Sandip Foundation's

Sandip Institute of Engineering and Management, Nasik

DEPARTMENT OF COMPUTER ENGINEERING

Presents

E-Insights

Volume 4

Issue 2 2022-23

About SIEM

Sandip Institute of Engineering and Management (SIEM) is located in the scenic, eco-friendly and conductive-to-study campus at an elevation off the Trimbak Road (Mahiravani, Nasik) leading to one of the twelve renowned pilgrimages of jyotirlingas known as Trimbakeshwar (abode of Lord Shiva) at the foot hills of Brahmagiri mountain ranges. SIEM is approved by All India Council for Technical Education, New Delhi Government of India and affiliated to Savitribai Phule University of Pune. SIEM is committed to imparting quality education in an atmosphere that will ensure that its students are confident, self motivated and industry-ready. Towards this goal, we are giving importance to qualified and experienced faculty for effective teaching-learning process, equipping our laboratories with best-in- class machines and instrument and developing overall personality of our students (with emphasis on strengthening the fundamentals of subjects, ability to work as a team and good communication skill). There is a well formulated regime with a blend of theoretical learning and practical experience. This enables the faculty to guide the students to learn tomorrow, today.

Sandip Foundation's
Sandip Institute of Engineering and Management, Nasik.
Department of Computer Engineering

January, 2023 E-Insights Volume 4: Issue 2

About Department

Computer Engineering

The Department of Computer Engineering sustains and strengthens its teaching and learning program by adapting a comprehensive student centric approach designed to add significant value to the learner in an integrated manner through conceptual and interactive teaching, active lab sessions, seminars, projects, and independent study. As the continued up gradation of the knowledge and skills of faculty members is vital for continuous growth and development of the department, faculties are motivated to attend workshops, seminars, conferences and Training programs. Department has well equipped state-of-the-art laboratories with latest hardware and software configuration for conducting various practical's as well as highly qualified and experienced faculty to nurture the future technocrats of the nation.

Editor-in-chief
Mr.Nilesh.B.Madke

Editor
Mr.Abhishek Dhatrak
Ms.Srushti Kolhe

Vision and Mission of Institute

Vision of the Institute

We at SIEM aspire to be a globally recognized Institute that delivers a world class education to outstanding intellectuals by nurturinc and grooming their interests, creative abilities and thrusts to acquire a life-long learning so as to imbibe values of their commitmen1 towards society.

Mission of the Institute

We at SIEM shall strive continuously,

• To inculcate and imbibe knowledge of cutting-edge technologies and its implementation for solving real life problems in E conducive environment.

• To collaborate with national and international institutes/industries/ universities of repute for sustainable growth through tearr work.

• To motivate and retain highly skilled and knowledgeable individuals, whose creativity and interest in teaching upholds to achieve desired goals.

• To provide a dedicated platform to cater the needs of individuals and inspire them for their intellectual growth and character building.

• To enable the students to achieve excellence in the chosen fields and to share the responsibilities of citizenship and service in E disciplined manner.

Vision and Mission of Department

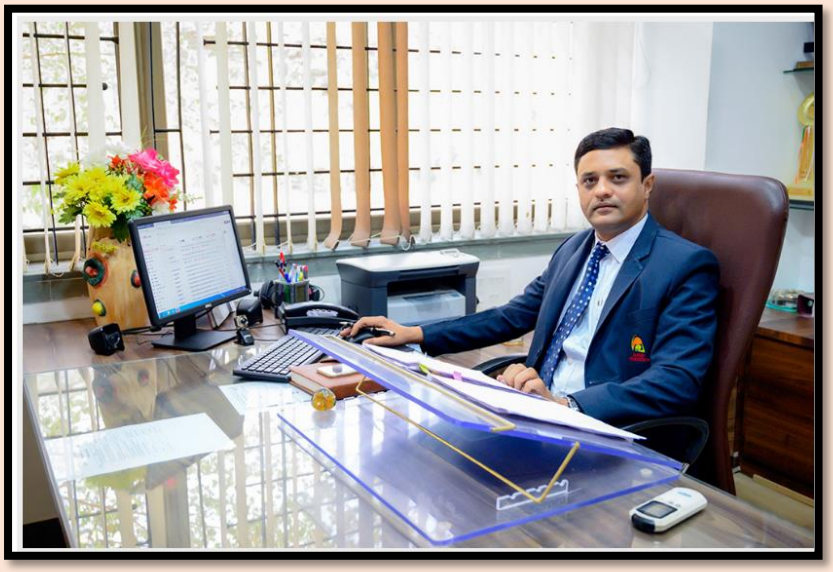
Vision of the Department

The department aims to be recognised in the field of quality education through excellence in teaching, learning, research and innovation for the betterment of society.

Mission of the Department

- To provide world class infrastructure with modern tools and technologies for better learning ambiance.
- To enhance problem-solving skills approaches by encouraging young and inspiring minds with innovative teaching & learning.
- To build competent professionals and entrepreneurs through collaborative learning with national and international institutes of repute.
- To contribute in the development of society & nation at large through excellence in research and innovation.

