



MANGALORE INSTITUTE OF TECHNOLOGY & ENGINEERING

(A Unit of Rajalaxmi Education Trust®, Mangalore - 575001)

Autonomous Institute affiliated to V.T.U., Belagavi, Approved by AICTE, New Delhi

Accredited by NAAC with A+ Grade, an ISO 9001: 2015 Certified Institution

DEPARTMENT OF CSE (IoT & Cyber Security with Blockchain Technology)

Activity Report

Title: “Inauguration Ceremony of The CYBOTIC Club Activities”

Date: 1-January-2024

Timings: 1:00 PM

About:

The inauguration ceremony of the CYBOTIC Club activities for the academic year 2023-24 unfolded on January 1, 2024, at the prestigious Auditorium 3 of Mangalore Institute of Technology and Engineering (MITE). The event, slated to commence at 1:00 PM, was meticulously organized under the patronage of Dr. Prashanth C M, the esteemed Principal of MITE. Adding to the grandeur of the occasion was the presence of Dr. Shashidhar Koolagudi, a distinguished Professor hailing from the Department of Computer Science and Engineering at the renowned National Institute of Technology Karnataka, Surathkal (NITK). Seated prominently on the stage were the esteemed dignitaries, each embodying excellence in their respective fields. Alongside Dr. Prashanth C M and Dr. Shashidhar Koolagudi, the dias was adorned with the presence of Dr. Shivananda V Seeri, the esteemed Head of the Department of Computer Science and Engineering, specializing in the cutting-edge domains of IoT and Cyber Security with Blockchain Technology.

Keynote Address:

The introduction of the office bearers of the Cybotic Club, the torchbearers entrusted with the responsibility of steering the club towards greater heights of success and innovation. With a sense of pride and purpose, each office bearer was introduced to the audience, their names resonating with promise and potential, as they pledged their unwavering commitment to the club's mission and objectives. The solemnity of the occasion reached its zenith with the administration of the oath of office, a solemn pledge that underscored the office bearers' commitment to upholding the values and principles of the Cybotic Club. Led by Dr. Shivananda V Seeri, the office bearers stood united, their voices ringing clear as they solemnly swore to discharge their duties with integrity, diligence, and dedication.



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Anvitha G Rao then took centre stage, presenting a comprehensive annual report that served as a testament to the club's achievements and milestones over the preceding academic year. Prajwal L with a sense of reverence befitting the occasion, stepped forward to introduce the esteemed Chief Guest, Mr. Shashidhar Koolagudi, whose illustrious career and profound insights promised to enrich the audience's understanding of the evolving landscape of technology and innovation.

Dr. Shivananda V Seeri, in his capacity as the Head of the Department, seized the opportunity to share his insights and perspectives on the significance of technological innovation in shaping the future. Emphasizing the pivotal role of clubs like Cybotic in nurturing talent and fostering a culture of excellence. The ceremony also witnessed a moment of celebration and recognition as outstanding achievers and class toppers were felicitated and awarded prizes for their exemplary performance and academic excellence. Their achievements served as a source of inspiration and motivation for their peers, underscoring the importance of dedication, perseverance, and hard work in the pursuit of excellence.

The culmination of the ceremony was marked by a captivating technical session conducted by Mr. Shashidhar Koolagudi, wherein he delved into the intricacies of the "Future of AI," offering insights and perspectives that left the audience enlightened and inspired. As participants dispersed, their minds abuzz with ideas and possibilities, the inauguration ceremony served as a poignant reminder of the transformative power of technology and innovation in shaping the future.



Inauguration event of CYBOTIC Activities



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Students Taking Oath



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DEPARTMENT OF CSE (IoT & Cyber Security with Blockchain Technology)

Activity Report

Title: “Interactive Presentation on Artificial Intelligence and Machine Learning”

Date: 1-January-2024

Timings: 1:00 PM

About:

This report summarizes the key takeaways from an interactive presentation delivered by Dr. Shashidhar G. Koolagudi on the topic of Artificial Intelligence (AI) and Machine Learning (ML). The presentation addressed several crucial aspects of this rapidly evolving field, exploring its impact on our lives, its inner workings, and its potential future implications.

Dr. Shashidhar G. Koolagudi opened the presentation by posing a provocative question: Is AI making us lazy? He explored the increasing reliance on AI tools for everyday tasks, from navigation and shopping to entertainment and communication. While acknowledging the convenience and efficiency these tools offer, he also raised concerns about their potential to diminish critical thinking, problem-solving skills, and even physical activity. He highlighted the importance of striking a balance between embracing AI technology and maintaining our own cognitive and physical capabilities. He explained the core concept of ML as algorithms that learn from data without explicit programming. He contrasted this with traditional, rule-based programming, emphasizing the ability of ML algorithms to adapt and improve over time. The question, then, arises: Why is ML gaining such traction now? He identified several factors, including the exponential growth of data, advancements in computing power, and the development of powerful algorithms like deep learning. He mentioned fields like statistics, probability theory, linear algebra, optimization, and computer science, highlighting their contributions to the design and implementation of ML algorithms.



