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OPTIMIZING IDENTITY MANAGEMENT: KEY STRATEGIES FOR EFFECTIVE GOVERNANCE AND ADMINISTRATION

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ABSTRACT

The significance of identity management has escalated in today's digital environment, where sensitive information is frequently at risk of breaches and unauthorized access. This research aims to investigate the best governance and administrative practices to enhance identity management systems, with a focus on security, privacy, and usability. By analyzing current industry standards, regulations, and technological advancements, the study intends to provide valuable insights for organizations seeking to improve their identity management capabilities. The research employs a mixed-methods approach, combining quantitative surveys and data analysis with qualitative interviews, to achieve a comprehensive understanding of current practices and challenges in identity governance and administration. Key components such as authentication, authorization, and access control are examined, with practical recommendations provided to enhance identity management strategies. The study emphasizes the importance of adopting role-based access control (RBAC), continuous monitoring and compliance, identity lifecycle management, and integrating identity governance with IT infrastructure. Additionally, it highlights the significance of effective password management, robust authentication measures, and the implementation of Single Sign-On (SSO) solutions to improve security and user experience. The research also underscores the critical role of data encryption and protection measures in safeguarding sensitive information and mitigating data breach risks. By adhering to best practices in identity management, organizations can strengthen their overall cybersecurity posture, ensure regulatory compliance, and build trust among stakeholders in an increasingly complex digital landscape.

KEYWORDS

Identity and Access Management, Digital Identity, Authentication, Authorization, Governance

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ANALYSIS OF MEDIA DISCOURSE ON INTELLECTUAL PROPERTY RIGHTS RELATED TO METAVERSE IN KOREA

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ABSTRACT

This study examines the evolving discourse on intellectual property rights (IPR) within the metaverse's Korean context, facilitated by the BIGKinds analytics program. As the metaverse transitions from a nascent concept to a complex reality, it reshapes digital interactions and poses new challenges for IPR, necessitating a comprehensive investigation into societal interest and legal discourse. The findings reveal a significant surge in metaverse-related IPR engagement over the past three years, aligning with the broader digital shift amid the COVID-19 pandemic. This pattern suggests an increasing need for nuanced legal approaches to copyright, trademark, and design patent protection in virtual environments. Thus, the urgency for legal reform to accommodate the metaverse's unique characteristics, the necessity for international collaboration on IPR in a borderless digital domain, and the intersection of technological advances, like NFTs and blockchain, with legal frameworks impacting creators' rights. As a result, this study provides policymakers and the digital community with real-time guidance on protecting intellectual property amid the transformative growth of the metaverse.

KEYWORDS

Metaverse, Intellectual property rights, BIGKinds, Discourse

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SECURITY AND PRIVACY PERCEPTIONS AMONG FEMALE ONLINE SOCIAL MEDIA USERS: A CASE STUDY OF BANGLADESH

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ABSTRACT

Online Social Networks (OSNs) such as Facebook are extremely popular in Bangladesh, not only to the younger generations, but also to the people from other age categories as well. However, due to different socio-technological factors, the security and privacy awareness of Bangladeshi Facebook users have remained questionable. This is also evident in the wake of a number of incidents reported while using Facebook, particularly involving women users. There have been a few research studies to investigate different security and privacy concerns of Bangladeshi users. However, none of the existing has is comprehensive enough focusing only on female users. In this paper, we aim to fill in this gap by presenting a study on security and privacy concerns while using different Online Social Networks such as Facebook among female users in Bangladesh. We conducted an online survey of 203 Bangladeshi female Facebook users. We analyzed the survey statistics to study the general trend of behavior, practices, and expectations pertaining to secure Facebook usage and different privacy preferences. The study reveals that female users are concerned about their data privacy, however, 67% participants feel safe and secure while using Facebook and 33% participants do not think that Facebook takes necessary steps to protect users' data privacy on the web. We suggest that such a study can help researchers identify the privacy concerns in using social networking sites/apps such as Facebook to focus on building secure and privacy-friendly technologies to protect users from online crimes and harassment in developing countries.