Golden Words from Principal



Welcome to Sandip Foundation's Sandip Institute of Engineering and Management.

Representing Sandip Institute of Engineering and Management is a great matter of pride for me. In this marvelous campus of Sandip Foundation, we strive to inculcate values in students which nurture them in a way that makes them excel in academics, innovation and personal growth. The prime interest of the institute has always been to impart knowledge, values, skills and wisdom in students to empower them to become the torch bearers of their respective fields.

We support an all-encompassing approach to education that integrates academic concepts with real-world applications. We pledge to deliver each and every stakeholder top-notch facilities and services. In order to integrate academic understanding to real-world problems and applications, our laboratories and research facilities provide students with hands-on learning opportunities.

We encourage our students to engage in extracurricular and intellectual activities as a supplement to their academic endeavors.

These experiences aid in the development of critical life skills, the enhancement of communication abilities, and the formation of enduring

connections that will last a lifetime. The institutes additionally offer employability-enhancement programs, value-added programs, and credentials in addition to the primary academic curriculum. Furthermore, we furnish webinars, seminars, guest lectures, workshops, and skill-based training modules for advancing the level of bar of the knowledge of students' field of interest.

In my ability and as this prestigious institution's principal, I can confidently assure you that we are dedicated to creating an orderly and enriching campus environment. To ascertain everyone's success both academically and personally, we place a high priority on their well-being and provide the best assistance whenever required.

Let's change the world together and leave an enduring impression of being an integral part of the Sandip Group of Institutes.

Thank You. Best Regards.
Dr. Dipak P. Patil Principal

Valuable Words from Head of the Department

Greeting from the Department of Computer Engineering!!

The world is going through a tremendous positive transformation, and in education its effects are clearly visible. We in the Department of Computer Engineering wish to be part of this positive change utilizing our core strengths in Technical knowledge, Research, Data Analytics and world class Infrastructure. Department of Computer Engineering was established in the year 2010 with Batchelor of Computer Engineering (BE) Programme with Intake of 60. Being an integral part of an institution, Sandip Institute of Engineering and Management, Sandip Foundation, Nasik, naturally helps the department and its programmes imbibe all the values and ethos that have made the institute an epitome of excellence.

The rigorous education and training which students get, helps them to tackle the complexity of the engineering and corporate environment as they are able to unshackle themselves from the confines of mere technical competencies. With a carefully designed syllabus by SPPU, we keep up to the true Sandip Foundation tradition of sensitizing ourselves with the latest trends in the industry. The emphasis of the training, Value added Programs in the Department is on building technical as well as people skills, which is indispensable for each of our students to do well in their life.

The class being a heterogeneous mix of academically motivated students from diverse, yet related fields naturally enriches the learning environment, turning it into a fountainhead of vibrant ideas.

The response from both academic institutes as well as industry has been very enthusiastic and encouraging. This bears testimony to the fact that our alumni have made us proud by assuming various positions in reputed organizations like Persistent, Accenture, Amazon, Synel and many more. The placement of the students has been equally encouraging as they have joined many reputed organizations like Infosys, Persistent, Amazon, TCS, Accenture, etc

All these achievements of the department would not have been possible without the enthusiastic and dedicated work of our past and present faculty members. Department faculty members are exceptionally dedicated set of teachers and at the same time top notch researchers in their field of study publishing on regular intervals in reputed journals. They have also done the department extremely proud by writing various books, book chapters etc. Department has also been in the fore front of industry interaction.

We are supremely confident that in years to come Department with its rigorous and regularly updated syllabus, research, innovative teaching techniques and active participation with industry will enforce the reputation of as an enviable seat of higher learning.

Dr. K. A. Shirsath (Nalavade)
Head, Department of Computer Engineering
Sandip Institute of Engineering and Management, Nasik

Table Content

01. Remote Work Technologies: Redefining the Workplace

The global shift to remote work, catalysed by the COVID-19 pandemic, has fundamentally transformed the way we work and collaborate. This seismic change has accelerated the adoption of digital solutions, reshaping corporate landscapes and redefining the concept of the workplace itself.

The Rise of Digital Collaboration Platforms

1.Video Conferencing Tools

Platforms like Zoom, Google Meet, and Microsoft Teams have become the new conference rooms. These tools have evolved rapidly, introducing features like:

- Virtual backgrounds.

- Breakout rooms for small group discussions.

- Real-time translation.

- Integration with calendar apps and project management tools.

2. Project Management and Collaboration Software

Tools such as Asana, Trello, and Monday.com have become central to remote team coordination. They offer:

- Visual task management
- Progress tracking
- File sharing and version control

3. Communication Platforms

Slack, Microsoft Teams, and Discord have emerged as the digital water coolers of remote workplaces. These platforms provide:

- Instant messaging and group chats
- Voice and video calls
- File sharing and collaboration
- Integration with hundreds of other work tools

4. Cloud Computing and Security

The shift to remote work has accelerated cloud adoption, with services like:

- Amazon Web Services (AWS)
- Microsoft Azure.
- Google Cloud Platform.

These platforms enable remote access to company resources while maintaining security through:

- Virtual Private Networks (VPNs).

