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**VIGNAN'S INSTITUTE OF MANAGEMENT AND
TECHNOLOGY FOR WOMEN**

Department of Information Technology

ITSPECTRUM

IT Newsletter

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Vision of the Department

“To impart technical education producing competent and socially responsible engineering professionals in the field of Information Technology”.

Mission of the Department

- M1: To make the teaching–learning process more engaging, effective, and stimulating.
- M2: To impart strong foundational knowledge in sciences and information technology while fostering a positive attitude.
- M3: To create a conducive environment for developing skills and technologies aligned with industry needs.

Program Educational Objectives

- PEO1: Apply knowledge of mathematics and information technology to Analyze, design, and implement effective solutions for real-world problems in core as well as multidisciplinary domains.
- PEO2: Communicate effectively, work collaboratively in teams, uphold professional ethics, and leverage computing technologies for the betterment of society.
- PEO3: Pursue professional growth through lifelong learning, continuous skill enhancement, or higher education.

Program Specific Outcomes

- PSO1: Apply standard practices for software project development using hands-on programming skills for analysis, design and creation of software solutions.
- PSO2: Design networks and awareness of network security related issues.
- PSO3: Develop IT Application services with the help of different current engineering Tools.

Editorial Board

Dr. Ch. Baswaraj,

Associate Professor, Dept of IT.

Jukanti Anjali (IV-I Student)

B Jaya Sri (III-I Student)

Manasi Agarwal (III-I Student)

Ch.Vaishnavi (II-I Student)

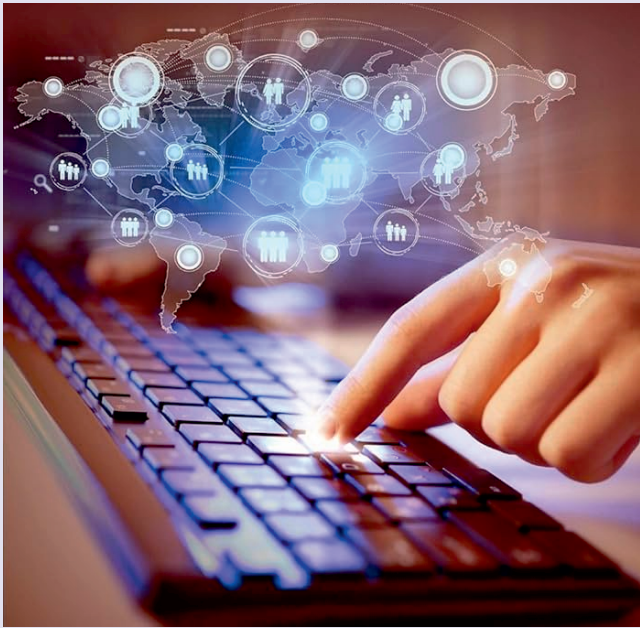
INFORMATION TECHNOLOGY

The Department of Information Technology was established in 2019 with an initial intake of 60 students. Since its inception, the department has been committed to providing excellent learning facilities and a dynamic academic environment that nurtures competent engineers capable of meeting both national and global industry standards.

The department's success is driven by the creativity, innovation, and dedication of its faculty and students. To strengthen technical competence, students are offered various in-house training programs designed to enhance their practical skills and domain expertise. The academic focus extends beyond theoretical knowledge, emphasizing holistic personality development through a blend of technical, analytical, and interpersonal skills.

The department regularly organizes workshops, seminars, and conferences to keep students and faculty abreast of emerging technologies in the field of Information Technology. Many of our students have secured placements in leading IT companies, while others have pursued higher education at top-ranked universities in the USA and other countries.





The collective efforts of both faculty and students have significantly contributed to the department's achievements and recognition. Furthermore, students are encouraged to participate in social outreach programs and extracurricular activities, fostering a spirit of leadership, teamwork, and community engagement.