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The presentation concluded by acknowledging the ethical concerns surrounding AI and ML. He discussed potential issues like bias in algorithms, job displacement due to automation, and the privacy implications of data collection. He stressed the importance of developing ethical frameworks and responsible AI practices to mitigate these risks and ensure the beneficial use of these powerful technologies.



Dr. Shashidhar G. Koolagudi giving the presentation



Student Introducing about the Dr. Shashidhar G. Koolagudi



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**Department of CSE (IOT AND CYBER SECURITY WITH
BLOCKCHAIN TECHNOLOGY)**

WORKSHOP ON

**“PRE-PROCESSING AND VISUALIZATION
IN DATA SCIENCE”**



2/07/2024 to 3/07/2024

**In association with
Research Council, MITE**

**Sponsored by
CYBOTIC**



Title: “Pre-processing and Visualization in Data Science”

Date: 2 July 2024 and 3 July 2024

Time: 9:30 AM to 04:30 PM

Venue: Computer Aided Design Lab, Academic Block.

About the Workshop:

The workshop on Pre-processing and Visualization in Data Science provided students with hands-on experience in essential techniques, empowering them to transform raw data into insightful visual representations, fostering a deeper understanding of data-driven decision-making. Industry experts imparted their knowledge on Python, data science fundamentals, big data, and data pre-processing techniques. Participants delved into practical exercises, exploring datasets and mastering data visualization using tools like Pandas, Seaborn, Plotly, and Matplotlib. The workshop aimed to equip students with the essential skills to navigate the data-driven world.

Workshop Outcome:

The workshop on "Pre-processing and Visualization in Data Science" successfully equipped participants with a strong foundation in data manipulation and interpretation. Through a combination of theoretical knowledge and hands-on practice, attendees gained proficiency in

- **Python programming:** Mastering essential Python syntax and operations for data handling.
- **Data exploration:** Understanding the data lifecycle, big data concepts, and exploratory data analysis techniques.
- **Data pre-processing:** Learning to clean, transform, and prepare data for analysis.
- **Data visualization:** Creating informative and visually appealing charts and graphs using libraries like Seaborn, Pandas, Plotly, and Matplotlib.
- **Image processing:** Acquiring basic image manipulation skills for potential data science applications.



About resource person for the Two day's workshop on “Pre-processing and Visualization in Data Science”



Mr. Harish Neermarga, the CEO and Managing Director of Accolade Tech Solutions, brought a wealth of industry experience to the workshop. With over thirteen years in the IT sector, his insights likely spanned web development, mobile app creation, and the broader technological landscape. While his specific data science expertise isn't explicitly detailed, his leadership role and company's focus on emerging technologies suggest a strong understanding of data's role in modern business. His contributions likely enriched the workshop by offering real-world perspectives on data science applications within the IT industry.



Day-1: Session-1

The workshop commenced on July 2nd, 2024 (Tuesday) in the CAED lab. The session began with a formal welcome by Ms. Sneha Nayak, followed by a prayer. Dr. Shivanandha Seeri, the HOD of the CSE-IoT department, delivered a keynote speech emphasizing the growing significance of data science across industries. A brief introduction to Mr. Harish Neermarga, the workshop's key resource person, was provided by Mr. Harshith Raj.

The core of the first session was an introduction to the fundamental concepts of data science. Participants were introduced to the **data science lifecycle**, a structured approach to solving problems using data. This involved understanding the problem, collecting and cleaning data, exploring and analyzing it, building models, deploying solutions, and monitoring results.



1st day Inauguration Session,

The concept of **big data** was explained, highlighting its characteristics (volume, velocity, variety, veracity, and value) and the challenges it presents. The session also touched upon the diverse **applications of data science** across sectors like healthcare, finance, marketing, and more. To provide a solid foundation, the **data science process** was outlined, covering data acquisition, data cleaning, exploratory data analysis (EDA), modelling, evaluation, and deployment. The basics of **machine learning algorithms** were introduced, emphasizing their role in extracting insights from data. The importance of **exploratory data analysis (EDA)** was stressed as a crucial step in understanding data patterns and trends. Participants were introduced to various statistical techniques and visualization methods used in EDA. Finally, the session concluded with an overview of **data visualization**. The speakers highlighted the role of effective visualizations in communicating complex data insights to diverse audiences. An introduction to different types of visualizations, such as charts, graphs, and maps, was provided, along with a discussion of the appropriate use cases for each.

