DEPARTMENT OF COMPUTER SCIENCE AND ENGINEERING

TECHNICAL MAGAZINE

TECH SPARK

ACADEMIC YEAR : 2022-23

VOLUME 1 / ISSUE 1

(JUL-DEC)

HALF YEARLY COMPUTER SCIENCE ENGINEERING MAGAZINE

AY: 2022-23   VOLUME: 1   ISSUE: JUL-DEC

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Editorial Message

Well-written technical articles contribute to the total body of knowledge for the engineering community and will potentially help many engineers. Articles do not need to be detailed "academic-level" work. In fact, some of the most popular articles are "down to earth" practical applications of existing or new technology.

Editorial Board

VISION-MISSION

VISION

To develop as a lead learning resource centre producing skilled professionals.

MISSION

DM1: Provide dynamic and application oriented education through advanced teaching learning methodologies.

DM2: Create sufficient physical infrastructural facilities to enhance learning.

DM3: Strengthen the professional skills through effective Industry- Institute Interaction.

DM4: Organize personality development activities to inculcate life skills and ethical values.

PROGRAM EDUCATIONAL OBJECTIVES (PEOs)

Graduates of B. Tech in Computer Science and Engineering program shall be able to

PEO1: Develop expertise in logical reasoning, analysis and design to solve Computer Science and Engineering problems.

PEO2: Competent to work as an individual or team member contributing to research and solve real world problems.

PEO3: Involve in multi disciplinary teams by imparting interpersonal skills and ethical behaviour.

PEO4: Engage in life long learning for career enhancement and professional growth.

MAC ADDRESS AND ITS IMPORTANCE IN NETWORK MANAGEMENT

With the increasing number of devices connected to networks, network management has become increasingly complex. For a network to be effectively managed, it is necessary to be able to identify the devices connected to it. In order to accomplish this, a MAC Address lookup may be used.

MAC (Media Access Control) addresses are unique identifiers assigned to network interface controllers (NICs) for use as network addresses within a network. MAC addresses are used by the data link layer of the network protocol stack, which is responsible for transmitting data between adjacent network nodes. Every NIC has a unique MACaddress assigned to it by the manufacturer.

MAC lookup is the process of searching a database to determine the manufacturer of a particular network device based on its MAC address. This can be useful in troubleshooting network issues and identifying devices on a network. There are many websites and tools available online that allow you to perform MAC lookup by entering a MAC address.

MAC lookup allows network administrators to identify the devices that are connected to their networks. This can be useful in detecting unauthorized devices or identifying devices that are causing problems on the network.

When there is a problem on a network, MAC lookup can be used to identify the device that is causing the problem. For example, if a network is experiencing slow speeds, MAC lookup can be used to identify the devicethat is using the most bandwidth.

MAC lookup can be used to enhance network security. By identifying the devices that are connected to a network, network administrators can ensure that only authorized devices are connected. This can help prevent unauthorized access to the network.

MAC lookup can be used for asset management. By identifying the devices that are connected to network, network administrators can keep track of their network assets and ensure that they are properly maintained.

Dattam Pallavi(192U1A0527)

HOW AI TECHNOLOGY CAN HELP YOU OPTIMIZE YOUR MARKETING

Artificial intelligence allows machines to complete tasks in a very efficient manner. AI is becoming more popular in the world of digital marketing due to its advanced and sophisticated algorithms. Different organizations and marketing teams prefer AI technologies to improve efficiency and the customer experience. In this article, I have collected data about how AI technology can help you optimize your marketing.

Artificial intelligence technology helps marketers by automating many time-consuming and repetitive tasks. Indeed, it allows marketers to focus on the creative aspects of their professions. It can also help marketers acquire data about their target audience. Artificial intelligence can be used to customize the buying process. More than ever, it can also help in dealing with consumer data analysis, evaluation, customer insights, and targeting. What is Artificial Intelligence?

Artificial Intelligence in marketing (also known as AI marketing) is a technique that uses data and machine learning to provide campaigns that help companies achieve their goals more successfully. The majority of marketers use AI for data science, real-time campaign analysis, and market research. Read the article thoroughly to know more about the impact of AI tools in marketing.

Benefits of AI for Marketing

Companies can use artificial intelligence to improve their marketing. The following are the advantages of AI in marketing.

· AI can automate routine marketing tasks such as email sending and scheduling, as well as analyze campaign insights.