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HOD'S MESSAGE

Dr. D. Shanthi

Postdoc (USA), PHD(CSE),
M.Tech(CSE), B.Tech(CSE), PG.Diploma
in AI(NITW), (M.SC.(Psychology), AU)
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Dr. D. Shanthi brings 18 years of experience to her role as Professor and Head of the Department of Information Technology at VMTW, Hyderabad, India. She completed her Postdoctoral research at California Public University (USA) and holds a PG Diploma in AI & ML with a 3.66 CGPA from NITW. Dr. Shanthi earned her Ph.D. in Computer Science from JNTU Hyderabad in 2020. She comes from a core Computer Science Engineering background. She also qualified the UGC NET examination in 2024. Additionally, she holds 3 copyrights, including 2 national and 1 international. Dr. Shanthi has been invited as an expert by esteemed organizations such as RCI (Hyderabad), IEI (Hyderabad), Telangana State Residential Degree Colleges, Thiruvalluvar University (Tamil Nadu), SRM (AP),

and Chaitanya Deemed University (Hyderabad). She has 2 scholars from CDU and Lincoln University College (Malaysia), under her guidance one scholar got his PHD. She has also been recognized as a research guide by JNTUH. She has authored 45 research papers in prominent international and national journals, including IEEE, Springer, and Inderscience, and few are presented at notable conferences. Her research citations are 537 H-Index: 12 and I10 Index: 13 and one of her research article won the “Best Paper Award” in 2019. Her accolades include the “Young Scientist Award” from DK International Research Foundation Faculty Awards in 2019, the “Outstanding Research Faculty Award” from Amaravathi Research Academy Faculty Excellence Awards in 2020, and the “APJ Abdul Kalam Award” from Shikshak Kalyan in 2021. Dr. Shanthi has published 2 national-level books, 4 international books, 3 Scopus-indexed book with Bentham Science, and 1 AICTE local language translation of a Software Engineering textbook. She is an active member of professional bodies such as FSIESRP, MIAENG, LMCSI, MEMRC, and MIEEE, and serves on the editorial boards of several journals, including the American Journal of Software Engineering and Applications, IJERT, and Microprocessors and Microsystems (SCI Journal), Discover Computing (springer Journal).



1. FACULTY ARTICLE'S A CLOUD SECURITY ASSESSMENT MODEL FOR MITIGATING ADVANCED PERSISTENT THREATS IN CLOUD COMPUTING SYSTEMS

By Mrs. A. Eenaja
Assistant Professors
Dept of IT



Title: A Cloud Security Assessment Model For Mitigating Advanced Persistent Threats In Cloud Computing Systems

In today's digital era, cloud computing has become the backbone of data storage and service delivery, offering scalability and flexibility to organizations worldwide. However, the growing sophistication of Advanced Persistent Threats (APTs) poses significant challenges to cloud security & proposed an innovative Cloud Security Assessment Model designed to identify, evaluate, and mitigate APTs in cloud environments. The model integrates behavioral analysis, real-time threat detection, and adaptive encryption techniques to safeguard sensitive information from malicious intrusions. Through comprehensive risk assessment and multi-layered defense mechanisms, the framework enhances the resilience of cloud systems against evolving cyber threats. The research emphasizes proactive monitoring and continuous evaluation, enabling early detection and quick response to security breaches. This pioneering work contributes significantly to the field of cybersecurity and cloud architecture, offering a practical roadmap for organizations to strengthen their digital defenses. The study has received appreciation from academic peers and industry experts, marking a step forward in building safer, more reliable cloud infrastructures. more reliable cloud infrastructures.