Day-1: Session-2

Hands-on with Python and Data Exploration:

The second half of the day was dedicated to practical learning. Participants were introduced to the Python programming language, a cornerstone of data science. They learned fundamental programming concepts like conditional statements (if-else), loops (for), and basic arithmetic operations. To apply these concepts, participants worked with a real-world dataset: Zomato restaurant ratings. They learned how to import necessary libraries (like pandas, NumPy), load the dataset into Python, and explore its structure. Tasks included selecting specific columns and rows, and calculating summary statistics to understand the data distribution. The session concluded with an introduction to data visualization using basic plotting techniques, providing a foundation for the more in-depth exploration planned for the following day.



“Highlights from day 1 Session 2: Pre-processing and Visualization in Data Science”

Day-2: Session-1

On the second day, Participant delved deeper into data visualization techniques, building upon the foundational knowledge gained in the previous session. The focus was on extracting meaningful insights from the Zomato dataset through effective visualization. Participant began by refining the dataset, saving the pre-processed version for future use. This involved ensuring data consistency, handling missing values, and creating new features as needed. Students then revisited the data, exploring it further using visualization techniques. A core part of the session was understanding the relationship between different variables. Students plotted graphs to identify the top 10 most expensive restaurants, analyzed the distribution of restaurant ratings, and visualized the count of restaurants across different locations and cities. These visualizations helped us uncover trends and patterns in the data.



“Highlights from day 2 Session 1: Pre-processing and Visualization in Data Science”

To enrich our understanding of data, participant experimented with various visualization types. Participant created bar charts, radar charts, scatter plots, heatmaps, pie charts, and histograms to represent the data in different ways. Each visualization type served a specific purpose in revealing different aspects of the data.

Day-2: Session-2

In the final session, students transitioned from data visualization to image processing. This introduction to image processing provided a glimpse into another domain where data analysis and manipulation play a crucial role. students learned the basics of handling images in Python, including importing, displaying, and resizing images. Participant explored image transformations like rotation, flipping, and colour adjustments. Edge detection and blurring techniques were also covered, providing a foundation for image processing tasks. The workshop concluded with a recap of the key learnings and a question-answer session. Participants shared their experiences and insights,



“Highlights from day 2 Session 2: Pre-processing and Visualization in Data Science”

fostering a collaborative learning environment. The instructors provided final thoughts and guidance for further exploration in data science and visualization.

Workshop Conclusion

The two-day workshop on Pre-processing and Visualization in Data Science concluded on a positive note. Ms. Amulya delivered a heartfelt vote of thanks, expressing gratitude on behalf of the students for the valuable insights and knowledge shared by the resource persons. The Head of the Department, Dr. Shivanandha Seeri, and the workshop coordinator, Mr. Sandeep Naik, presented letters of appreciation to the resource persons, formally acknowledging their contributions to the event's success. The closing ceremony marked the end of a productive and informative workshop.





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Glimpses of the Workshop



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**Department of CSE (IOT AND CYBER SECURITY
WITH BLOCKCHAIN TECHNOLOGY)**

WORKSHOP ON

**“CYBER SECURITY AND
ETHICAL HACKING”**



29/07/2024 - 31/07/2024

**In association with Research
Council MITE sponsored by
CYBOTIC, MITE, Moodabidri**



“CYBER SECURITY AND ETHICAL HACKING”

Title: Workshop on “Cyber Security and Ethical Hacking”

Date: 29th July 2024 – 31st July 2024

Time: 09:30 AM - 04:30 PM

Venue: Computer Aided Design Lab, Academic Block.

Number of Students Attended: 66

About the Workshop:

The workshop aims to provide students with a comprehensive overview of Cyber Security and Ethical Hacking. Engaging youth in cyber security education not only equips them with essential skills but also prepares them to address current and future cyber threats. The workshop will feature live demonstrations of tools and lectures delivered by active practitioners to raise awareness of recent technologies and software tools used in cyber security and ethical hacking. Participants will gain hands-on experience with tools such as Kali Linux, various exploitation techniques, and methods to maintain anonymity online.

The workshop intends to immerse individuals in practical exercises and projects related to cyber security, addressing their experiences and needs to enhance the quality of their understanding. The primary focus of the workshop is to upgrade the practical skills and knowledge of participants in the field of cyber security. It aims to train students early in their careers to carry out security-related activities using modern techniques to achieve a high degree of proficiency. Each session will be led by well-experienced resource persons with extensive knowledge of cyber security, ethical hacking, and related domains. Participants will become familiar with powerful tools for network security, ethical hacking practices, and various exploitation techniques.



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Workshop Outcome:

The workshop is designed to help students gain practical knowledge and skills in Cyber Security and Ethical Hacking. It offers hands-on training in using modern tools and techniques to address specific challenges in securing systems and networks. Participants will learn to collect, analyze, and interpret data to identify and exploit vulnerabilities, while adhering to ethical principles and professional responsibilities in cyber security practice. The workshop aims to prepare students to effectively enhance security measures and protect digital assets.

