



SRINIVAS UNIVERSITY

**Institute of Computer Science and
Information Science**

City Campus, Pandeshwar, Mangaluru – 575001

Karnataka State, India

Website: www.srinivasuniversity.edu.in

BOOK OF ABSTRACT

**One Day National Virtual Conference
30th June 2022**

On the theme

**Future and Innovation Technology in IT,
Management & Education**

Srinivas University, Mangalore

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SRINIVAS UNIVERSITY

City Campus, Pandeshwar, Mangalore-575 001

INSTITUTE OF COMPUTER SCIENCE AND INFORMATION SCIENCES

Cordially invite you to the Inaugural Function Of
National Conference On "Future And Innovation
Technology In IT, Management And Education"

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One Day National Virtual Conference
on
Future and Innovation Technology in IT,
Management & Education

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ZERO-CLICK ATTACKS

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ABSTRACT

A zero-click attack takes advantage of vulnerabilities in software to carry out an attack without user interaction. By exploiting this vulnerability, the exploit can install malware or perform other malicious interactions on a user's device without the target needing to click on a link, open a malicious file or take any other action.

A real-world example of this could be a vulnerability in an email messaging app on your phone. If a malicious hacker finds the vulnerability, all they'd have to do is send you an email message containing their bad code. Once the email is received, that code activates and infects the target phone, giving the hacker access to all the emails on your device. Even if the original email is deleted, the infection persists. And since we all delete emails we've read or don't recognize, chances are there won't be any trace of the attack left on your phone for a very long time.

Unfortunately, since these attacks are difficult to detect and require no user action to execute, they're tough to guard against. But good digital hygiene can still make you less of a target.

Keywords: Attacks

SOCIAL ENGINEERING & SCAM

Attempts in 2022

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ABSTRACT

Social engineering is a manipulation technique that exploits human error to gain private information, access, or valuables. Social engineering is an attack vector that relies heavily on human interaction and often involves manipulating people into breaking normal security procedures and best practices to gain unauthorized access to systems, networks or physical locations or for financial gain.

What makes social engineering especially dangerous is that it relies on human error, rather than vulnerabilities in software and operating systems. Mistakes made by legitimate users are much less predictable, making them harder to identify than a malware-based intrusion.

Social engineering fraud is a broad term that refers to the scams used by criminals to exploit a person's trust in order to obtain money directly or obtain confidential information to enable a subsequent crime. Social media is the preferred channel but it is not unusual for contact to be made by telephone or in person.

According to the InfoSec Institute, the following five techniques are among the most commonly used social engineering attacks.

1. Phishing.
2. Scareware.
3. LoopHole in software.
4. Spear phishing or whaling attack. ...
5. Cache poisoning or DNS spoofing. ...
6. Pretexting.
7. Baiting and spamming attacks. ...

Social engineering not only affects the organization and sectors, it also affects the normal individuals and people. They are at risk of losing their reputation and money as well as it will affect their mental health.

Keywords:- Social Engineering, scam, phishing, hacking, cyber attack

Paper 03

THE SUPERVISED MACHINE LEARNING AND ITS TYPES

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ABSTRACT

Supervised machine learning is the type of machine learning where machines are trained using well “labeled” data that is the training data, and on the basis of that data, machines predict the output. The training labeled data acts as a supervisor that teaches machines to predict results accurately. The aim of the supervised learning algorithm is to find a mapping function to map input with the output variable so that the output prediction is accurate. The test data is used to check the accuracy of the model trained if the predicted output variable is correct then the model is accurate. In the last decade a large number of supervised learning algorithms have been introduced which are mainly used for solving classification and regression problems. Supervised learning has become an area for a lot of research activity in machine learning. Supervised learning model helps us to solve various real-world problems such as fraud detection, image classification etc with its previous experience, but supervised learning cannot predict the correct output if the test data is different from the training dataset and also requires a lot of time to train the model.

