MALLAREDDY COLLEGE OF ENGINEERING & TECHNOLOGY
(Autonomous Institution–UGC,Govt.of India)
DEPARTMENT OF COMPUTER SCIENCE & ENGINEERING

Report on One Week Faculty Development Programme on Cyber security

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Program Title: Faculty Development Program on Cyber security

Duration: One Week

Dates: 21st August 2023 to 26th August 2023

Venue: CSE 150 lab

Organized by: Department of CSE

Objective: To enhance faculty members' understanding of cyber security principles, tools, and practices, and to equip them with the knowledge to incorporate cyber security topics into their curriculum and research.

Day 1: Introduction to Cyber security

Morning Session:

- **Welcome and Overview:**
  - Introduction to the program's objectives, schedule, and format.
  - Ice-breaking activities and participant introductions.
- **Introduction to Cyber security:**
  - Basic concepts and terminology (e.g., threats, vulnerabilities, risks).
  - Overview of the cyber security landscape, including common types of cyber attacks (e.g., phishing, malware, ransomware).

Afternoon Session:

- **Cyber security Frameworks and Standards:**
  - Introduction to key cyber security frameworks and standards (e.g., NIST Cyber security Framework, ISO/IEC 27001).
  - Discussion on the importance of frameworks in managing and mitigating cyber security risks.
- **Hands-On Activity:**
  - Basic exercises to identify common vulnerabilities in software and network configurations.

Day 2: Network Security

Morning Session:

- **Network Security Fundamentals:**
  - Overview of network security principles, including firewalls, intrusion detection systems (IDS), and intrusion prevention systems (IPS).
  - Network security protocols (e.g., VPNs, encryption, secure communication).

Afternoon Session:

- **Hands-On Labs:**
  - Configuring firewalls and IDS/IPS.
  - Practical exercises on network segmentation and securing network communication.
- **Case Study:**
  - Analysis of real-world network security breaches and discussion on lessons learned.

Day 3: Cyber Threats and Defense Mechanisms

Morning Session:

- **Understanding Cyber Threats:**
  - Detailed exploration of various cyber threats, including advanced persistent threats (APTs), zero-day exploits, and social engineering attacks.
  - Techniques used by attackers and common attack vectors.

Afternoon Session:

- **Defense Mechanisms:**
  - Strategies for defending against cyber threats, including threat hunting, incident response, and malware analysis.
  - Introduction to cyber security tools and software for threat detection and prevention.
- **Hands-On Labs:**
  - Simulation of cyber attack scenarios and defense mechanisms using cyber security tools.

Day 4: Security in Software Development

Morning Session:

- **Secure Software Development:**
  - Principles of secure coding practices and software development lifecycle.
  - Introduction to common vulnerabilities (e.g., SQL injection, cross-site scripting) and how to mitigate them.

Afternoon Session:

- **Code Review and Testing:**
  - Techniques for conducting secure code reviews and vulnerability assessments.
  - Hands-on exercises in identifying and fixing vulnerabilities in sample code.
- **Case Study:**
  - Review of high-profile software vulnerabilities and their impact on organizations.

Day 5: Cyber security Management and Compliance

Morning Session:

- **Cyber security Management:**
  - Best practices for managing cyber security within organizations, including risk management and policy development.
  - Overview of cyber security governance and the role of the Chief Information Security Officer (CISO).

Afternoon Session:

- **Compliance and Legal Issues:**
  - Understanding regulatory requirements and compliance (e.g., GDPR, CCPA).
  - Discussion on legal and ethical issues related to cyber security.
- **Hands-On Activity:**
  - Developing a cyber security policy and risk management plan for a hypothetical organization.

Day 6: Emerging Trends and Technologies

Morning Session:

- **Emerging Trends in Cyber security:**
  - Overview of emerging technologies and trends (e.g., AI in cyber security, blockchain, IoT security).
  - Discussion on how these technologies are shaping the future of cyber security.

Afternoon Session:

- **Future Directions:**
  - Exploration of future challenges and opportunities in the field of cyber security.
  - Panel discussion with industry experts on the future landscape of cyber security.
- **Hands-On Labs:**
  - Exploring new tools and technologies in cyber security through interactive demonstrations.

Outcome of the Programme:

- Participants gained foundational knowledge of cyber security concepts, frameworks, and the current threat landscape.
- Participants learned practical skills in securing network infrastructure and understood real-world implications of network security breaches
- Participants gained insights into different types of cyber threats and learned about effective defense mechanisms.
- Participants learned about secure software development practices and how to identify and address security vulnerabilities in code.
- Participants gained knowledge on cyber security management practices and compliance requirements, and practiced developing security policies.
- Participants explored emerging trends and technologies, gaining insights into future developments in cyber security.