KEYWORDS

Online Social Networks, Facebook, Security, Privacy, Survey

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VOICE BIOMETRIC IDENTITY AUTHENTICATION MODEL FOR IOT DEVICES

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ABSTRACT

Behavioral biometric authentication is considered as a promising approach to securing the internet of things (IoT) ecosystem. In this paper, we investigated the need and suitability of employing voice recognition systems in the user authentication of the IoT. Tools and techniques used in accomplishing voice recognition systems are reviewed, and their appropriateness to the IoT environment are discussed. In the end, a voice recognition system is proposed for IoT ecosystem user authentication. The proposed system has two phases. The first being the enrollment phase consisting of a pre-processing step where the noise is removed from the voice for the enrollment process, the feature extraction step where feature traits are extracted from user's voice, and the model training step where the voice model is trained for the IoT user. And the second being the phase verifies whether the identity claimer is the owner of the IoT device. Based on the resources limitedness of the IoT technologies, the suitability of text-dependent voice recognition systems is promoted. Likewise, the use of MFCC features is considered in the proposed system.

KEYWORDS

Internet of Things, Authentication, Access control, Biometric, Voice recognition, Security, Cybersecurity

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PERUSAL OF INTRUSION DETECTION AND PREVENTION SYSTEM ON A MANET WITH BLACK HOLE ATTACK:ISSUES AND CHALLENGES

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ABSTRACT

MANET is a self configuring network of nodes which is a wireless . The nodes in this network move randomly .Mobility of nodes is more. The nodes are dynamic and infrastructure less ,self maintainable. In MANET there are many types of security attacks like Blackhole, greyhole attack, wormhole, jellyfish etc. When the MANET is under blackhole attack there is a loss of energy which is high at the node resulting in loss of battery backup and also excess of bandwidth may be consumed by the attacker. The attacker is an insider. Among various mobility models to generate mobility patterns the Random waypoint mobility model is used .To solve these issues an IDPS framework for MANET using image processing techniques under blackhole attack is proposed to detect the blackhole attack RREP by providing security services like authentication and confidentiality.

KEYWORDS

AODV, BLACKHOLE ATTACK, IDPS, MANET, RWM IMAGE PROCESSING.

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TRUST: DIFFERENT VIEWS, ONE GOAL

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ABSTRACT

A thorough review of trust models is carried out in this paper to reveal the key capabilities of existing trust models and compare how they differ among disciplines. Trust decisions are risky due to uncertainties and the loss of control. On the other hand, not trusting might mean giving up some potential benefits. Advances in electronic transactions, mutliagent systems, and decision support systems create a necessity to develop trust and reputation models. The development of such models will allow for trust reasoning and decisions to be made in situations with high risk and uncertainty. In recent years, several attempts have been made to model reputation and trust. However, perceiving trust differently and the lack of having a unified trust definition are among the main causes of the proliferation of many trust models across different disciplines.

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TECHNICAL ANALYSIS ON THE CYBER ORGANIZATIONAL CRIMINOLOGY OF DICTATORIAL MILITARY CONDUCTS EXPERIENCE FROM HUMAN TRAFFICKING AND COERCIONS BY MILITARY CYBER AGGRESSIONS

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ABSTRACT

The reformulated paper after the proceeding of the NCWMC 2022 recovers some previous manuscripts intercepted by the PLA of PRC for covert military operations with intrusions in global investment and financial systems. The crimes are analytically conducted through cloud servers and I/O for intelligence gathering. The information contained in the manuscripts with THEIR informatics not only could have led to further economic-financial surrogation of the PLA in American economy with investments, but also threats American national security through ontological calculation frameworks with artificial intelligence and further calculative power assertions - apart from the threats of outer space peace and security. It can be the reason behind the black hole and white hole observational results with the signal-satelliteinformation approach to general relativity manuscripts. A preliminary conception for defense strategy is proposed with previous insights and post facto security breaches to USA Space Command directly and national security conductively.

KEYWORDS

Space Command, National Security, Human Trafficking, Military Intelligence, Black Hole Information.

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A METHOD OF TRUST MANAGEMENT IN WIRELESS SENSOR NETWORKS

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ABSTRACT

The research problem considered in this paper is how to protect wireless sensor networks (WSN) against cyber-threats by applying trust management and how to strengthen network resilience to attacks targeting the trust management mechanism itself. A new method, called WSN Cooperative Trust Management Method (WCT2M), of distributed trust management in multi-layer wireless sensor networks is proposed and its performance is evaluated. The method is specified by giving its class model in UML and by explaining the related attributes and methods. Different attacks against the network and against WCT2M deployed in the network are considered. The experimental evaluation of WCT2M involves laboratory experiments and simulations using a dedicated simulator. The evaluation focuses on efficiency of detecting and isolating the malicious nodes that implement different attack scenarios in the network and on the method's sensitivity to the changes in effectiveness of the security mechanisms deployed in the network nodes.

KEYWORDS

Wireless Sensor Network; trust management; security threat; attack scenario; simulation

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DE-IDENTIFICATION OF PROTECTED HEALTH INFORMATION PHI FROM FREE TEXT IN MEDICAL RECORDS

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ABSTRACT

Medical health records often contain clinical investigations results and critical information regarding patient health conditions. In these medical records, along with patient health information, patient Protected Health Information (PHI) such as names, locations and date information can co-exist. As per Health Insurance Portability and Accountability Act (HIPAA), before sharing the medical records with researchers and others, all types of PHI information needs to be de-identified. Manual de-identification through human annotators is laborious and error prone, hence, a reliable automated de-identification system is need of the hour.

In this work, various state of the art techniques for de-identification of patient notes in electronic health records were analyzed for their performance, based on the performance quoted in the literature, NeuroNER was selected to de-identify Indian Radiology reports. NeuroNER is a named-entity recognition text de-identification tool developed by Massachusetts Institute of Technology (MIT). This tool is based on the Artificial Neural Networks written in Python and uses Tensorflow machine-learning framework and it comes with five pre-trained models.

To test the NeuroNER models on Indian context data such as name of the person and place, 3300 medical records were simulated. Medical records were simulated by extracting clinical findings, remarks from MIMIC-III data set. For collection of all the relevant Indian data, various websites were scraped to include Indian names, Indian locations (all towns and cities), and Indian Hospital and unit names. During the testing of NeuroNER system, we observed that some of the Indian data such as name, location, etc. were not de-identified satisfactorily. To improve the performance of NeuroNER on Indian context data, along with the existing NeuroNER pre-trained model, a new pre-trained model was added to handle Indian medical reports. Medical dictionary lookup was used to reduce number of misclassifications. Results from all four pre-trained models and the model trained on Indian simulated data were concatenated and final PHI token list was generated to anonymize the medical records to obtain de-identified records. Using this approach, we improved the applicability of the NeuroNER system to Indian data and improved its efficiency and reliability. 2000 simulated reports were used for transfer learning as training set, 1000 reports were used for test set and 300 reports were used for validation (unseen) set.

KEYWORDS

De-identification, Free text, Protected Health Information, Medical records, Radiology reports, Indian context data

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LOCATION PRIVACY ONLINE: CHINA, THE NETHERLANDS AND SOUTH KOREA

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ABSTRACT

The aim of the study is to explore cross-cultural differences in users' location privacy behaviour on LBSNs (location-based social networks) in China, the Netherlands and Korea. The study suggests evidence that Chinese, Dutch and Korean users exhibit different location privacy concerns, attitudes to social influence, perceived privacy control and willingness to share location-related information on LBSNs. The results show that in general, the more concerned users are about location privacy, the less they are willing to share and it also suggests that location privacy concern and social influence affect each other. Furthermore, the more control people perceive they have over their privacy, the more they are willing to share location information. A negative relationship between willingness to share location information and users' actual sharing of location information was seen. In short, it is concluded that the relation between cultural values and location privacy behaviours only have a partial connection.

KEYWORDS

Privacy online, individualism, social influence, Asia, Europe

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