2. FACULTY ARTICLE'S ROAD TRANSPORT SOLUTIONS: LICENSE PLATE NUMBER EXTRACTION AND HELMET DETECTION USING YOLOV3 AND CONVOLUTIONAL NEURAL NETWORKS (CNN)

By Mr. S. Chandra Sheker
Assistant Professors
Dept of IT

Title: Road Transport Solutions: License Plate Number Extraction And Helmet Detection Using YOLOv3 And Convolutional Neural Networks (CNN)



In the pursuit of enhancing road safety and enforcing traffic regulations through technology, Mr. S. Chandra shekerAssistant Professor, has developed an innovative system for license plate number extraction and helmet detection using advanced deep learning techniques. The research leverages YOLOv3 (You Only Look Once, Version 3) for real-time object detection and Convolutional Neural Networks (CNN) for accurate image classification. This intelligent system identifies motorcyclists, detects the presence or absence of helmets, and extracts vehicle license plate numbers with high precision, even in complex

environments. By integrating image preprocessing, segmentation, and deep neural models, the solution enables automated monitoring and data collection for traffic management authorities. The model demonstrates excellent accuracy and speed, making it suitable for smart surveillance, automated e-challan systems, and road safety analytics. This pioneering work reflects the growing potential of artificial intelligence in building safer, smarter cities. The project received commendation for its practical applicability, technical innovation, and contribution toward intelligent transportation systems.



1. Student's Article Letting Go to Grow: Finding Peace Through Forgiveness

By GOLLA AKHILA 22UP1A1225-IT

Title: Letting Go to Grow: Finding Peace Through Forgiveness

Forgiveness is too often confused with weakness, submission, or ignoring the pain inflicted by others. Actually, it is one of the strongest weapons of emotional recovery and mental acuity. Resentment, anger, or betrayal can contaminate the mind, blur judgment, and keep us stuck in a cycle of emotional suffering. Letting go, however, does not imply that we condone the misconduct—it implies we are -

opting for peace over penalty, clarification over confusion. The Emotional Burden of Unforgiveness Holding onto anger is like carrying a weight you can never set down. While such emotions may seem to protect us, they gradually erode our mental well-being, leading to anxiety, stress, and emotional fatigue. Resentment consumes energy, blunts our emotional growth, and prevents healing. In the end, we suffer more than the one who hurt us. Self-Forgiveness: Healing From Within Forgiving ourselves is often harder than forgiving others, yet it's crucial for mental health. Guilt and shame can hold us back, but self-forgiveness allows growth. It's not about ignoring our mistakes—it's about choosing self-compassion over self-punishment. Healing starts with being kind to ourselves. “To forgive is to set a prisoner free and discover that the prisoner was you.” — Lewis B. Smedes

2. Title: AI for Bharat: Transforming Local Problems into Smart Solutions

By THANGEDA RADHIKA 22UP1A1258-IT

Title: AI for Bharat: Transforming Local Problems into Smart Solutions

Artificial Intelligence (AI) has gained significant attention in India—not merely as a technological trend, but as a tool for solving the nation's unique local challenges. While AI is already transforming industries across the globe, India's focus lies in adapting and customizing AI to meet its diverse social and economic needs. This approach reflects the country's spirit of innovation, inclusivity, and practical problem-solving. Rather than simply adopting global solutions, India is developing its own AI-driven frameworks that align with its cultural, environmental, and demographic realities. Indian researchers, innovators, and policymakers are collaboratively leveraging AI

education, and governance, ensuring technology reaches the grassroots level. These initiatives highlight India's commitment to using AI as a means of social empowerment and sustainable development. By integrating AI with indigenous knowledge and local data, India is creating intelligent systems that truly serve its people—showcasing how technology can be both globally advanced and locally relevant.