Supervised Learning can be classified into two types of problems: classification and regression. Classification algorithms are used when the output needed is categorical like male-female or true-false. Some of the classification algorithms are Random Forest, Decision Trees. Regression algorithms are used when the output variable is continuous like weather forecasting or market trends.

Some of the regression algorithms are Linear Regression, Non-linear Regression. Supervised Learning is used to solve problems like fraud detection, spam detection, diagnostics, image classification, risk assessment score prediction etc by predicting the outputs accurately.

Keywords: Supervised machine learning, classification, regression, and labeled data, trainingdata, test data.

STEGANOGRAPHY

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ABSTRACT

In today's world, sensitive data is increasingly used in communication over the internet. Thus security of data is the biggest concern of internet users. The best solution is to use some steganography algorithm that encrypts data in images over the internet and again decrypts to original data. The field steganography deals with the procedure for conveying information securely. The goal is to allow the intended recipients of a message to receive the message properly

while interrupting eavesdroppers from understanding the message. Information technology includes a set of techniques for scrambling or disguising data so that it is available only to someone who can restore the data to its original form. In current computer systems, steganography provides a strong, economical basis for keeping data classified and for verifying data integrity. Thus, lightweight Steganography methods are proposed to overcome many of the problems of conventional cryptography. The advantage of steganography over cryptography alone is that the intended secret message does not attract attention to itself as an object of scrutiny. Plainly visible encrypted messages, no matter how unbreakable they are, arouse interest and may in themselves be incriminating in countries in which encryption is illegal. You can attach any kind of secret message file in an image file. You can hide images in BMP, GIF, JPEG, JPG, PNG and WBMP. You can hide data in these files and take output as a PNG file. The purpose of steganography is to conceal and deceive. It is a form of covert communication and can involve the use of any medium to hide messages. It is not a form of cryptography, because it doesn't involve scrambling data or using a key. Instead, it is a form of data hiding and can be executed in clever ways.

Keywords: Encryption, Cryptography, Algorithm, Steganography, Images, Decryption.

Paper 05

CRYPTOGRAPHY FOR COMMUNICATION SYSTEM

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ABSTRACT

In Today's world Sensitive data is increasingly used in communication over the internet. Thus Security of data is the biggest concern of internet users. Best solution is use of some cryptography algorithm which encrypts data in some cipher and transfers it over the internet and again decrypts to original data. The field of cryptography deals with the procedure for conveying information securely. The goal is to allow the intended recipients of a message to receive the message properly while interrupt eavesdroppers from understanding the message. Cryptography includes a set of techniques for scrambling or disguising data so that it is available only to someone who can restore the data to its original form. In current computer systems, cryptography provides a strong, economical basis for keeping data classified and for verifying data indigntiy. While our conventional cryptography methods, such for AES (encryption) and RSA (signing), work well on systems which have reasonable processing power and memory capabilities, These do not scale well into a world with embedded systems and sensor networks. Thus, lightweight cryptography methods are proposed to overcome many of the problems of conventional cryptography. This paper sets out to contribute to the general body of knowledge in the area of classical cryptography by developing a new hybrid way of encryption of plaintext. The cryptosystem performs its encryption by encrypting the plaintext using Vigenere Cipher and further using the ciphertext to encrypt the plaintext again using Polybius Cipher. Information security can be summed up to info, a group of steps, procedures, and strategies that are used to stop and observe illegal access, troubleshooting, revelation, perturbation and adjustment of computer network sources.

Enhancing the privacy, eligibility and reliability of the work requires a lot of work to strengthen the current methods from constant trials to break them and to improve new ways that are resistant to most kinds of attacks, if not all. Accordingly, it was proven that encoding is one of the most reliable strategies used to secure information since the ancient days of the Romans who used similar methods to enable security on their valued information and documents Cryptography is the art of creating written or generated codes that allow information to be kept secret. Cryptography converts data into a format that is unreadable for an unauthorized user, allowing it to be transmitted without unauthorized entities decoding it back into a readable format, thus compromising the data. Information security uses cryptography on several levels. The information cannot be read without a key to decrypt it.