The Evolution of Remote Work Culture

1.Employee Engagement and Well-being

Companies are investing in digital solutions to maintain company culture and employee well-being:

- Virtual team-building activities

- Online wellness programs and mental health support

- Digital recognition and reward systems

2.Performance Management

Remote work has necessitated new approaches to performance evaluation:

- Focus on output and results rather than hours worked

- Regular virtual check-ins and feedback sessions

- Use of digital tools to track productivity and goals

3.The Future: Hybrid Work Models

As the world gradually returns to some in-person operations, hybrid work models are emerging:

- Flexible schedules combining office and remote work

- Hot-desking and shared workspace management systems

- Enhanced audio-visual setups in offices to seamlessly include remote participants

Challenges and Opportunities

1. Digital Divide

- Ensuring equal access to high-speed internet and necessary technology

- Addressing disparities in digital literacy

2. Work-Life Balance

- Developing strategies to combat "always-on" culture and burnout

- Creating clear boundaries between work and personal life in a remote setting

3. Innovation and Collaboration

- Finding new ways to foster spontaneous interactions and idea-sharing

- Balancing the benefits of in-person collaboration with the flexibility of remote work

4. Key Takeaways

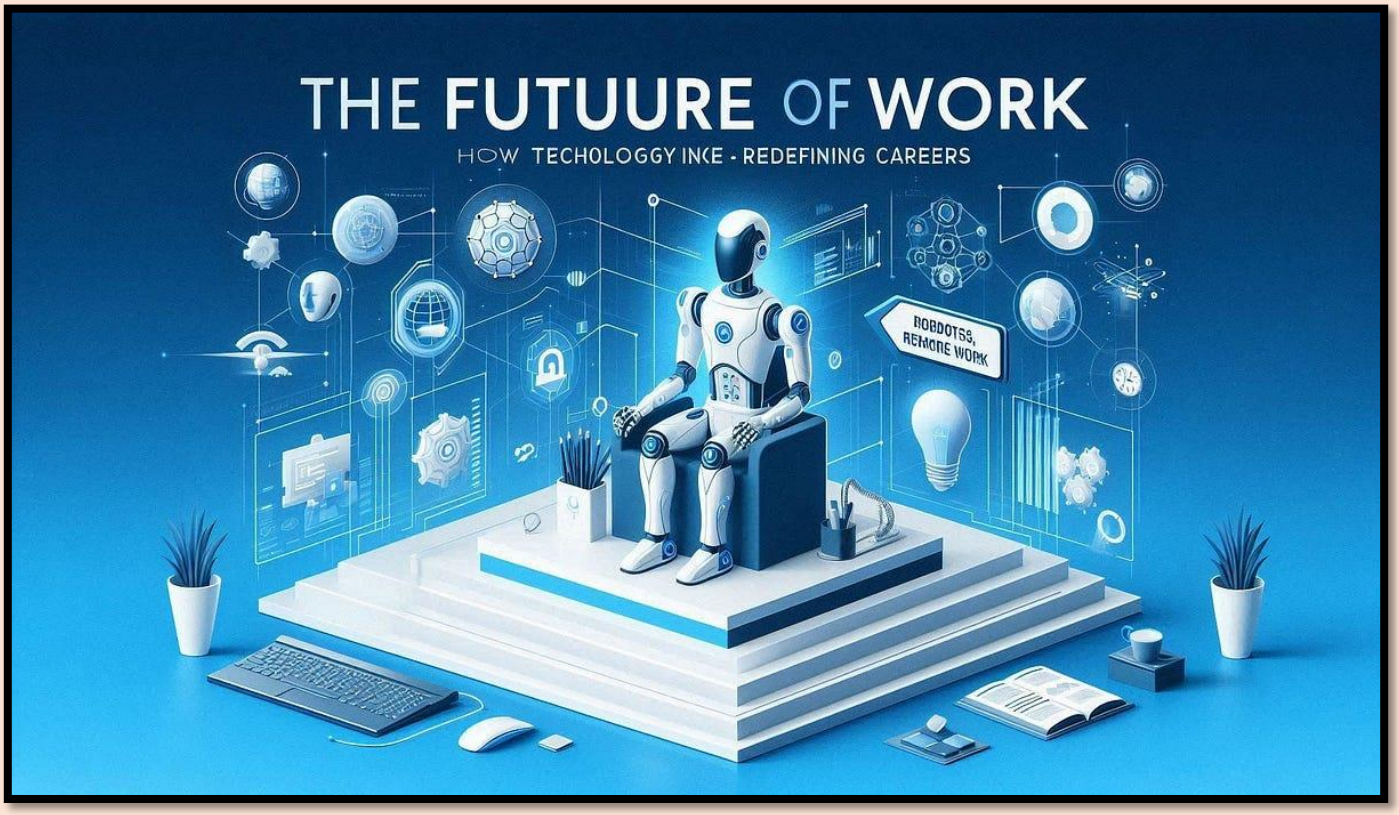
1. Remote work technologies are not just a temporary fix—they're reshaping corporate culture and workflows for the long term, enabling a global, digitally-connected workforce.