Conclusion:

The program successfully achieved its objectives, providing participants with a thorough understanding of cyber security principles, tools, and practices. The insights and skills gained will enable faculty members to enhance their teaching and research in cyber security, contributing to the development of the next generation of cyber security professionals.


MALLA REDDY COLLEGE OF ENGINEERING AND TECHNOLOGY
(UGC-AUTONOMOUS, Approved by AICTE & Affiliated to JNTUH, HYDERABAD)
DEPARTMENT OF COMPUTER SCIENCE AND ENGINEERING
ORGANIZING
FIVE DAYS FACULTY DEVELOPMENT PROGRAM ON
CYBER SECURITY
SYSTEM HACKED
From:
21st August - 25th August 2024
Venue:
CSE Seminar Hall
Dr. VSK Reddy
Director
Dr. S. Srinivasa Rao
Principal
Dr. T. Venugopal
Dean Student Welfare
Dr. S. Shanthi
HOD-CSE


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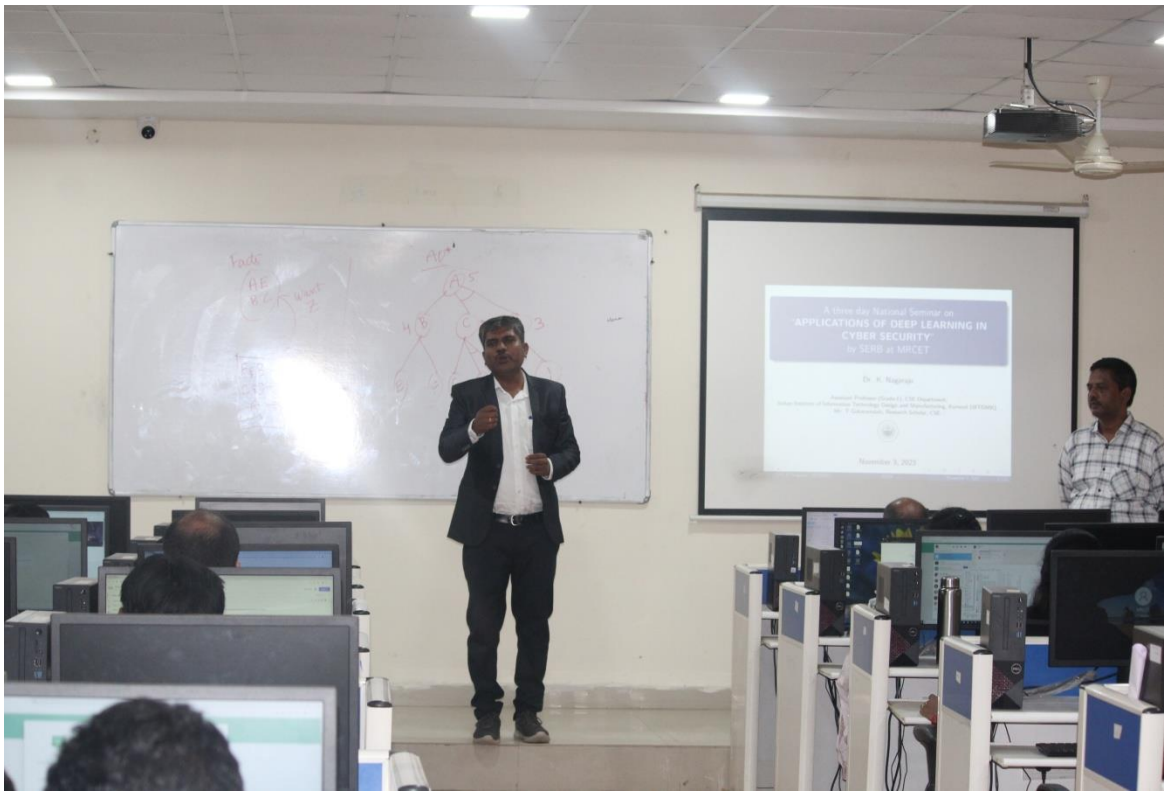
A three day National Seminar on
"APPLICATIONS OF DEEP LEARNING IN CYBER SECURITY"
by SERB at MRCET
Dr. K. Nagmar
November 3, 2023