The resource person for the Three days workshop on “Cyber Security and Ethical Hacking” was



Samarth Bhaskar Bhat

Director,

Reverse Engineering Infosec

Samarth Bhaskar Bhat, Technical Director at Reverse Engineering Infosec, holds a B.E. in Telecommunication from SSIT and is recognized as one of the "Youngest Ethical Hackers in India" by PREVOYANCE Forensic Technologies. He is also the youngest Court-appointed "Commissioner" for expert witness roles in Cyber Forensics. With over six years of experience, Samarth has specialized in Information Security, application software development, and auditing over 50 business web applications across sectors such as banking, finance, and eCommerce. Samarth's expertise includes conducting security audits of payment gateways, application security assessments, and penetration tests. He is proficient in creating threat profiles, using web security testing tools, and implementing encryption technologies. His certifications include GIAC Certified Web Application Defender, Certified Ethical Hacker v6, and SANS CTF Winner for Network and Web App Pen Testing. He has completed training courses from the SANS Institute and is skilled in vulnerability scanning tools, GRC, SIEM solutions, and web scanners like Burp Suite and Wireshark.

Day 1: 29th July 2024

The workshop on “Cyber Security and Ethical Hacking” for all the sixth semester students was held on 29th July 2024 at 9.30 am in Computer Aided Design Lab. The workshop was in association with MITE – KSCST IPR Cell sponsored by CYBOTIC, MITE, Moodabidri.



"Highlights from Day 1 Session 1: Ethical Hacking and Cybersecurity Workshop"

The workshop began with an introduction by the host, Disha V. She welcomed the participants and outlined the workshop agenda. Prajwal then provided details about the resource person, Samarth Bhaskar Bhat. The workshop officially commenced with the facilitation of Samarth Bhaskar Bhat by the Head of the Department, Dr. Shivananda V. Seeri.

In his remarks, Dr. Seeri highlighted the importance of the workshop and how it could benefit participants. The chief guest set the context for the workshop by discussing the significance of cyber security and ethical hacking in today's digital landscape. Samarth Bhaskar Bhat then provided insights into the fundamentals of cyber security methodologies, techniques, and practices, aiming to instill a strong understanding of these critical areas.

Sandeep S. Naik informed the attendees about the workshop's schedule, detailing the key sessions and activities planned for the three days.

Day 1: Session 1

The first session of Day 1 commenced with an introduction to ethical hacking and its career opportunities, setting the stage for a comprehensive exploration of the field. The speaker began by discussing **CVE details**, shedding light on common vulnerabilities and how they impact system security. Participants were introduced to the concept of vulnerabilities, understanding their critical role in the security landscape.



"Highlights from Day 1 Session 1: Ethical Hacking and Cybersecurity Workshop"

The session then addressed various **hacking conceptions and misconceptions**, clarifying common myths, and providing a realistic view of what hacking entails. The speaker detailed the different **types of hackers**, distinguishing between ethical hackers, black-hat hackers, and others.

A practical demonstration followed, showcasing the use of **Konboot** for bypassing Windows passwords, illustrating a real-world application of hacking tools. The discussion included why **hacking is possible**, exploring the underlying reasons that make systems vulnerable and how these vulnerabilities can be exploited.

To provide a broader perspective on career opportunities, the speaker presented a **cybersecurity career map**, outlining potential career paths and growth opportunities within the field. The session concluded with hands-on activities, including the **installation of Kali Linux** and the **installation and virtualization of firewall tools**. This practical segment equipped participants with essential skills for setting up and using cybersecurity tools,

ensuring they were well-prepared for future sessions.

Day 1: Session 2

The second session of Day 1 focused on advanced exploitation techniques across different platforms. It began with an in-depth exploration of **Windows exploitation**, where participants learned about common vulnerabilities and methods used to compromise Windows systems. The session covered practical exploitation techniques, demonstrating how attackers might exploit these vulnerabilities to gain unauthorized access or control over Windows environments.