2. The future of work is likely to be hybrid, combining the best aspects of remote and in-person work.

3. Continued innovation in digital collaboration tools will be crucial in addressing the challenges of remote and hybrid work models.

4. Companies must prioritize digital equity and employee well-being as they navigate this new landscape.

5. The ability to adapt to and leverage remote work technologies will be a key differentiator for businesses in the coming years.



As we move forward, the integration of remote work technologies will continue to evolve, shaping not just how we work, but also how we think about productivity, collaboration, and the very nature of the workplace itself.

02. Telemedicine: The New Face of Healthcare

The COVID-19 pandemic catalyzed a rapid and widespread adoption of telemedicine, transforming healthcare delivery and patient care. This shift has not only provided immediate solutions during the crisis but has also paved the way for long-term advancements in healthcare IT and service delivery.

The Explosive Growth of Telemedicine

1.Driving Factors

- Overwhelmed hospitals during the pandemic

- Need for social distancing and reduced in-person contact

- Advancements in digital health technologies

- Changes in healthcare regulations and reimbursement policies

2. **Key Components of Telemedicine**

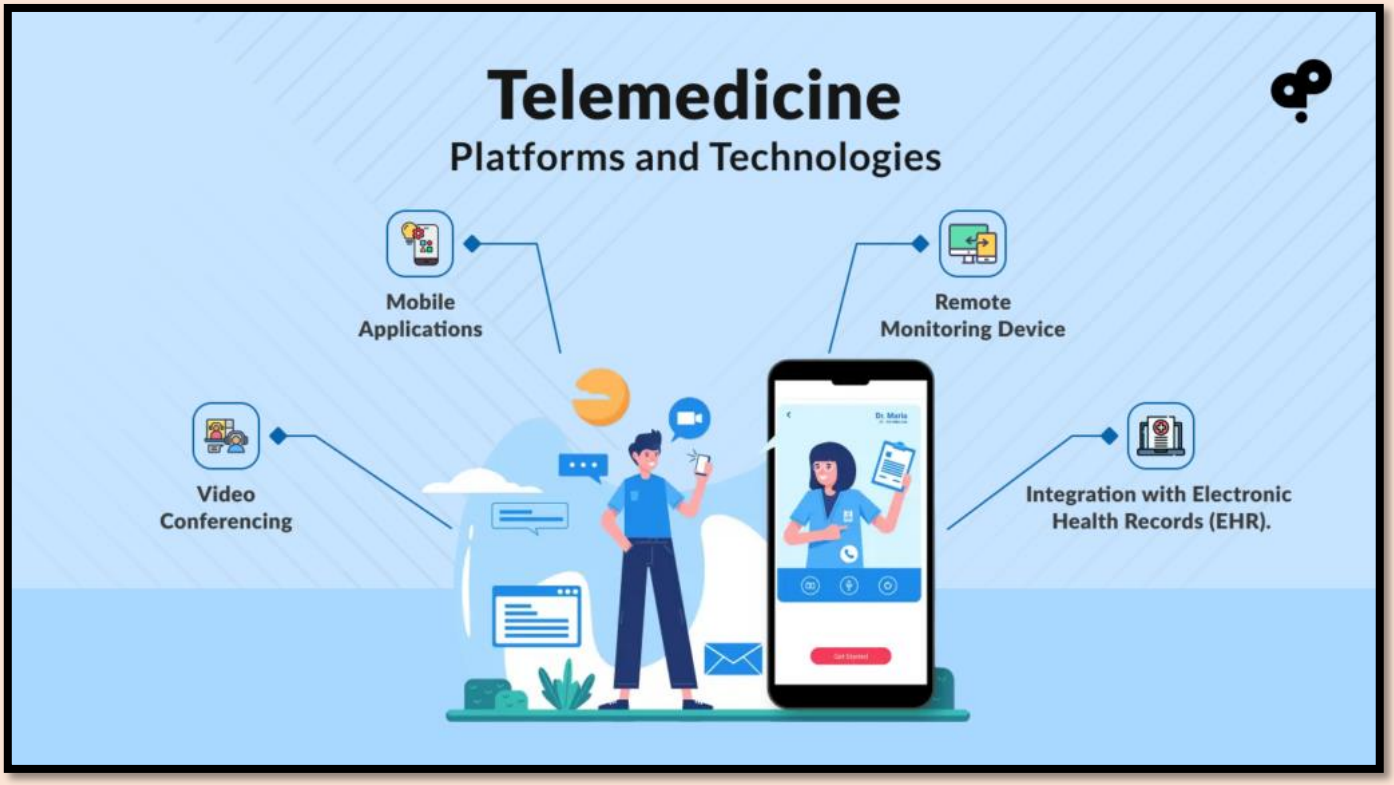
1.Video Consultations: Real-time, face-to-face interactions between patients and healthcare providers.

2. Remote Patient Monitoring (RPM): Use of connected devices to track patient health data from home.

3.Store-and-Forward: Transmission of medical data (e.g., images, documents) for evaluation by specialists.

