current computational resources and the need for advanced artificial neural networks to achieve high-fidelity brain simulations are explored. The core of the research focuses on the ethical considerations of mind uploading. Questions of identity, free will, and the nature of selfhood in a digital state are analysed. The paper explores potential existential anxieties and the need for robust ethical frameworks to guide the development and implementation of this technology. Furthermore, the research addresses the legal status of a digital consciousness. Can a digital mind possess the same rights and protections as a biological one? Potential legal frameworks for ensuring the well-being and autonomy of uploaded minds are explored. The paper also considers the societal implications of mind uploading. Issues of accessibility, digital inequality, and the potential for social stratification in a world where some can transcend biological limitations are addressed. Additionally, the research explores the potential benefits, such as extending human lifespan and enhancing cognitive abilities. Finally, the research concludes by proposing a roadmap for the responsible development of mind uploading technologies. This roadmap emphasizes international collaboration, robust ethical guidelines, and ongoing public discourse to ensure that mind uploading benefits humanity.

Keywords

Mind Uploading, Consciousness, Ethical Considerations, Brain Emulation, Legal Frameworks

Enhancing Financial News Sentiment Analysis Using Natural Language Processing Techniques

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Abstract

This research examines the use of Natural Language Processing (NLP) for sentiment analysis of financial news and its potential applications in the financial industry. The study focuses on how NLP can be utilized in the banking sector to analyze financial news articles. A comprehensive literature review is conducted to highlight the limitations and issues of NLP-based sentiment analysis. The study includes case studies of financial organizations and academic institutions that have successfully used NLP to analyze the emotional content of financial news, detailing both results and obstacles encountered. Recent advancements in NLP, such as deep learning, are explored to address the limitations of traditional techniques, especially when financial news is nuanced and open to multiple interpretations. The study also covers the trend of monitoring social media for financial sentiment research, emphasizing its potential to provide real-time insights into public sentiment about financial products or firms. The findings suggest that NLP can significantly improve the efficiency and precision of financial news sentiment analysis, although further research and development are necessary to overcome existing limitations and enhance accuracy.

Keywords

Natural Language Processing, Financial News, Sentiment Analysis, Deep Learning, Financial Markets, Social Media, Real-Time Analysis, Machine Learning

Machine Learning-Driven Optimization for Sustainable Smart City Infrastructure Development

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Abstract

The rapid urbanization and the growing need for sustainable development have driven the adoption of smart city technologies. This paper presents a comprehensive study on the implementation of machine learning algorithms to optimize infrastructure development in smart cities. The primary objective is to enhance resource efficiency, reduce environmental impact, and improve the quality of urban life. The methodology involves collecting and analyzing large datasets from various urban systems, including transportation, energy consumption, and waste management. Advanced machine learning models, such as neural networks and reinforcement learning, are employed to identify patterns and predict future urban trends. The results demonstrate significant improvements in energy efficiency, traffic management, and waste reduction. Case studies from multiple cities showcase successful applications and highlight the potential for scalability. The conclusion emphasizes the importance of integrating machine learning with urban planning to achieve sustainable smart cities. Future research directions include exploring more robust algorithms and expanding the data sources to further enhance the optimization process.

Keywords

Smart City, Machine Learning, Sustainable Development, Infrastructure Optimization, Urban Planning, Neural Networks, Energy Efficiency, Traffic Management

Integrating Internet of Things and AI for Advanced Urban Traffic Management Systems

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Abstract

As urban areas continue to grow, effective traffic management becomes increasingly crucial to ensure the smooth flow of vehicles and reduce congestion. This paper explores the integration of Internet of Things (IoT) devices and Artificial Intelligence (AI) techniques to create an advanced urban traffic management system. The objective is to leverage real-time data from IoT sensors deployed across the city to dynamically manage traffic signals, reduce congestion, and enhance overall transportation efficiency. The methodology involves deploying a network of IoT sensors to collect data on traffic density, vehicle speed, and environmental conditions. AI algorithms, including machine learning and deep learning models, are then used to analyze this data and predict traffic patterns. The results show a significant reduction in traffic congestion and travel times, with optimized signal timings and route recommendations. Case studies from major metropolitan areas illustrate the practical applications and benefits of this approach. The conclusion underscores the potential of IoT and AI in revolutionizing urban traffic management, calling for further research into more sophisticated algorithms and wider sensor networks.