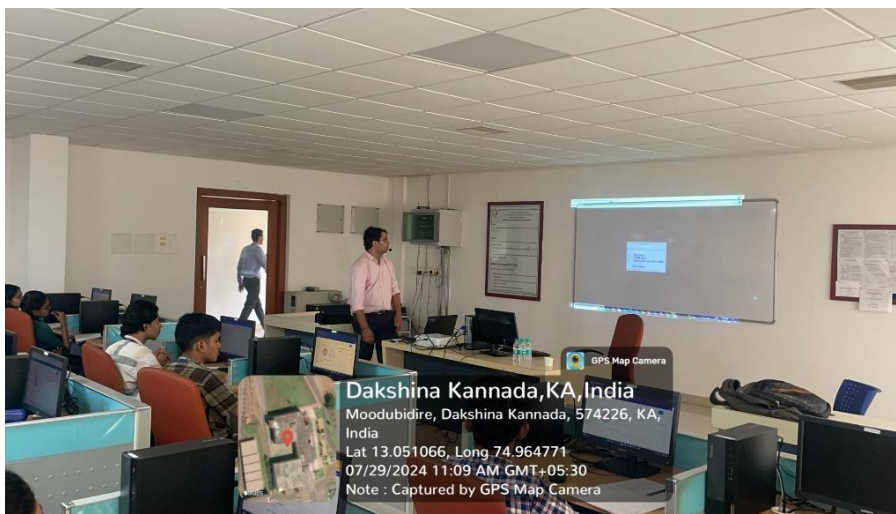
"Highlights from Day 1 Session 2: Ethical Hacking and Cybersecurity Workshop"

Next, the session transitioned to **Linux exploitation**, detailing both **APT-based** and **YUM-based** methods. **APT-based exploitation** involves leveraging Advanced Persistent Threats to exploit weaknesses in Linux systems, while **YUM-based exploitation** uses vulnerabilities in package management to execute attacks. These demonstrations provided participants with insights into specific strategies and tools used for exploiting Linux systems, enhancing their understanding of the unique challenges associated with this operating system.

The session also addressed **Android exploitation**, highlighting the specific vulnerabilities and attack vectors pertinent to Android devices. To ensure online privacy and security, the speaker introduced methods for remaining anonymous, including the use of **FQDM**, **VPNs**, and **Tor Browsers**. This segment offered practical advice on maintaining anonymity and protecting personal information online, rounding out the session with crucial skills for ethical hacking and cybersecurity practices

Day 1: Session 3

The third session of Day 1 covered a broad range of topics essential for understanding and implementing cybersecurity measures. The session began with an overview of **bug bounty programs and their applications**, discussing how participants can find and report vulnerabilities in exchange for rewards. This was followed by a review of **global body certifications** relevant to cybersecurity professionals.



"Highlights from Day 1 Session 3: Ethical Hacking and Cybersecurity Workshop"

Participants were introduced to **CTF (Capture the Flag) machines** and learned **how to solve challenges**, enhancing their practical skills. The use of **virustotal.com** was demonstrated for checking file and URL safety, along with explanations of **signature-based** and **heuristic-based verification** methods for detecting malware. Network attacks were also covered, providing insights into various attack vectors and how to defend against them.

The session continued with an in-depth exploration of the **life of defense** in cybersecurity, including key areas such as **cryptography** with a focus on encryption programs using AES and DES, and **anti-virus** solutions. Participants learned about **firewalls**, including their different types (software, hardware, hybrid), rules and policies (accept, reject, drop), and how to install **IP tables**. The session also included discussions on **honeypots** with a demonstration of Pentbox, and an overview of **Intrusion Detection Systems (IDS)** and **Intrusion Prevention Systems (IPS)**. Lastly, the session touched on

Security Information and Event Management (SIEM) and keyloggers.

Day 2: Session 1

The morning session of Day 2 focused on the fundamentals of hacking methodology and web attacks. The session began with a comprehensive overview of the **hacking methodology**, including key stages such as **vulnerability analysis**, **information gathering**, **creating payloads**, and **exploiting vulnerabilities**. Participants learned about systematic approaches to identifying and exploiting security weaknesses in various systems.



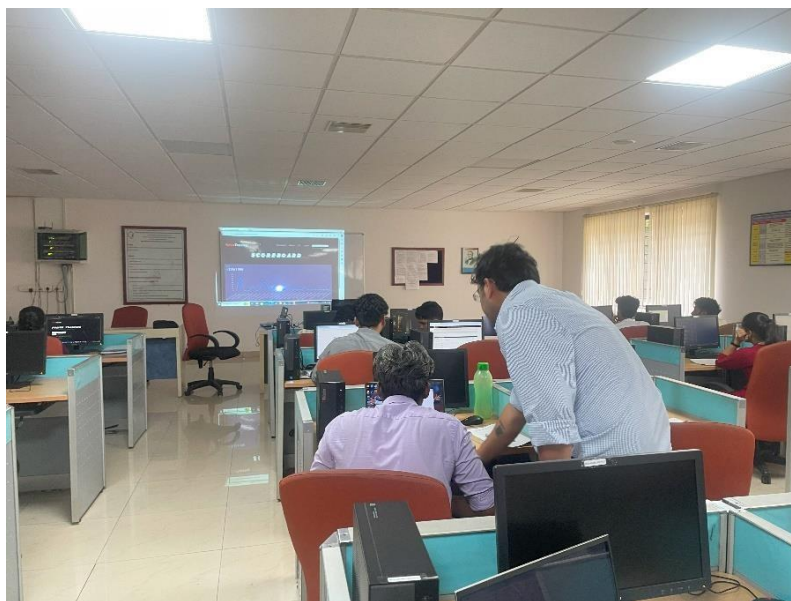
"Highlights from Day 2 Session 1: Ethical Hacking and Cybersecurity Workshop"

The discussion then shifted to **web attacks**, where participants were introduced to the intricacies of **DNS records**. The session covered different types of DNS records including **A record**, **AAAA record**, **CNAME record**, **MX record**, and **TXT record**, explaining their roles in domain name resolution and how they can be leveraged in attacks.