Cryptography is the technique of securing information and communications through use of codes so that only those people for whom the information is intended can understand it and process it. Thus preventing unauthorized access to information. The prefix "crypt" means "hidden" and the suffix graphy means "writing".

Keywords: Encryption, Cryptography, Algorithm, Ciphers

Paper 06

EMERGING TRENDS IN COMPUTING & NETWORKING TO BUILD INFORMATION SUPERHIGHWAYS

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ABSTRACT

The information superhighway is a term used during the last part of 20th century to represent the national communication network to access and exchange information via data, voice, video, and other services. Currently, information superhighways are used to rapidly access and exchange big data (audio, video, and text digital data) through super high-speed networks especially using optical soliton-based communication through optical fibers.

An old model of information Superhighway consists of hardware such as computers, modems, routers, switches for computer networks, set-top boxes for television networks and software platforms such as browsers and operating systems. But 21st century information superhighways are predicted for individual industries or industry sectors with open access to every information belonging to that industry. In such a system, no registration or subscription of availing information is required. It is planned that through proper networking, information superhighways allow the group of systems of one category that consist of human brains and super computers/quantum computers to share and exchange information for fast and better decision making.

In this paper, the possibility of developing information superhighways for some specified networks and industries is discussed with special reference to (1) Information as Resource in Business, (2) ICCT as Enabler in Business & Education, (3) ICCT Underlying Technologies, (4) Computing & Networking in Business & Education, (5) Information Superhighway Concept, (6) Connecting Computers & Brains through microchip, and (7) A Case Study on Neuralink (owned by Tesla CEO Elon Musk) and its research on connecting human brains and supercomputers through neural interface technology to realize information superhighways for specific industry/ industry sectors in near future. It is anticipated that Neuralink, through its brain implantable microchip, can change the world by 2030 by allowing people to upgrade their brains with machine intelligence via an implantable neural lace. This technology also helps people to upgrade their human abilities with Artificial Intelligence (AI) and get a whole new version of themselves.

Keywords: Information superhighways, Industry-wide information, Computing and networking devices and concepts, High speed computing, Optical solitons in communication, Optical fibers for infinite bandwidth, Brain-computer network, Neuralink

Paper 07

STUDY ON IT SERVICES AND PRODUCT OF WIPRO LIMITED IN ASIAN MARKET

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ABSTRACT

Wipro Limited (Wipro) is a global information technology (IT) services company. Wipro provides outsourced research and development, infrastructure outsourcing, business process outsourcing (BPO) and business consulting services. The Company operates in three segments: IT Services, IT Products, Consumer Care and Lighting. The IT Services segment provides IT and IT enabled services to customers. The IT Products segment sells a range of Wipro personal desktop computers, Wipro servers and Wipro notebooks. The Company is also a value-added reseller of desktops, servers, notebooks, storage products, networking solutions and packaged software. The Consumer Care and Lighting segment manufactures, distributes and sells personal care products, baby care products, lighting products and hydrogenated cooking oils in the Indian and Asian markets. On June 10, 2011, the Company acquired the Commercial Business Services Business Unit of Science Applications International Corporation (SAIC).

Keywords: Wipro Limited, Asian Market.

Paper 08

A STUDY ON OPERATIONAL AND BUSINESS LEVEL SERVICES TOWARDS SUSTAINABLE GROWTH OF ACCENTURE IN THE WORLD MARKET

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ABSTRACT

Background/Purpose: In this study, we discussed and analyzed the major services of the top IT company by studying its services to solve the client's problems and to face future challenges using various case study methodologies. Company analysis may be a quiet research method to know the performance, opportunities, and challenges of a corporation by identifying various issues in internal and external environments and therefore the decision's taken and yet there to be taken to optimize the solution. It also involves unique features and important comments on a selected company and its business at the operational level, business level and company level. This paper includes the company's strength and also the weakness done by analysis.