Student's Participation

S. No	Name of the Student	Name of the Event	State/National/International level	Date of the Event
1	A.Meghana	EPITOME 24 HACKATHON	National	1st & 2nd March 2024
2	B&Ari Shailaja	EPITOME 24 HACKATHON	National	1st & 2nd March 2024
3	Karna Tejaswi Reddy	EPITOME 24 HACKATHON	National	1st & 2nd March 2024
4	Voriganti Bhavana	EPITOME 24 HACKATHON	National	1st & 2nd March 2024
5	Poleboina Archana	EPITOME 24 HACKATHON	National	1st & 2nd March 2024
6	Ch.Akshaya Reddy	Infinity-24	National	18th -20th Jan 2024
7	Govindu Swathi	Infinity-24	National	18th -20th Jan 2024
8	Makthala Rithika	Infinity-24	National	18th -20th Jan 2024
9	M.Akhila	Infinity-24	National	18th -20th Jan 2024
10	Paritala Jyothika	Infinity-24	National	18th -20th Jan 2024
11	Nalla Likhitha	Infinity-24	National	18th -20th Jan 2024
12	T.Bindu Sri	Infinity-24	National	18th -20th Jan 2024
13	M. Divya	Infinity-24	National	18th -20th Jan 2024
14	M.Laxmi Prasanna	Infinity-24	National	18th -20th Jan 2024
15	G.Sharanya	Infinity-24	National	18th -20th Jan 2024
16	Pendri Sri Varsha	Infinity-24	National	18th -20th Jan 2024
17	V.Swapnika	Infinity-24	National	18th -20th Jan 2024
18	Karravula Pravallika	Infinity-24	National	18th -20th Jan 2024
19	Kudipudi Niharika	Infinity-24	National	18th -20th Jan 2024

SAC Activities

Title: CPR & First Aid Awareness Session in Collaboration with Indian Red Cross Society

A two-day CPR and First Aid Awareness Session was organized on 14th February 2024 at Rashtrapati Nilayam, Bolarum, Secunderabad,



in collaboration with the Indian Red Cross Society. The session aimed to educate participants on the importance of immediate medical response during emergencies. The event began with an insightful lecture on CPR techniques and first aid procedures, followed by video demonstrations illustrating life-saving practices in real-world scenarios. A mock session allowed participants to perform CPR under expert supervision, helping them gain hands-on experience and confidence in handling medical emergencies. The program emphasized the value of timely assistance and community readiness, equipping students and faculty with essential first-response skills. The collaboration with the Indian Red Cross Society enhanced awareness of humanitarian service and promoted a culture of health and safety within the institution.

Title: Ey GDS – Aicte 6-Week Internship Orientation Session

The institution hosted the EY GDS – AICTE 6-Week Internship Orientation Session on 28th February 2024, marking the beginning of a valuable learning journey for aspiring students. The session provided a comprehensive overview of the internship structure, learning outcomes, and career development opportunities offered by EY Global Delivery Services (GDS) in collaboration with AICTE.

Students were guided through the program's objectives, which focus on equipping them with industry-relevant skills in technology, analytics, and business operations. The orientation also highlighted the importance of professional ethics, teamwork, and innovation in the corporate environment. Participants gained insights into real-world problem-solving and the role of digital transformation in today's business landscape.

NSS Activities

Title: Helping Hand – Social Service Activity at Rampally

The Helping Hand outreach program was organized on 23rd January 2024 at Rampally by the VMTW Extension Activity Center in association with the Samskruthi Foundation. This humanitarian initiative aimed to support underprivileged communities through acts of kindness and service. Volunteers distributed essential supplies and interacted with local residents to understand their needs and challenges. The event highlighted the values of compassion, empathy, and social responsibility among students. Through their active participation, volunteers learned the importance of giving back to society and making a positive difference in people's lives. The program reflected the institution's commitment to nurturing socially responsible citizens and fostering community welfare.



Title: Girl Child Education Program at Keesara Village

The VMTW Extension Activity Center, in collaboration with the Keesara Panchayat and Nehru Yuva Kendra (NYK), organized a Girl Child Education Awareness Program on 25th January 2024 at Keesara Village. The initiative aimed to promote the importance of educating girls as a means of empowering families and communities. Resource persons highlighted government schemes supporting girl education and shared inspiring stories of successful women from rural backgrounds. Interactive sessions encouraged parents and youth to support continued education for girls. The event strengthened the message that educating a girl means educating an entire generation, fostering equality and social progress.



The program began with a traditional prayer and invocation, followed by the decoration of the venue with colorful rangoli, marigold flowers, and festive elements that showcased the essence of Indian heritage. Students and faculty members actively participated in cultural performances, including devotional songs, classical dance, skits, and speeches explaining the relevance of Dussehra in modern times. These activities not only provided a platform for students to showcase

Title: Awareness Program on E-Waste Management at VMTW Campus



An Awareness Program on E-Waste Management was conducted on 9th February 2024 at the VMTW Campus by the VMTW Extension Activity Center in association with TASK (Telangana Academy for Skill and Knowledge). The program emphasized the environmental hazards of improper disposal of electronic waste and the need for responsible recycling practices. Speakers explained the importance of reducing e-waste through repair, reuse, and recycling initiatives. Students actively participated in discussions on sustainable technology usage and digital responsibility. The event fostered a sense of ecological awareness and inspired attendees to adopt green practices, aligning with India's mission toward sustainable development.

Title: Anti-Drug Abuse Summit at BITS Campus



The Anti-Drug Abuse Summit was organized on 10th February 2024 at the BITS Campus by the VMTW Extension Activity Center in collaboration with the Rachakonda Commissionerate. The summit aimed to educate students about the devastating effects of drug abuse and promote a healthy, drug-free lifestyle. Police officials, medical experts, and counselors addressed the gathering, discussing preventive measures, legal consequences, and rehabilitation support systems. Real-life case studies and testimonials provided valuable insights into the importance of awareness and early intervention. The event encouraged youth to act as ambassadors of a drug-free society, spreading the message of health, discipline, and responsibility.

Title: Awareness Program on E-Waste Management at VMTW Campus

A Voter Awareness Program was organized on 28th March 2024 at Keesara by the VMTW Extension Activity Center in collaboration with Nehru Yuva Kendra (NYK). The program aimed to educate citizens, especially first-time voters, about the importance of active participation in the democratic process. Volunteers conducted interactive sessions and distributed informational pamphlets to raise awareness on the significance of voting, the electoral process, and ethical voting practices. Engaging discussions emphasized the role of youth in shaping the future of the nation through informed decision-making. The initiative successfully inspired civic responsibility among participants, fostering awareness about the power of each vote in building a stronger democracy.



Professional Societies/Bodies

S.N.	Name of the Faculty	Name of the Professional Society /Body at National and International Level	Name of the Grade/ Level/Position
1	Dr.D. Shanthi	CSI	Life Member
2	Dr.D. Shanthi	IEEE	Member
3	Dr.D. Shanthi	IAENG	Life Member
4	Dr.D. Shanthi	FSIESRP	Life Member
5	Dr.D. Shanthi	AIMERS	Member
6	Dr.D. Shanthi	IFERP	Member
7	Dr.D. Shanthi	MEMRC	Life Member
8	Dr.P.Eswaraiah	IAENG	Life Member
9	Dr.P.Eswaraiah	IFERP	Life Member
10	Mr.Janakiraman Ranjith	IAENG	Life Member
11	Mrs.Swapna Chiluguri	ISTE	Life Member
12	Mrs.Swapna Chiluguri	IFERP	Member
13	Mrs.Swapna Chiluguri	IAENG	Life Member
14	Mrs.Kolan Helini	AIMERS	Member
15	Mrs.Kolan Helini	IFERP	Member
16	Mrs. P.Amreswari	IAENG	Life Member
17	Mrs. P.Amreswari	IFERP	Member
18	Mrs.Eenaja Aileni	IAENG	Life Member
19	Mrs.Eenaja Aileni	AIMERS	Member
20	Mrs.Bojjapalli Archana	AIMERS	Member
21	Mrs.Bojjapalli Archana	IAENG	Life Member
22	Mrs.Bojjapalli Archana	SDIWC	Member
23	Mr.U.Venkat Rao	NDLI Club	Member
24	Mr.U.Venkat Rao	AIMERS	Member
25	Mr.U.Venkat Rao	IAAC	Member
26	Mr.U.Venkat Rao	CSI	Member
27	Mr.U.Venkat Rao	ABCDINDEX	Life Member
28	Mr.U.Venkat Rao	IFERP	Member
29	Mrs.FouziyaMojammed	IAENG	Life Member
30	Mrs.FouziyaMojammed	IFERP	Member
31	Mr.ChandraShekher Sangishetty	IAENG	Life Member
32	Mr.ChandraShekher Sangishetty	IFERP	Member
33	Mr.Srinivasarao Munagala	IFERP	Member
34	Mrs.Sandhya Rani Gangu	IAENG	Life Member
35	Mrs.Sandhya Rani Gangu	FSIESRP	Member
36	Mrs.Sandhya Rani Gangu	AIMERS	Member
37	Dr.A.Sudheer Babu	IFERP	Member
38	Dr.Ch. Baswaraj	IFERP	Member

Activities

Sankranti Celebrations at Vignan's Institute of Management and Technology for Women (VMTW)

The festival of Sankranti, symbolizing prosperity, gratitude, and the joy of harvest, was celebrated with immense enthusiasm and cultural splendor at Vignan's Institute of Management and Technology for Women (VMTW). The campus was transformed into a vibrant space filled with color, music, and festive cheer as students and faculty came together to celebrate one of India's most cherished festivals. The event was organized by the VMTW Cultural Committee under the guidance of faculty coordinators, with active participation from all departments.

The celebrations commenced with the traditional Bhogi ceremony, marking the beginning of the festival. A symbolic Bhogi fire was lit in the college courtyard, where students gathered around to offer prayers and old belongings, signifying the burning away of negativity and the welcoming of new beginnings. The fragrance of freshly harvested crops and the joyful beats of traditional music created a lively atmosphere, setting the tone for the day's events.

One of the highlights of the celebration was the Rangoli competition, where students showcased their artistic skills through intricate and colorful designs representing rural life, harvest themes, and cultural symbols. The campus pathways were adorned with creative patterns that added to the festive ambiance. The traditional dress competition further enhanced the beauty of the event, as students arrived in elegant sarees and traditional attire, reflecting the diversity and vibrancy of Indian culture.

The cultural program that followed was a delightful blend of tradition and talent. Students performed folk dances, skits, and songs depicting the significance of Sankranti across various regions of India. The performances resonated with the themes of gratitude, unity, and celebration of the agrarian spirit. The audience responded with loud applause, appreciating the dedication and enthusiasm of the participants.

Adding to the excitement were the traditional games and fun activities organized for students and staff. Events like pot breaking, tug of war, and kite flying infused the celebration with energy and laughter. The faculty and non-teaching staff also joined in the festivities, making the event even more memorable.

The Principal of VMTW, in her address, congratulated the organizing team and emphasized the importance of celebrating festivals that connect students with cultural heritage and community values. She noted that such events not only provide recreation but also nurture teamwork, leadership, and respect for tradition among students.

The Sankranti celebrations at VMTW concluded with a shared festive meal and heartfelt camaraderie among students and staff. The day stood as a perfect example of how the institution upholds the spirit of “learning beyond classrooms”, blending academic excellence with cultural enrichment. The event left everyone with smiles, memories, and renewed positivity for the year ahead.



Program Outcomes (Adapted from NBA)

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

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.

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.

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 information to provide valid conclusions.

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.

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 professional engineering practice.

Environment and Sustainability: Understand the impact of the professional engineering solutions in societal and environmental contexts, and demonstrate the knowledge of, and need for sustainable development.

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

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

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.

Project Management and Finance: Demonstrate knowledge and understanding of the engineering and 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.

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.