The session also provided a detailed breakdown of **URL components**, including the **scheme protocol**, **user**, **path**, **host or domain**, **query string**, **port**, and **fragment**. Understanding these elements is crucial for analysing and manipulating URLs in web security. Finally, participants reviewed **HTTP status codes**, with a focus on the significance of **3xx Redirection**, **4xx Client Error**, and **5xx Server Error** codes in diagnosing and addressing web-based issues.

Day 2: Session 2

The morning session of Day 2 delved into essential aspects of web security and practical tools for vulnerability assessment. The session began with an exploration of domain hierarchy, starting from the root domain and extending to top-level domains such as .ORG, .COM, and .NET. This overview provided participants with a foundational understanding of how domain names are structured and managed.



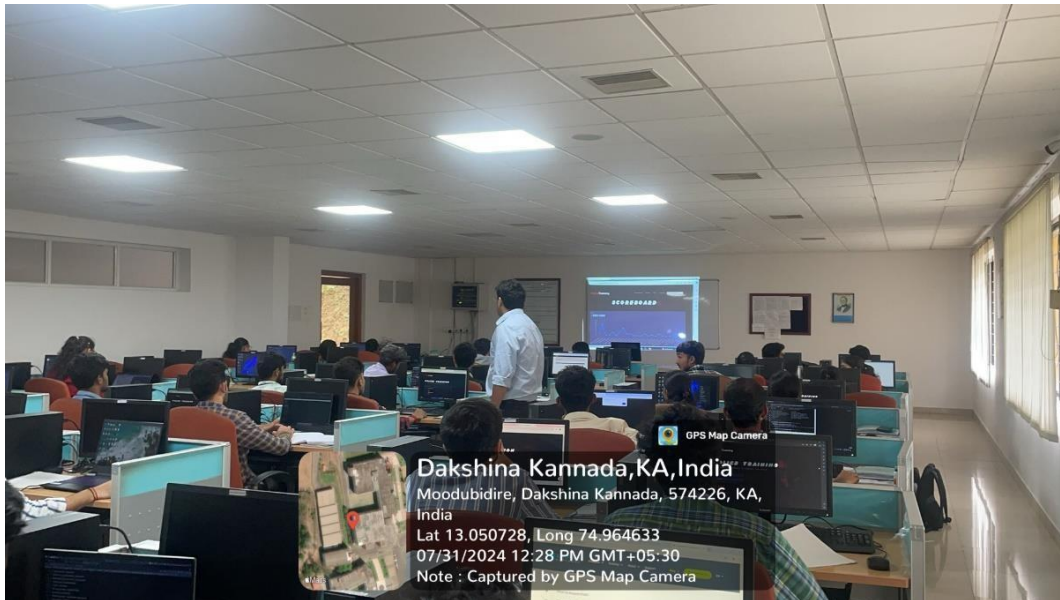
"Highlights from Day 2 Session 2: Ethical Hacking and Cybersecurity Workshop"

Following this, participants were guided through the process of downloading and setting up key tools for practical exercises. This included XAMPP, a popular cross-platform web server solution; DVWA (Damn Vulnerable Web Application) from GitHub, designed for testing web security skills; and Burp Suite, a comprehensive tool for web application security testing.

The session concluded with a focus on DNS (Domain Name System), covering its role in translating domain names into IP addresses and its importance in network security. Participants gained insights into how DNS works and its implications for security assessments and web attacks.

Day 3: Session 1

The first session of Day 3 introduced participants to essential tools and concepts in cybersecurity and forensic analysis. The session began with a practical demonstration of **PFSense**, a powerful open-source firewall and router platform, focusing on its configuration and use for secure networking. Participants also learned about **server hosting** and how to deploy **DVWA (Damn Vulnerable Web Application)** on a server for hands-on security testing.



"Highlights from Day 2 Session 2: Ethical Hacking and Cybersecurity Workshop"

The session then shifted to **cybersecurity forensics**, covering crucial areas such as the **Deep Web** and **Dark Net**. Participants explored the **Digital Virtual Crypto Currency** landscape, including its role in both legitimate and illicit activities. The discussion included five key resources for accessing the dark web, such as **Onion Networks**, **special email providers**, **special search engines (like Tor browser)**, **blade servers**, and **crypto currencies**. This segment provided valuable insights into navigating and understanding the hidden aspects of the internet, enhancing participants' knowledge of both security and forensic investigation techniques.