Objective: This work is carried to understand the concepts of operation level and business level scheme of the IT Company. To explore the growth, challenges, strategies and all possible opportunities of the company.

Design/Methodology/Approach: Accenture radically provides a blueprint for clients to create business value while building a more human centered, trust based and sustainable enterprise. From the block chain, to meta-verse, to emotional AI, digital technologies are rapidly developing.

The Breakdown of today's most advanced human-inspired technologies and actionable Ideas, framework are explained to help the client and people to understand the innovation in a completely new way. Every day the organization collects a wealth of service related data and translates those insights into revenue growth. **Findings/Results:** Accenture is a global professional services company based in Dublin for tax purposes. Specializing in information technology (IT) services and consulting. A Fortune Global500 company .Accentures current clients include 91 of the Fortune Global 100 and more than three-quarters of the Fortune Global 500. It has been incorporated in Dublin, Ireland, since 2009. Accenture is one of the fastest leading global management consulting, technology services and outsourcing companies, headquartered at Dublin, Ireland. Julie Sweet is CEO of Accenture.

Accenture leads with capabilities in digital, cloud and security. Combining unmatched experience and specialized skills across more than 40 industries, Accenture offers Strategy and Consulting, Song, Technology and Operations services all powered by the world's largest network of Advanced Technology and Intelligent Operations centers. Over 699,000 people deliver on the promise of technology and human ingenuity every day, serving clients in more than 120 countries.

Conclusion: In this paper, we have discussed the main reasons for the sustainable growth of Accenture in the world market. The company business strategy is a model for other companies in this industry and teaches that every company should follow the long-term goal, planning, correct decision making at the right time, maintaining good relations with employees, customers and stakeholders for prosperous growth.

Keywords: Growth, Accenture, World market.

Paper 09

A COMPREHENSIVE STUDY OF AUTHENTICATION ECOSYSTEM AND BIOMETRIC SECURITY IN AADHAR

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ABSTRACT

The Indian Department of Information Technology introduced the idea of a universal electronic ID as part of an endeavor to give distinctive identification for each citizen across the nation. The goal of Aadhaar Authentication is to offer a digital, online identification platform so that the identity of people with Aadhaar numbers may be instantaneously verified whenever and wherever they choose. Individual information must be kept secure because Aadhaar numbers are linked to bank accounts, shares, mutual funds, and even mobile phones. Individual protection and information security are incorporated into the design of the UID project.

The UIDAI act prevents the collection of sensitive personal data such as religion, caste, community, class, ethnicity, income, and health. Individual profiling is thus not possible using the UID system because the data collected is constrained to that required for identification and identity clarification. This paper focuses on UIDAI authentication and its security measures.

Keywords: Aadhaar Authentication, UIDAI, biometric devices, CIDR, AUA, ASA

BREAST CANCER PREDICTION USING MACHINE LEARNING AND TENSOR FLOW

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ABSTRACT

Breast Cancer is one of the most significant reasons for death among ladies. Much research has been done on the diagnosis and detection of breast cancer using various image processing and classification techniques. Nevertheless, the disease remains as one of the deadliest diseases found in one out of six women in her lifetime. Since the cause of breast cancer stays obscure, prevention becomes impossible. Thus, early detection of tumors in the breast is the only way to cure breast cancer. Using CAD (Computer Aided Diagnosis) on mammographic images is the most efficient and easiest way to diagnose breast cancer. Accurate discovery can effectively reduce the mortality rate brought about by using mamma cancer. Masses and microcalcifications clusters [5] are an important early symptoms of possible breast cancers. They can help predict breast cancer at its infant state. The image from the DDSM Database [15] (Digital Database for Screening Mammography) which contains approximately 3000 cases and is being used worldwide for cancer research. This project quantitatively depicts the analysis methods used for texture features for detection of cancer. These texture features are extracted from the ROI of the mammogram to characterize the micro calcifications into harmless, ordinary or threatening. These features are further compared and passed through Machine learning algorithm for better understanding of the cancer pattern in the mammography image. The application is intended to use for predicting the presence of breast cancer based on the image uploaded. Initially the app is trained with the sample images for both tumorous and non- tumorous using Tensor Flow through which the model learns on the pattern. The trained model is deployed using Flask in python which acts as an API and connects the frontend HTML with the backend script. In this application an image is taken as input to the model for processing and the result is predicted. Two labels are taken into consideration such as benign and malignant.