4.Mobile Health (mHealth): Health-related services via mobile devices and apps.

Technological Advancements Enabling Telemedicine



1.Secure Video Conferencing Platforms

- HIPAA-compliant solutions like Zoom for Healthcare, Doxy.me, and Teladoc

- Integration with Electronic Health Records (EHR) systems

2. IoT and Wearable Devices

- Smart watches and fitness trackers for continuous health monitoring

- Connected medical devices (e.g., blood pressure monitors, glucose meters).

3. Artificial Intelligence and Machine Learning

- AI-powered symptom checkers and triage tools.

- Predictive analytics for early disease detection and intervention.

4.5G Technology

- Enabling high-quality video consultations in remote areas

- Supporting real-time transmission of large medical files (e.g., MRI scans)

Impact on Healthcare Delivery

1.Improved Access to Care

- Breaking geographical barriers, especially for rural communities

- Providing care to mobility-impaired patients

- Reducing wait times for specialist consultations

2. Cost-Effectiveness

- Reducing overhead costs for healthcare providers

- Lowering transportation costs for patients

- Potentially decreasing hospital readmissions through better follow-up care

3. Enhanced Efficiency

- Streamlining appointment scheduling and reducing no-shows

- Enabling quick follow-ups and medication adjustments

- Facilitating easier coordination among healthcare teams

4.Patient-Centered Care

- Empowering patients with more control over their health data

- Encouraging proactive health management

Challenges and Considerations

1. Digital Divide

- Ensuring equitable access to technology and high-speed internet

- Addressing disparities in digital literacy among patients

2. Data Security and Privacy

- Implementing robust cybersecurity measures

- Ensuring compliance with healthcare data protection regulations (e.g., HIPAA)

3. Quality of Care

- Maintaining the standard of care in virtual settings

- Addressing limitations in physical examinations

4. Regulatory and Reimbursement Issues

- Navigating evolving telemedicine regulations across different jurisdictions

- Ensuring fair and sustainable reimbursement models for telehealth services

The Future of Telemedicine

1. Integration with Emerging Technologies

- Virtual and Augmented Reality for medical training and patient education

- Robotics for remote physical examinations and procedures

2. Expansion of Specialties

- Growth in telepsychiatry, teledermatology, and other specialized fields

- Development of hybrid care models combining in-person and virtual care

3. Focus on Preventive Care

- Leveraging telemedicine for regular check-ups and health screenings

- Using predictive analytics to identify at-risk patients and intervene early

4. Global Health Initiatives

- Facilitating cross-border medical consultations

- Supporting healthcare delivery in underserved regions worldwide

Key Takeaways

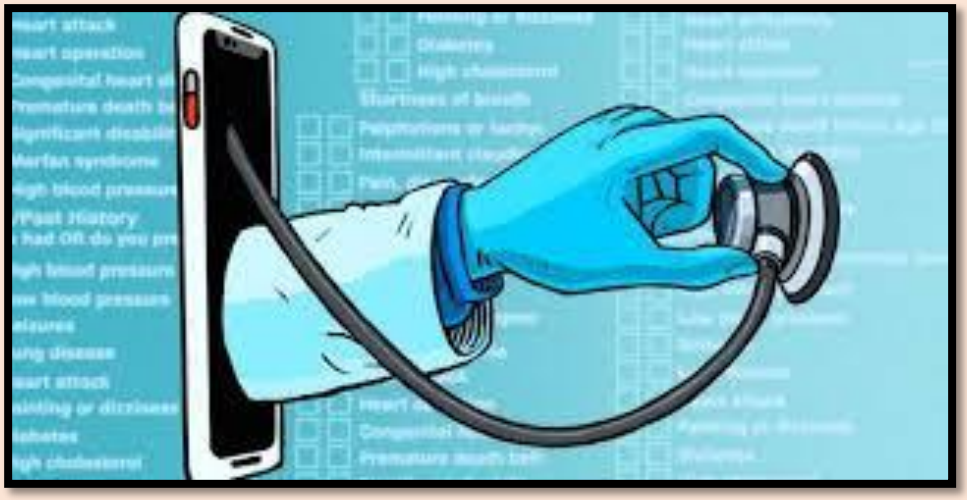
1. Telemedicine has revolutionized healthcare delivery, making it more accessible and efficient, with lasting impacts on patient care post-pandemic.

2. The integration of AI, IoT, and 5G technologies is driving further innovations in telehealth services.

3. While improving access and efficiency, telemedicine also presents challenges related to the digital divide, data security, and quality of care.

4. The future of healthcare is likely to be a hybrid model, seamlessly blending in-person and virtual care to optimize patient outcomes.

5. Continued advancements in telemedicine have the potential to significantly improve global health equity and access to specialized care.



As telemedicine continues to evolve, it promises to reshape the healthcare landscape, offering new possibilities for patient care, medical research, and health management on a global scale.

03. Cyber security: Protecting the Digital Frontier

The COVID-19 pandemic accelerated digital transformation across industries, leading to an unprecedented surge in online activities. This rapid shift exposed and exacerbated cyber security vulnerabilities, making the protection of digital assets more crucial than ever.