· It also helps by customizing experiences for both marketers and customers.

· Speed, efficiency, and personalization are important aspects of any marketing campaign, and AI can help predict and enhance these aspects.

Golla Rakesh(192U1A0537)

INTRUSION DETECTION SYSTEM

With the ever-increasing sophistication of cyber attacks, it's becoming more and more important to have robust security measures in place to protect your computer network. One of the most effective ways to do this is through an intrusion detection system (IDS). In this article, we'll take a closer look at what an IDS is, how it works, and why it's essential for maintaining the security of your network.
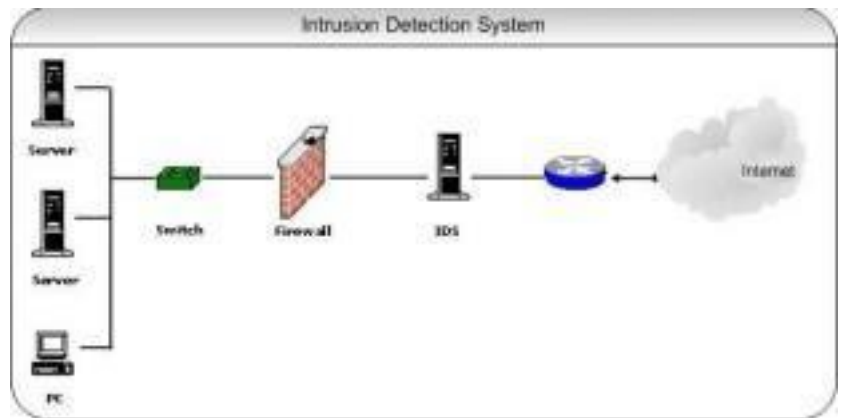
An IDS is a security tool designed to monitor network traffic and detect any suspicious or unauthorized activity. It works by analyzing network packets and comparing them against a database of known attack signatures, looking for any signs of malicious activity. If it detects something suspicious, it will generate an alert, allowing administrators to investigate the incident and take appropriate action.

There are two main types of IDS:

1. host-based and network-based. Host-based IDS (HIDS) run on individual computers, monitoring system activity and detecting any unusual behavior.

2. Network-based IDS (NIDS), are placed at strategic points throughout the network, monitoring traffic as it passes by.

An IDS uses a combination of signature-based and anomaly-based detection to identify potential security threats. Signature-based detection involves comparing network traffic against a database of known attacksignatures. These signatures are created by analyzing the behavior of known malware and other types of attacks, allowing the IDS to quickly identify them if they appear on the network.

Anomaly-based detection, on the other hand, involves analyzing network traffic for any patterns that deviate from normal behavior. This can include unusual levels of traffic, unexpected protocols or ports, or other anomalous behavior that could indicate a potential attack.

Once the IDS has detected something suspicious, it will generate an alert, which can be sent to the system administrator via email or other notification methods. The administrator can then investigate the incident and take appropriate action, such as blocking traffic from a specific IP address or disconnecting a compromised device from the network.

Pydimarry Rishitha(192U1A0588)

CLOUD COMPUTING SERVICE PROVIDERS

Amazon Web Services:

AWS (Amazon Web Service) seems to be an extensive cloud computing service that enables end-to-end facilities such as simulated systems and data warehouse management. It really is accessible in 245 countries as well as regions around the world.

AWS incorporates Amazon Redshift but also Amazon EMR, all of which contend with Snowflake in various areas. Amazon Redshift seems to be a managed hosting data warehouse which streamlines analysis of the data through the use of standard SQL. Consumers utilize their core Enterprise tools to examine their information.

Snowflake's information processing and handling remedies start competing with Amazon EMR. One such web based system makes big data analysis easier. AWS's overall income for 2020 has been $45.3 billion, to earnings of $13.5 billion.

Microsoft:

Microsoft was a very well software company that provides equipment, applications, and cloud computing through Azure. In the Data Management Systems (DBMS) classification, the firm's SQL Server needs to compete with Snowflake. One such solution allows developers to create better insights into the selected language.

In addition to Snowflake, Microsoft offers Azure Data Lake Store as well as Azure Synapse Predictive analysis, which also start competing in big data analysis and data storage of goods. Microsoft has a market edge over Snowflake due to its 3 trying to offer and significant improvements. Snowflake, on the other hand, is less expensive in all 3 groups.

Google:

Google is a technological as well as search engine behemoth. The company offers effective solutions that compete with Snowflake. Ways to analyze big data in the cloud with Google SQL queries as well as run SQL like queries against multi-terabyte sets of data in secs. BigQuery serves as a reservoir that is marginally cheaper than Snowflake disk space.

Snowflake outperforms BigQuery inside a head-to-head connection speed. It takes 8.21 seconds to complete an inquiry, whereas BigQuery takes an average of 11.18 seconds. Snowflake as well as BigQuery 2.0 use both SQL Language.

Shaik Salma(192U1A05A5)

GRAPHICAL PASSWORD AUTHENTICATION

Now a day's people do not go to a bank to make a transaction, do not go to an Electric board to pay bill, do not go to railway station to make a train reservation and what not. All these time consuming and non productive tasks are simplified

Mark five blocks where mountain is visible

because of Internet (Read more on How Internet works?). To carry out these tasks everyone hits respective portals/sites or make use of a smart phone app. There are many such areas where we need human interaction with computers and these systems should be secured against Cybercrime (Read more on Cyber Crime). User authentication is the most fundamental component in all computer security systems.

Security practitioners and researchers have made their efforts to protect systems and correspondingly, individual users' digital assets. Because of increasing threats over the internet or networked computer systems, there is great need for preventions of such activities. We use alphanumerical usernames and passwords for authentication purpose but studies shows that user can only remember a limited number of passwords. They tend to note them down somewhere or will use the same passwords for different accounts. In some cases, to avoid the complexity, users often pick passwords that is simple and easy to remember.

Biometrics is one of the various alternatives to increase the security but it requires lot of investments. To increase security to next level, some researchers have developed authentication methods that use pictures as passwords or a second level of authentication. So, in this article we will deal with another alternative: using image as passwords. The below image is used for spam prevention as a second level of authentication.

Graphical passwords were first introduced by BLONDER in 1996. A graphical password is an authentication system which allows the users to select from images, in a specific order, presented in a graphical user interface (GUI). Graphical passwords can be easily remembered, as users remember images better than words. Graphical passwords techniques are categorized into two main techniques: recall-based and recognition-based graphical techniques.

Allam Pati Srilakshmi(202U1A0502)

Polisetty Malasri(202U1A0580)
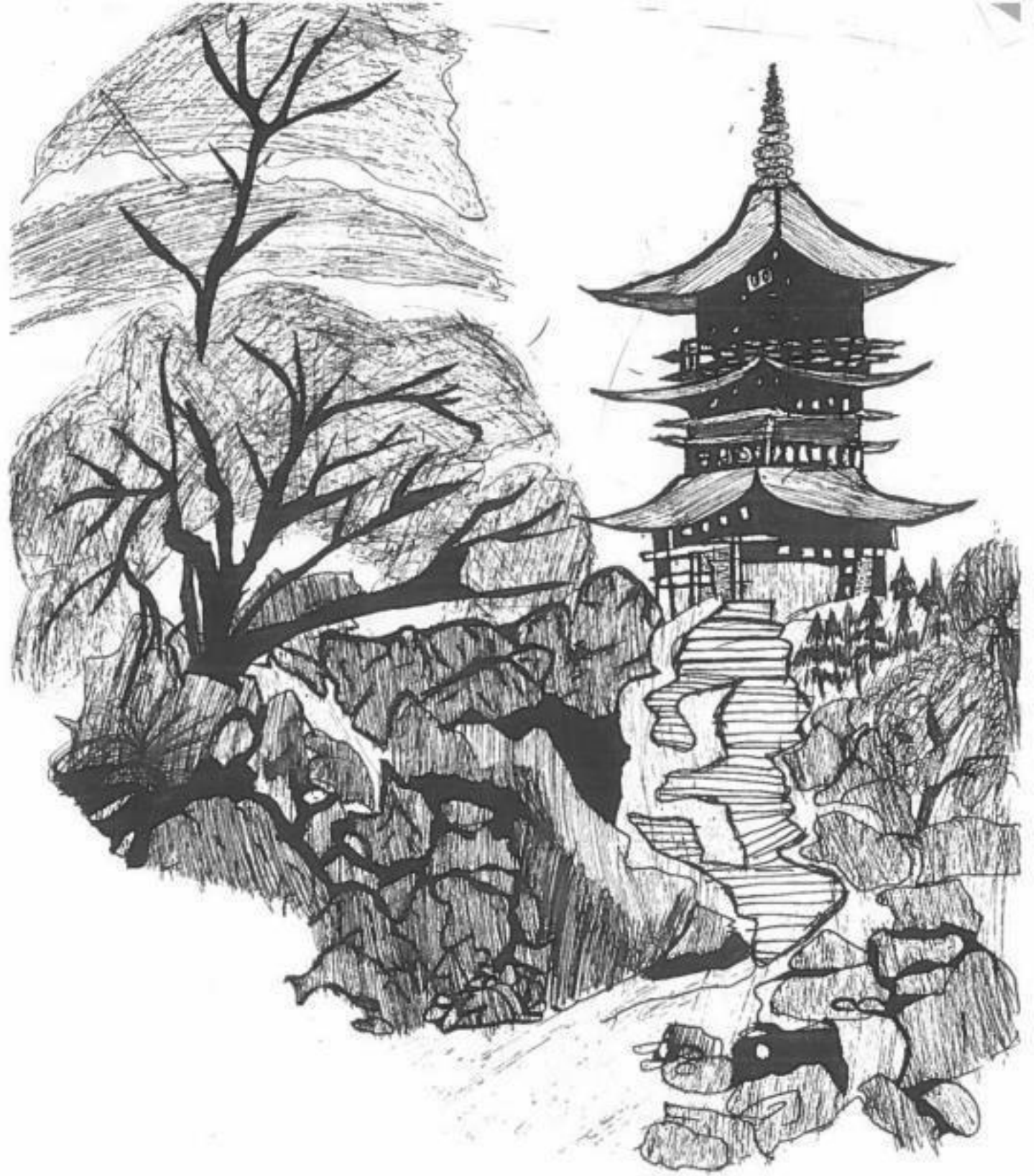
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Pallam Deepika(212U1A0579)

Shaik Roshni(212U1A0599)

Vanamala Sandeep(212U1A05C4)

PROGRAM OUTCOMES (POs)

Engineering Graduates will be able to:

PO1. **Engineering Knowledge:** Apply the knowledge of mathematics, science, engineering fundamentals, and an engineering specialization to the solution of complex engineering problems.

PO2. **Problem Analysis:** Identify, formulate, review research literature, and analyze complex engineering problems reaching substantiated conclusions using first principles of mathematics, natural sciences, and engineering sciences.

PO3. **Design/development of solutions:** Design solutions for complex engineering problems and design system components or processes that meet the specified needs with appropriate consideration for the public health and safety, and the cultural, societal, and environmental considerations.

PO4. **Conduct investigations of complex problems:** Use research-based knowledge and research methods including design of experiments, analysis and interpretation of data, and synthesis of the informationto provide valid conclusions.

PO5. **Modern tool usage:** Create, select, and apply appropriate techniques, resources, and modern engineering and IT tools including prediction and modeling to complex engineering activities with an understanding of the limitations.

PO6. **The engineer and society:** Apply reasoning informed by the contextual knowledge to assess societal, health, safety, legal and cultural issues and the consequent responsibilities relevant to the professionalengineering practice.

PO7 **Environment and sustainability:** Understand the impact of the professional engineering solutionsin societal and environmental contexts, and demonstrate the knowledge of, and need for sustainable development.

PO8 **Ethics:** Apply ethical principles and commit to professional ethics and responsibilities and norms of the engineering practice.

PO9 **Individual and team work:** Function effectively as an individual, and as a member or leader in diverse teams, and in multidisciplinary settings.

PO10 **Communication:** Communicate effectively on complex engineering activities with the engineering community and with society at large, such as, being able to comprehend and write effective reports and design documentation, make effective presentations, and give and receive clear instructions

PO11 **Project management and finance:** Demonstrate knowledge and understanding of the engineeringand management principles and apply these to one's own work, as a member and leader in a team, to manage projects and in multidisciplinary environments.

PO12 **Life-long learning:** Recognize the need for, and have the preparation and ability to engage in independent and life-long learning in the broadest context of technological change.

PROGRAM SPECIFIC OUTCOMES

PSO1: Professional Knowledge: Analyse and apply the concepts of Algorithms, Web Technologies and Data Analytics to meet specified requirements.

PSO2: Software Skills: Design and implement solutions for computing problems using Java, PHP, Python and Big Data technologies