Keywords

Internet of Things, Artificial Intelligence, Traffic Management, Urban Planning, Smart Cities, Machine Learning, Deep Learning, Real-Time Data

Integrating Blockchain Technology for Enhanced Data Security and Management in Distributed Systems

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Abstract

The growing reliance on distributed systems in various industries necessitates robust data security and efficient management solutions. This paper investigates the application of blockchain technology to enhance data security and management in distributed systems. The objective is to leverage blockchain's decentralized, immutable ledger capabilities to ensure data integrity, transparency, and traceability. The methodology involves integrating blockchain protocols with existing distributed system architectures, followed by the implementation of smart contracts to automate and secure data transactions. Detailed analysis is conducted on how blockchain can address common security vulnerabilities such as data breaches and unauthorized access. The results show that blockchain integration significantly improves data security, reduces operational risks, and streamlines data management processes. Case studies from sectors like supply chain management and healthcare illustrate the practical benefits and scalability of this approach. The conclusion emphasizes the transformative potential of blockchain technology in revolutionizing data management and security in distributed systems, advocating for its wider adoption and further exploration of advanced blockchain solutions.

Keywords

Blockchain Technology, Data Security, Distributed Systems, Smart Contracts, Data Management, Decentralized Ledger, Cybersecurity, Supply Chain Management

Advanced Predictive Modeling Techniques for Risk Management in Complex Engineering Projects

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Abstract

Managing risk in complex engineering projects requires sophisticated techniques capable of handling high levels of uncertainty and interdependencies among project components. This paper delves into the application of advanced predictive modeling techniques to enhance risk management strategies in large-scale engineering projects. The objective is to leverage machine learning algorithms and stochastic modeling to predict potential risks and devise proactive mitigation strategies. The methodology involves constructing comprehensive datasets encompassing project variables such as timelines, resource allocations, environmental conditions, and historical risk occurrences. Advanced predictive models, including Bayesian networks and Monte Carlo simulations, are employed to simulate various risk scenarios and their impacts on project outcomes. The results indicate that these advanced techniques significantly improve the accuracy of risk predictions and the effectiveness of mitigation strategies, leading to reduced project delays and cost overruns. Case studies from industries such as aerospace and civil engineering illustrate the practical applications and benefits of these methods. The conclusion underscores the necessity of integrating advanced predictive modeling into standard risk management practices in engineering projects to enhance their robustness and reliability.

Keywords

Predictive Modeling, Risk Management, Complex Engineering Projects, Machine Learning, Bayesian Networks, Monte Carlo Simulation, Stochastic Modeling, Project Management

Managing Technology Risks in Space Exploration

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Abstract

The burgeoning field of space exploration presents a unique landscape of technological challenges and risks. This research paper delves into the critical task of mitigating these risks to ensure mission success, crew safety, and the advancement of scientific knowledge. The paper begins by outlining the inherent technological complexities of space exploration endeavours. Harsh environments characterized by extreme temperatures, radiation exposure, and microgravity necessitate the development of robust and reliable spacecraft, life support systems, and scientific instrumentation. Next, the research focuses on specific technological risk areas. It examines challenges like single-event upsets (SEUs) induced by cosmic radiation in electronic components, the potential for cascading failures in complex systems, and the limitations of current propulsion technologies and their impact on mission timelines and feasibility. Furthermore, the paper explores the growing importance of automation and artificial intelligence (AI) in space exploration. While these technologies offer significant benefits in terms of autonomy, data analysis, and decision-making, they also introduce new risk factors. The research will address concerns regarding software bugs, unintended consequences of AI decision-making, and the need for robust fault tolerance mechanisms. Risk mitigation strategies form the core of this research. The paper will analyse approaches such as rigorous design verification and validation processes, redundancy in critical systems, and the implementation of fault detection and isolation (FDI) techniques. Additionally, the research will explore the potential of advanced materials science to create radiation-resistant electronics and spacecraft components. The importance of international collaboration in managing technology risks in space exploration is emphasized. Sharing best practices, pooling technical expertise, and establishing standardized protocols for risk assessment and mitigation will be crucial for advancing space exploration endeavours. Finally, the paper concludes by proposing a framework for a comprehensive technology risk management program in space exploration. This framework will encompass elements like proactive risk identification, continuous risk assessment throughout the mission lifecycle, and the development of adaptable mitigation strategies. By implementing such a framework, stakeholders can ensure the long-term success and sustainability of space exploration activities.

Keywords

Space Exploration, Technological Risks, Risk Mitigation, Automation and AI, Radiation-resistant Electronics

Leveraging Predictive Analytics for Strategic Risk Management in Global Supply Chains

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Abstract

In an increasingly interconnected and volatile global market, the strategic management of risks within supply chains is paramount. This paper explores the application of predictive analytics to enhance risk management strategies across global supply networks. The study begins by contextualizing the complexities and uncertainties inherent in modern supply chains, including geopolitical risks, natural disasters, and fluctuating demand patterns. The objective is to design a predictive model that utilizes large datasets from diverse sources to forecast potential disruptions and enable proactive risk mitigation. The methodology encompasses data collection, advanced statistical analysis, and machine learning techniques to identify risk patterns and predict their impact on supply chain operations. Results reveal that predictive analytics can significantly improve the accuracy of risk forecasts, allowing companies to develop more resilient and adaptive supply chain strategies. The conclusion underscores the critical role of predictive analytics in transforming risk management practices, advocating for its integration as a core component of strategic supply chain management.

Keywords

Predictive Analytics, Risk Management, Global Supply Chains, Strategic Management, Supply Chain Resilience, Machine Learning, Risk Forecasting, Data-Driven Decision Making

Utilizing ANOVA Techniques for Optimizing Resource Allocation in Project Management

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Abstract

Effective resource allocation is a critical component of successful project management. This paper explores the application of Analysis of Variance (ANOVA) techniques to optimize resource distribution across various project tasks. Traditional resource allocation methods often fail to account for the variability and specific needs of different project activities, leading to inefficiencies and potential project delays. The objective of this study is to demonstrate how ANOVA can be utilized to identify significant differences in resource requirements among project tasks, thus informing more precise allocation decisions. The methodology involves collecting detailed resource usage data from a series of past projects, including time, labor, and material costs associated with various activities. This data is subjected to ANOVA to analyze the variance in resource consumption across different tasks. By identifying which activities significantly deviate in their resource needs, project managers can allocate resources more effectively. Results indicate that ANOVA can pinpoint discrepancies in resource usage that traditional methods overlook, leading to more balanced and efficient resource distribution. This approach not only enhances resource utilization but also reduces overall project costs and improves timelines. The conclusion underscores the importance of incorporating ANOVA into project management practices. By leveraging statistical techniques, managers can make data-driven decisions that enhance resource efficiency, optimize costs, and ultimately improve project performance. This paper advocates for broader adoption of ANOVA in project management to achieve these benefits.

Keywords

ANOVA, Resource Allocation, Project Management, Optimization Techniques, Variance Analysis, Data-Driven Decision Making, Resource Efficiency, Project Performance

Implementing Six Sigma Methodology to Enhance Ethical Practices in Corporate Governance

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Abstract

The integration of Six Sigma methodology into corporate governance frameworks presents a novel approach to enhancing ethical practices within organizations. This paper examines the application of Six Sigma principles, traditionally used for quality control and process improvement, to the realm of business ethics. The objective is to demonstrate how Six Sigma can systematically identify and eliminate ethical lapses, thereby fostering a culture of integrity and accountability. The study begins with an overview of Six Sigma's DMAIC (Define, Measure, Analyze, Improve, Control) process and its relevance to ethical governance. The methodology involves a detailed analysis of ethical performance metrics within a corporate setting, followed by the application of Six Sigma tools to measure deviations from ethical standards, analyze root causes, and implement corrective actions. Key performance indicators (KPIs) related to ethical behavior, such as compliance rates, incident reports, and employee surveys, are utilized to gauge the effectiveness of interventions. Results from the application of Six Sigma to ethical practices reveal significant improvements in compliance and a reduction in ethical violations. These improvements are achieved through the systematic identification of problem areas and the implementation of targeted solutions. The conclusion highlights the dual benefits of this approach: not only does it enhance ethical standards, but it also strengthens overall corporate governance and stakeholder trust. By advocating for the integration of Six Sigma into business ethics, this paper underscores the potential for organizations to achieve higher ethical standards through structured, data-driven methodologies. The findings suggest that such an approach can lead to sustained ethical improvements and a more robust governance framework.

Keywords

Six Sigma, Business Ethics, Corporate Governance, Ethical Practices, DMAIC, Compliance, Root Cause Analysis, Stakeholder Trust