Keywords: Machine Learning, Tensor Flow, Prediction Analysis, Feature Extraction.

Paper 11

INTELLIGENT POLICE PATROLLING SYSTEM TO FASTEN RESPONSES IN EMERGENCIES AND DISASTERS – A FRAMEWORK

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ABSTRACT

Background/Purpose: At present with the advent of the pandemic life is restricted to the four walls of the house. The most important requirement is the connectivity with the world not physically but through the internet. Hence the concept of IOT-internet of things where every objects are accessible by its position is becoming the need of the hour.

IoT can help connectivity of every machine making human life easier, safer and comfortable. The distance does not matter as long as the connectivity is good and the machine is connected. While it is difficult for human to human interaction and computer to human interaction, it is also important that the connectivity between these must be good to send and receive information. Objective: Through this paper the authors have tried to bring out an important aspect of human

security. The job of a police and the importance of patrolling is given a new dimension. While the police need to do the patrolling physically it is almost impossible to be present everywhere and specially in the location of crime. Police patrolling is supposed to be one of the most important

security in the lives of common man in order to curb crimes and reduce criminal activities by providing a secured and healthy environment by providing a quick response to any kind of emergencies and disastrous motives. This concept of police patrolling has become an important aspect of a police job as a key role to provide security from 1829 in England when the concept of “New Police” was established as a part of routine police patrolling.

Authors Wise and Cheng describe the creation of guardianship to remind the common man about the rules and law and also creating an awareness among potential criminals who may be the criminals associated with committing crimes. Hence the presence or the absence of the police physically in a particular area could be an important aspect for committing crimes. Thus, one of the primary aims of proactive thinking and aiming to prevent crimes police patrolling claims to provide a secured Ambience. Design/Methodology/Approach: This paper develops a framework of a flexible system which moves in a predefined location and collects crime noise, and location information like crime geographic location, crime images and send these

data as an alarm to the nearby police station so that action could be taken immediately and the crime can be stopped or criminals could be caught in order to provide safety and protection to the citizens in every area without being present physically. This paper suggests the concept of an interface of virtual reality which takes the binary file as the input which is in 3DS format and maps the textures which are obtained from the 3D modeling of the Police patrolling IDE using OpenGL. This concept also uses the data stored as an array to render the surroundings based on OpenGL. Finally, the interaction between human and machine displays the 3D Model such that the users can further rotate the virtual model for different angles of view using the respective Omni direction browsing algorithm. Findings/Results: It was experimented and found that despite the goal, the physical police patrolling is rather an ineffective mode of policing meant for reducing crimes and also the public's fear for crimes. So the need for focused proactive patrolling at specific geographic locations may help in reducing the crimes and this is also known as hot spots policing.

Conclusion: The authors made an extensive study and found various routing strategies which are completely based on hot spot policing even though it is observed that in many jurisdiction, this the concept is in use as a routine in a number of places which are predefined as high crime spots and they are not constrained geographically.

Paper Type: Research paper on the success story and contributing factors of intelligent police patrolling system to fasten responses in emergencies and disasters

Keywords: Police patrolling, hot spot policing, virtual reality interface, texture maps.