The Evolving Threat Landscape

1. Pandemic-Driven Cyber Threats

1. Phishing Attacks: Surge in COVID-themed phishing emails and messages

2. Ransomware: Increased targeting of healthcare institutions and remote workers

3. Data Breaches: Exploitation of vulnerable remote access points

4. Insider Threats: Risks associated with employees working from unsecured home networks

5. DDoS Attacks: Targeting of critical infrastructure and online services

2.Emerging Cybersecurity Challenges

1.IoT Vulnerabilities: Security risks in connected devices used for remote work and healthcare

2.AI-Powered Attacks: Use of artificial intelligence to create more sophisticated cyber threats

3.Cloud Security: Risks associated with rapid cloud adoption for remote work

4.5G Security: New attack vectors introduced by 5G network expansion

3.Cybersecurity Strategies and Solutions

1.Zero Trust Architecture

- Principle of "never trust, always verify" for all network access

- Continuous authentication and authorization for users and devices

2. Advanced Endpoint Protection

- AI-driven endpoint detection and response (EDR) solutions

- Behavioral analysis to identify and prevent novel threats

3.Multi-Factor Authentication (MFA)

- Implementation of MFA across all critical systems and applications

- Use of biometrics and hardware tokens for enhanced security.

4.Security Awareness Training

- Regular cybersecurity education programs for employees

- Simulated phishing exercises to improve threat recognition

5.Cloud Security Measures

- Cloud access security brokers (CASBs) for monitoring cloud usage

- Data loss prevention (DLP) tools for protecting sensitive information in the cloud.

6. Secure Remote Access

- Virtual Private Networks (VPNs) with strong encryption.

- Software-defined perimeter (SDP) solutions for secure remote access.

7. AI and Machine Learning in Cyber security

- Use of AI for threat detection and automated response.

Regulatory Landscape and Compliance

1. Data Protection Regulations

- General Data Protection Regulation (GDPR) in the EU

- California Consumer Privacy Act (CCPA) in the US

- Industry-specific regulations like HIPAA for healthcare

2. Cyber security Frameworks

- National Institute of Standards and Technology (NIST) Cybersecurity Framework

- ISO/IEC 27001 for information security management

3. Incident Reporting Requirements

- Mandatory breach notification laws in various jurisdictions

- Increased regulatory focus on timely disclosure of cybersecurity incidents.

The Human Factor in Cybersecurity

1.Building a Cybersecurity Culture

- Fostering a security-first mindset across organizations

- Encouraging employees to report suspicious activities

2.Addressing the Skills Gap

- Investing in cybersecurity education and training programs

- Promoting diversity in the cybersecurity workforce

3. Ethical Hacking and Bug Bounty Programs

- Engaging white-hat hackers to identify vulnerabilities

- Implementing responsible disclosure policies

Future Trends in Cybersecurity

1. Quantum Computing and Cryptography

- Development of quantum-resistant encryption algorithms

- Potential for quantum computers to break current encryption methods

2. Blockchain for Cybersecurity

- Use of blockchain for secure, decentralized identity management

- Implementation of blockchain for secure supply chain management

3.Extended Detection and Response (XDR)

- Integration of multiple security products into a unified threat detection and response platform

- Improved visibility across network, cloud, and endpoint environments

4. Privacy-Enhancing Technologies

- Homomorphic encryption for processing encrypted data without decryption

- Federated learning for AI model training without centralizing sensitive data

Key Takeaways

1. The pandemic heightened the need for robust cybersecurity measures, pushing organizations to invest in better protection for the increasingly digital world.

2. Cyber threats are evolving rapidly, with attackers leveraging AI, IoT vulnerabilities, and emerging technologies to launch more sophisticated attacks.

3. A comprehensive cybersecurity strategy must include technological solutions, employee education, and a security-first organizational culture.

4. Compliance with data protection regulations and adherence to cybersecurity frameworks are crucial for organizations to maintain trust and avoid penalties.

5. The future of cybersecurity will be shaped by emerging technologies like quantum computing, blockchain, and AI, requiring continuous adaptation and innovation in defence strategies.