Day 3: Session 2

The afternoon session of Day 3 focused on various forensic tools and techniques essential for data analysis and recovery. The session began with an overview of **cloning and imaging tools**, crucial for creating exact copies of data from storage devices while preserving the integrity of the original data. Participants also learned about **write protection tools**, which prevent modifications to data during forensic investigation



"Highlights from Day 2 Session 2: Ethical Hacking and Cybersecurity Workshop"

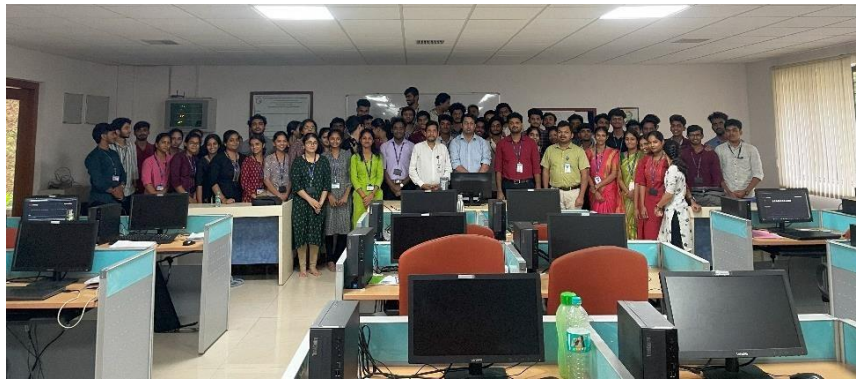
The session continued with introductions to **data recovery tools**, **audio and video forensic tools**, and **mobile data analysis tools**, all vital for extracting and analysing information from different types of media and devices. Participants were introduced to **CDR (Call Detail Record) analysis tools** and **Mac forensic techniques**, providing a broad perspective on forensic analysis across various platforms.

A segment on **histogram analysis** for audio and video forensics covered tools like **AMFED5** and **FOXIT** for video analysis, and **SONIC VISUALIZATION** for audio analysis. These tools assist in examining and interpreting multimedia evidence. The session concluded with a test on **training.infosec.com**, assessing participants' understanding and practical skills gained throughout the workshop.

At the conclusion of the workshop, the program transitioned into a closing ceremony where participants had the opportunity to provide their feedback on the sessions and overall experience. The Head of the Department (HOD) delivered a closing speech, reflecting on the workshop's impact and expressing appreciation for the resource persons and participants. The ceremony marked the end of the workshop, wrapping up with final remarks and acknowledgments.

Outcomes:

- **Understanding of Hacking Methodology:** Participants gained knowledge of key hacking processes, including vulnerability analysis, information gathering, payload creation, and exploitation techniques.
- **Insight into Web Attacks:** The workshop covered various web attack methods and DNS record types, enhancing participants' ability to analyse and secure web applications.
- **Practical Skills in Cybersecurity Tools:** Attendees learned to use essential tools such as XAMPP, DVWA, Burp Suite, and forensic tools for data recovery, audio/video forensics, and mobile data analysis.
- **Knowledge of Online Anonymity:** Participants understood methods to maintain anonymity online using tools like VPNs, Tor Browsers, and other privacy resources.
- **Exposure to Cybersecurity Forensics:** The workshop included detailed discussions on deep web and dark net navigation, digital currencies, and forensic analysis techniques.
- **Hands-On Experience with Forensic Tools:** Participants received practical training on cloning and imaging tools, write protection, data recovery, and various forensic analysis tools.
- **Enhanced Skills in Analyzing Multimedia Evidence:** The session covered histogram analysis, audio/video forensic tools, and visualization techniques, equipping participants with skills for handling multimedia evidence.
- **Certification and Evaluation:** Attendees were assessed through a final test on training.infosec.com, validating their understanding and practical application of the workshop content.



Glimpses of the workshop



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Department of CSE (IoT & Cyber Security with Blockchain Technology)

AICTE Activity Report

Title of the Event: Swachh Bharat Abhiyan

Date: 05/09/2024

Timings: 09:00 AM to 1:00 PM

About the Event: Under the AICTE activity point program, we will engage students in social awareness activities for the current academic year and motivate them to work as a team, as a part of event the program was scheduled from 05th September 2024.

The objectives of AICTE student activity is to expose students to real-time life challenges, to provide the opportunity to gather data, analyse data, propose solutions and implement solutions. Also, it paves the way for personal development and creative engineers who are proud volunteers with a sense of achievement and ready to take up projects having a social impact and creating digital awareness. Besides, it helps the students to strengthen their softskills, leadership qualities and team spirit. Moreover, these activities inculcate entrepreneurial mindset and societal commitment. Following are the various activities conducted by the institution to enable AICTE activity points.

1. Swachh Bharat Abhiyan
2. Awareness programme on the importance of education
3. Digital awareness programme

As part of All India Council for Technical Education (AICTE) activity point programme, Department of CSE (IoT & Cyber Security with Blockchain Technology) students of 2nd year students along with faculty members were actively participated visiting the Aremajalu Palke Villegge to contribute about the Swach Bharath a National level of initiative of Government of India. Total of 63 students were actively participated in this event. Swach Bharath Abhiyana is one of the most significant and popular mission to have taken place in India. Swachh Bharath Abhiyana is a great step towards the Clean India.

This drive was formulated to cover all the cities and towns of India to make them clean. This campaign was administered by the Indian government in the vision of a Clean India. The cleanliness campaign of Swachh Bharat Abhiyan was run on a national level and encompassed all

the towns, rural and urban. It served as a great initiative in making people aware of the importance of cleanliness. Swachh Bharat Abhiyan set a lot of objectives to achieve so that India could become cleaner and better. In addition, it not only appealed the sweepers and workers but all the citizens of the country. This helped in making the message reach wider. It aims to build sanitary facilities for all households. One of the most common problems in rural areas is that of open defecation. Swachh Bharat Abhiyan aims to eliminate that.

The "Swachh Bharat" mission, initiated by the Government of India in 2014, aims to promote cleanliness, sanitation, and waste management across the country. In alignment with this national vision, the AICTE (All India Council for Technical Education) organized various activities to instill the values of cleanliness and hygiene in students. The event witnessed the enthusiastic participation of 63 students who took part in different initiatives such as awareness campaigns, cleanliness drives, hygiene education programs, and waste management activities. This report outlines the comprehensive efforts made by these students to contribute to the Swachh Bharat mission and the impact these activities had on their surroundings and the local community.

The foundation of the Swachh Bharat initiative is to spread awareness about the importance of maintaining a clean and hygienic environment. The students played an instrumental role in carrying forward this message to the community through multiple outreach efforts.



Students used the Poster and Slogans to spread awareness among the village peoples

All groups of students designed eye-catching posters and wrote impactful slogans that communicated the essence of the Swachh Bharat mission. These posters were placed in prominent public locations such as marketplaces, and Village entrance to catch the attention of a larger audience. The slogans emphasized key messages such as "Keep Clean Save our Earth," "Keep your surroundings clean," and "A clean India is a healthy India." Street plays were performed by students at local gathering spots like community centers to further reinforce the message of cleanliness. Through these plays, students demonstrated the consequences of unhygienic practices and the benefits of a clean environment. The plays were well-received by the public, as they conveyed the importance of cleanliness in an engaging and interactive manner.



Cleaning the Village

In addition to reaching out to the community, students actively engaged their peers by presenting their thoughts on cleanliness during Village assemblies. Several students shared personal anecdotes and inspiring stories related to the benefits of a clean and hygienic lifestyle. These presentations served to motivate others to actively participate in the mission and take responsibility for cleanliness within their homes.

visited the classrooms and gave the information about the usage of computers in the day to day educational activities. Thought each of the students how to use the personal computer to design various projects and drawing. The awareness campaigns successfully reached over more than 50

individuals within the community, inspiring them to take action. Many locals were seen taking steps such as segregating waste, cleaning their surroundings, and spreading the message further. The campaigns played a significant role in transforming mindsets and instilling a sense of responsibility toward maintaining public spaces.

Villagers were taught the importance of basic hygiene practices, such as washing hands before meals, maintaining personal hygiene, and keeping their living spaces clean. Demonstrations on proper handwashing techniques were provided, highlighting the critical role of hygiene in preventing the spread of diseases like diarrheal infections, flu, and other communicable diseases.



With slogans Trajectory by Students

Villagers learned about the broader implications of poor sanitation, not only for individual health but also for community well-being. Discussions were held on the benefits of using clean toilets, safe drinking water, and the proper disposal of waste. These sessions also covered how to maintain clean surroundings, and the importance of ensuring that public spaces, such as schools and parks, are kept litter-free.

The AICTE Swachh Bharat activities provided a platform for students to engage with the principles of cleanliness, hygiene, and sustainability in a hands-on and meaningful way. Through their participation in awareness campaigns, hygiene education programs, cleanliness drives, and waste management activities, students not only learned valuable life lessons but also contributed

significantly to their community's well-being. The event fostered a sense of responsibility and environmental stewardship among the participants, ensuring that the mission of Swachh Bharat continues to resonate with future generations.

The positive impact of these activities was evident in the improved cleanliness of the school and surrounding areas, the heightened awareness of hygiene practices among students, and the enthusiastic response from the local community. As the Swachh Bharat mission moves forward, these students will serve as role models and ambassadors for cleanliness and sustainability in their communities.





Glimpses of the Activity