Paper 12

ASSESSING THE INFLUENCE OF SOFT SKILL TRAINING ON STUDENTS EMPLOYABILITY – A STUDENT’ PERSPECTIVE

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ABSTRACT

The education system today is changing drastically and there is a dire need to infuse students with both hard and soft skills that the corporate world expects. Employers do not look for individuals with only excellent academic records and experience. To excel in the corporate world one needs to be self-directed, ethical and most importantly resourceful with good interpersonal skills. Dearth in the candidates meeting these requirements is causing decrease in the placement drives at institutional levels. This paper aims at understanding the influence of soft skills training on the employability of students and thereby emphasizing the importance of incorporating soft skill training as part of the curriculum at the institutional level. The study takes into account the responses of students from various institutions with and without exposure to soft skill training programmes in order to assess the influence of soft skills training on their employability.

Keywords: Soft Skill, Training, Personality Development, Employability

BLOCKCHAIN-BASED TRUST MANAGEMENT PROTOCOL FOR IOT NETWORKS USING MACHINE LEARNING APPROACH

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ABSTRACT

Blockchain (BC) technology is integrated with trust-based system protocols to enhance the security, privacy, access control, and availability of IoT nodes. Further, this strategy with help of machine learning (ML) algorithms provides multifold benefits in terms of reducing uncertainty and risk involved in decision-making processes through a decentralized and distributed trust architecture. Traditional approaches are incurring more overheads for identifying and establishing communication among the shared services or resource providers and also, fail to protect the trust evaluation model from the influence of the malicious nodes, finally tampering the output adversely that make an untrusted environment for smart devices without performing anticipated operations. Any centralized approach is always susceptible to a single point of failure where the recovery to the normal state from the maliciousness is an implausible task, so the smart networks can't perceive with such approaches. Hence, an IoT network needs an intelligent trust model where data storage in blockchain ought to be transparent, traceable, immutable, distributed, and secondly, machine learning protocols must perform well ensuring malicious transaction prevention. The storage and analytic features from the highlighted technologies above are leveraged in this work to establish truly distributed modeling for similar network ecosystems. Moreover, in this work, the effectiveness of our proposed approach would be realized in segregating the recommendation data received from different neighbor nodes for the trust assessment phase and then, classifying the nodes (trusted and malicious nodes) in computation phases of the trust model. The performance of this adaptive trust management model is measured through different network parameters against the simulation time and trust score to prove its advantages in terms of improving throughput, network lifetime, energy consumption, and then addressing trust-based attacks by nullifying malicious activities over conventional models.

Keywords: IoT, BlockChain, Machine Learning, Deep Learning, Trust Management, Trust-based Attacks, Malicious nodes.

Paper 14

EXPLORING THE CONTENT OF NEWSPAPER USING THE AUGMENTED REALITY APPLICATION

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ABSTRACT

Newspapers provide coverage of a country's economy, sports, games, entertainment, trade, and commerce. Reading the newspaper would be an excellent ritual to develop, it has already become a part of everyday life. This habit will enhance your knowledge and broaden your horizons. We can learn about the current condition of any incident by reading the newspaper; to learn more about it and pique the readers' curiosity, we are developing an augmented reality application. By incorporating a digital aspect into the printed material, it helps to bring the content of the magazine to life. It allows users to view a video, animation, or other unexpected content that appears on a page of their newspaper. When an augmented reality programme and the camera software on a smartphone or tablet work together, the illusion is generated. For the illusion to operate, the newspaper must be viewed through the mobile device's camera. Our paper main goal is to take a physical newspaper and use augmented reality objects to increase the variety of information it gives, such as buttons to movies, links, YouTube, 3D models, and so on. We've combined augmented reality with the newspaper here. Using a marker, when you display markers in augmented reality, a computer identifies them and projects objects over them. You'll need a newspaper with a marker and a smartphone with a non-standalone app that recognises the marker. It could be a newspaper image or a QR code. Integrating the traditional method AR experience is one of the best methods for print media to stand out from the crowd. In this work, we use the Vuforia Engine tool and Augmented Reality Tools approach to design and develop a newspaper with Augmented Reality approaches to improve user usability.

Keywords – Vuforia Engine, News Paper, Augmented Reality, Marker – based AR, Illusion, 3D models, QR code, Smart Phone, Print Media.

Paper 15

ANALYSIS OF 0-DAY SECURITY VULNERABILITIES USING CISA KEV CATALOG

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ABSTRACT

Security vulnerabilities cause damage to the reputation and financial status of an organization. The damage is more serious when organizations are unaware of the security vulnerability. An active exploitation study is required to prepare organizations to protect from Zero Day (0-Day) security vulnerabilities. Governments publish security alerts and necessary details for organizations to define their security practices. This paper uses Cybersecurity and Infrastructure Security Agency's published known exploited vulnerability catalog to analyze the 0-Day security vulnerabilities. We also provide possible suggestions to protect software solutions from 0-Day vulnerabilities.

Keywords: Security, CISA KEV Catalog.

Paper 16

A STUDY ON ANDROID SMARTPHONE ACCESSIBILITY FEATURES TO BRIDGE ACCESS-DIVIDE FOR SPECIALLY CHALLENGED USERS

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ABSTRACT

Background/Purpose: Specially challenged people face difficulty to access information and services. They seek the support of assistive tool to get their work done. The easily accessible and affordable smartphone has become primary assistive tool. Due to the loss or defect of one or multiple sensory organs, the specially challenged (Divyang) can't access the smartphone features the way general users access. It is worth to discuss the special features available for easy access of information and services.

Objective: To study the smart features and train specially challenged to access the services and information.

Approach: Analysis and presentation of features available on device, information available collected from scholarly articles, web articles.

Findings: Based on the study through various resources, hands-on experience of device usability, it is observed that the add-on features in Android smartphone works like the "Third-eye" for the people with special needs.

Research Implications: The analysis and Solutions mentioned in this paper are limited to Android operating systems, focuses only on Vision, Hearing and Physical challenged people.

Paper Type: Review paper on accessibility especially for specially challenged android smartphone users.

Keywords: Accessibility, Assistive Tool, Access Divide, Divyang, Android.

Paper 17

ENERGY CONSUMPTION ANALYSIS AND EVALUATION OF COMMUNICATION TECHNOLOGIES IN WIRELESS SENSOR NETWORKS

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ABSTRACT

The wireless sensor networks can be used in agriculture to increase the crop yields and improve the quality of the agriculture output. The proposed systems use low-cost wireless technologies such as LORA, Zigbee and Wi-Fi. The proposed system is based on technologies with low-energy requirements and with cheaper resource requirements. The Wireless Sensor devices requires energy to run wirelessly and to communicate with the other nodes and base nodes. The energy monitoring of the wireless devices plays a crucial role in wireless communication. The system proposed uses three wireless communication technologies and its energy usage during the communication and ideal period is analyzed by applying advanced techniques, and it is found that error rate is 7% lesser and it is also concluded that LoRa wireless technology can sustain for longer period.

Keywords: Wireless Sensor Network, Agriculture

A CASE STUDY ON PRODUCTS AND SERVICES OF COGNIZANT

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ABSTRACT

Background/Purpose: In this study, we discussed and analyzed the major services of the top IT company by challenges using various case study methodologies. Company analysis maybe a quite research method to know the performance, opportunities, and challenges of a corporation by identifying various issues in internal and external environment and therefore the decision's taken and yet there to be taken to optimize the solution. IT also involves unique features and important comments on a selected company and its business at the operational level, business level and company level. This paper includes the company's strength and also the weakness done by analysis.

Objective: This work is carried to understand the concepts of operation level and business level scheme of the IT Company. To explore of the growth, challenges, strategies and all possible opportunities of the company.

Design/Methodology/Approach: Cognizant radically provides a blueprint for client to create business value while building a more human centered, trust based and sustainable enterprise. From the block chain, to meta-verse, to emotional AI, digital technologies are rapidly developing. the breakdown of today's most advanced human-inspired technologies and actionable Ideas, framework are explained to help the client and people to understand the innovation in completely new way. Every day the organization collects a wealth of service related data and translate those insights into revenue growth.

Findings/Results: Cognizant is a global professional services company based in Dublin for tax purposes. Specializing in information technology (IT) services and consulting. A Fortune Global 500 company. Cognizant's current clients include 91 of the Fortune Global 100 and more than three-quarters of the Fortune Global 500. IT has been incorporated in Dublin, Ireland, since 2009. Cognizant is one of the fastest leading global management consulting, technology services and outsourcing company, headquartered at Dublin, Ireland. Julie Sweet is CEO of Cognizant. Cognizant leads with capabilities in digital, cloud and security. Combining unmatched experience and specialized skills across more than 40 industries, Cognizant offer Strategy and Consulting, Song, Technology and Operations services all powered by the world's largest network of Advanced Technology and Intelligent Operations centers. Over 699,000 people deliver on the promise of technology and human ingenuity every day, serving clients in more than 120 countries

Area of the Paper: Computer Science.

Type of the Paper: Research Case Study.

Keywords: Cognizant, Products and Services, IT analysis, Fortune Companies.

A STUDY ON PRODUCTS AND SERVICES ON SAP

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ABSTRACT

Background/Purpose: In this study, we discuss and analyze the evaluation of IT Company. Company analysis includes examination of a company, its financial health and prospects, its management activities and its strengths and weaknesses. Here, we discuss products and services, business-cycle sensitivities and statistical similarities opportunities and challenges of a corporation by identifying various issues in internal and external environment.

Objective: This work is carried to understand the concepts of strategy analysis, business level and operational level scheme of the IT Company. To explore growth, strategies, challenges and all opportunities of the company.

Design Methodology Approach: SAP innovation connects all parts of a business into an intelligent suite on a fully digital platform. Its innovation modules include human resources, finance, sales, and few more. Depending on the clients requirements they can purchase business modules to fit their needs. As SAP is enterprise application software, it helps companies in all industries of all sizes to run their best.

Findings/Results: SAP is a German multinational software corporation based in Walldorf, which develops enterprise software to manage customer relations and business operations. It is specially known for ERP – enterprise resource planning software. It has long established record of business success in pre-packaged software since the 70s. SAP AG is a recognized market leader by industry analysts. SAP illustrates how a software firm can be developed by adopting various models.

Conclusion: In this paper, we have discussed the main reasons for the sustainable growth of SAP in the world market. The company software provides multiple business functions with a single view of the truth. This helps companies better manage complex business processes by giving employees of different department easy access to real-time insights across the enterprise.

Paper Type: Case study-based IT Analysis

Keywords: Systems, Applications, and Products in Data Processing, SAP AG and SAP SE.

Paper 20

WHY AMAZON WEB SERVICES ARE POPULAR IN CLOUD COMPUTING? -A CASE STUDY

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ABSTRACT

Cloud computing is the latest trend of the 21st Century which has made all business upfront costs or capital expenditure very minimum and on-demand service provision model. When we discuss cloud computing concepts everyone remembers or recalls the name of Amazon Web Services (AWS). Amazon web services provide countless services with minimum cost and are affordable to all. AWS offers excellent opportunities for start-ups. Medium-scale and big companies start their business with minimum cost and effort. AWS cost grows based on the customer usage based on the typical characteristics of cloud computing pay as you use. There are many social welfare initiatives by the AWS. In this paper, we compare the AWS services with other similar service providers and analyse them. This paper mainly focuses on the security and reliability services of cloud computing. This paper also describes various services available in AWS Console Management. As the business model focuses on flexible usage customers are always not worried about whether they should rethink the usage of cloud services in terms of Cost. This paper will help the researcher to know why AWS services are so popular and how they benefited to various types of companies.

Keywords: Amazon Web Services, Case Study, AWS Management Console, Cloud Computing



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