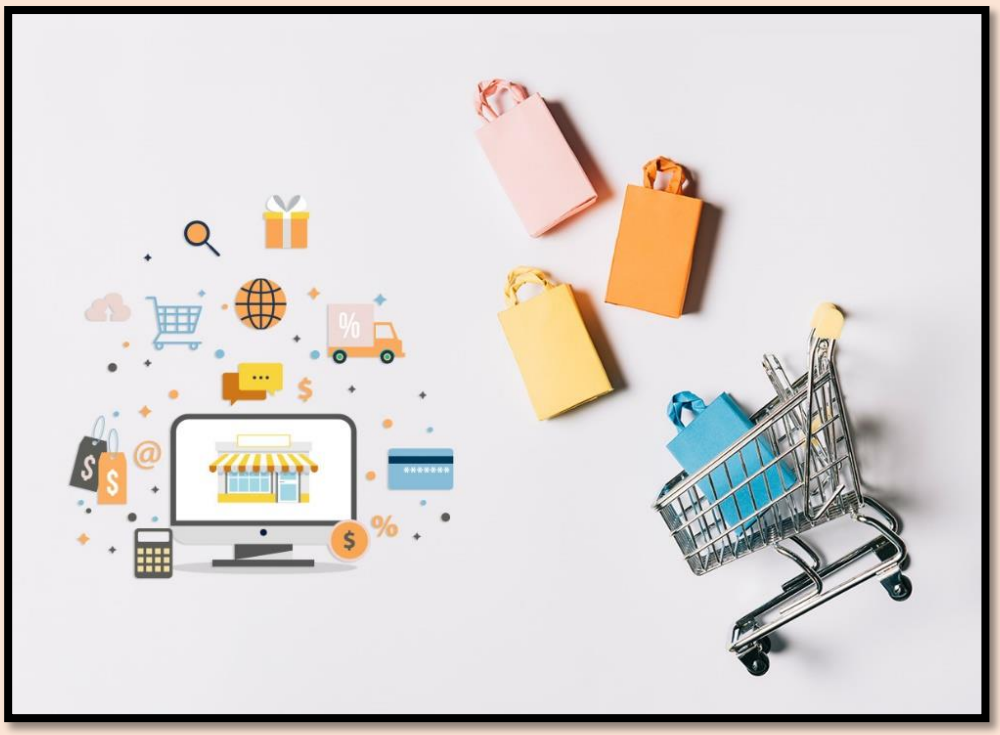
6. Addressing the human factor in cybersecurity, including bridging the skills gap and fostering a security-aware culture, is essential for long-term resilience against cyber threats.

As the digital landscape continues to evolve, cyber security will remain a critical priority for organizations worldwide. The ability to adapt to new threats, leverage emerging technologies, and maintain a robust security posture will be key to protecting the digital frontier in the post-pandemic world.

04. E-Commerce and Contactless Delivery: The New Shopping Experience

The COVID-19 pandemic has dramatically accelerated the growth of e-commerce and the development of contactless delivery solutions, fundamentally altering the retail landscape and consumer expectations.

The E-Commerce Boom



1. Driving Factors

- Lockdowns and social distancing measures
- Safety concerns related to in-person shopping
- Convenience and 24/7 availability of online platforms
- Expanded product selection compared to physical stores

2.Key Growth Areas

1. Grocery and Essential Items: Rapid adoption of online grocery shopping

2. Health and Personal Care: Increased demand for wellness products and medications

3. Home Office Equipment: Surge in purchases for remote work setups

4. Entertainment and Hobbies: Growth in sales of gaming, streaming, and DIY products

Innovations in E-Commerce

1. AI and Machine Learning

- Personalized product recommendations

- Chatbots for customer service

- Predictive inventory management

2. Augmented Reality (AR) and Virtual Reality (VR)

- Virtual try-on experiences for clothing and cosmetics

- AR-powered furniture placement in home environments

- Virtual showrooms for cars and real estate

3. Voice Commerce

- Integration with smart home devices (e.g., Amazon Alexa, Google Home)

- Voice-activated shopping lists and reordering

4. Social Commerce

- Shoppable posts on social media platforms

- Livestream shopping events

- Influencer-driven product recommendations

Contactless Delivery Solutions

1.Last-Mile Innovations

1.Autonomous Vehicles: Self-driving cars and robots for local deliveries

2.Drone Delivery: Aerial delivery for rural or hard-to-reach areas

3.Smart Lockers: Secure, contactless pickup points in convenient locations

2.Contactless Payment Methods

- Mobile wallet integration (e.g., Apple Pay, Google Pay)

- QR code payments

- Cryptocurrency adoption by some retailers

3.Delivery Tracking and Communications

- Real-time GPS tracking of deliveries

- Automated notifications and delivery instructions

- Contactless signature confirmation

Logistics and Supply Chain Advancements

1. Warehouse Automation

- Robotic picking and packing systems
- Automated guided vehicles (AGVs) for inventory movement
- AI-driven inventory forecasting and management

2. Sustainable Packaging

- Eco-friendly packaging materials
- Right-sizing algorithms to reduce waste
- Reusable packaging initiatives

3. Dark Stores and Micro-Fulfillment Centers

- Conversion of retail spaces to local fulfillment centers
- Strategically located micro-warehouses for faster delivery

Impact on Traditional Retail

1. Omnichannel Integration

- Buy Online, Pick Up In-Store (BOPIS) options
- Ship-from-store capabilities
- Seamless integration of online and offline shopping experiences

2. Reimagining Physical Stores

- Showrooming concepts with limited inventory
- Interactive in-store technology (e.g., smart mirrors, digital kiosks)
- Experiential retail focusing on brand engagement

3. Data-Driven Retail

- Use of customer data for personalized in-store experiences

- Dynamic pricing strategies

- Inventory optimization based on online and offline data

Challenges and Considerations

1. Digital Divide

- Ensuring access to e-commerce for all demographics

- Addressing disparities in internet access and digital literacy

2.Environmental Concerns

- Managing the carbon footprint of increased deliveries

- Balancing convenience with sustainability

3. Data Privacy and Security

- Protecting customer data in online transactions

- Ensuring secure payment processing

4.Labor Market Shifts

- Addressing job displacement in traditional retail

- Training workforce for e-commerce and logistics roles

The Future of Shopping

1. Hyper-Personalization

- AI-driven personal shopping assistants

- Customized product recommendations based on lifestyle and preferences

2. Seamless Omnichannel Experiences

- Frictionless transitions between online and offline shopping

- Unified customer profiles across all touchpoints

3.Sustainable E-Commerce

- Carbon-neutral delivery options

- Circular economy initiatives in online retail

4. Emerging Technologies

- Blockchain for supply chain transparency

- 5G enabling new AR/VR shopping experiences

- IoT integration for automated replenishment

Key Takeaways

1. E-commerce and contactless delivery became essential during the pandemic, setting new expectations for the future of retail and logistics.

2. AI, AR/VR, and IoT are driving innovations in online shopping experiences and logistics efficiency.

3. Contactless delivery solutions, including autonomous vehicles and smart lockers, are reshaping last-mile logistics.

4. Traditional retail is evolving towards omnichannel integration and experiential store concepts.

5. The future of shopping will be characterized by hyper-personalization, seamless omnichannel experiences, and a focus on sustainability.

6. Addressing challenges related to the digital divide, environmental impact, and data security will be crucial for the long-term success of e-commerce.

As e-commerce and contactless delivery continue to evolve, they are not just changing how we shop, but also influencing urban planning, logistics networks, and consumer behaviour on a global scale. The convenience, safety, and efficiency offered by these innovations are likely to have lasting impacts on the retail industry and beyond.

05. Report on Faculty Development Program on Creative Thinking and Problem Solving.

1.**Event Title**: Report on faculty Development Program on “Creative Thinking and Problem Solving”

2. **Event Date**: 28/01/2023

3. **Event Conduction Duration**: 2 Hours (Timings: 11 am to 1 pm)

4**. Event Venue**: SITRC Computer Seminar Hall

5. **Event Resource Person Details**: Col. Arun Jha

6. **Name of Event Coordinator**: Prof (Dr) K C Nalavade

7. **Expected Audience**: Faculties from Sandip Group of Institutions.

8. **Number of Participants**: 82

In the sessions speaker has explained about increasing thinking capacity and process of creative thinking. Speaker has given real life examples to improve the thinking power on any problem. In problem solving session speaker explained that no problem in the world is unsolvable. Person has to divide the problem and apply problem solving cycle to solve the problem by critical thinking.

9. **Photo:**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06. Report on Industrial Visit.

1. **Event Title**: Industrial Visit at “ESDS”.
2. **Event Date**: 21/2/2023 .
3. **Event Conduction Duration**: Timings: 10 am to 2 pm.
4. **Event Venue**: ESDS, Nashik.
5. **Name of Event Coordinator**: Prof. M V Korade.
6. **Expected Audience**: Students of TE Computer Engineering Department.
7. **Number of Participants**: 50
8. **Event Objectives & Outcomes**:

Objectives: By attending Industrial Visit students should

1) Aware of Industry Environment.
2) Aware about Cloud Technology.
3) Aware about data center working.

Outcomes: Students are able to

1) Understand industry Culture.
2) Understand Cloud technology structure.
3) Understand Rack server, Big data storage on cloud.
4) Understand the concept of data center

9.**Photo:**


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07.Report on Expert Talk.

1. **Event Title**: Expert Talk on 'Everything to Handle Interruptions and Applications to Microcontroller'
2. **Event Date**: 22nd May, 2023.
3. **Event Venue** : Network Lab, CE Department, SIEM, Nashik
4. **Event Conduction Duration**: 10:30 AM to 12:30 PM
5. **Name of Event Coordinator** : Ms. Snehal P. Dongre
6. **Name of Resource Person**: Prof. Pramod Aswale Assistant Professor, Dept. of Electronics and Telecommunication, SIEM, Nashik-422213.
7. **Expected Audience** : SE (Computer Engineeing)
8. **Number of students present**: 30
9. **Event Objectives & Outcomes**:

Objectives:-

1. To make students understand interruption mechanism.
2. To develop student's ability to handle interrupts while designing assembly language program.
3. To make students understand the working of microcontroller and its architecture.
4. To give students practical applications of microcontroller.

Highlights: In the morning session, Prof. Snehal Dongre welcomed and introduced the resource person of the event Prof. Pramod Aswale. She also gave glimpse on the content and conduction of the session. Prof Pramod started with delivering the basic introduction of Interruption,

Types of interrupts. He very beautifully explained the difference between interrupts and exception, Further he briefly explained the maskable and non-maskable interrupts. He extended his talk by discussing the overall architecture and working of Microcontroller, its basic functions and at the end he enlighten the students by discussing on real-time IoT devices using microcontroller along with its future scope.

Outcome:

1. Students have gained knowledge on handling interrupts.
2. Students have learnt about how to handle maskable and non-maskable interrupts.
3. Students have understood the importance of Microcontroller and its applications.

10. **Photo**: