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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)

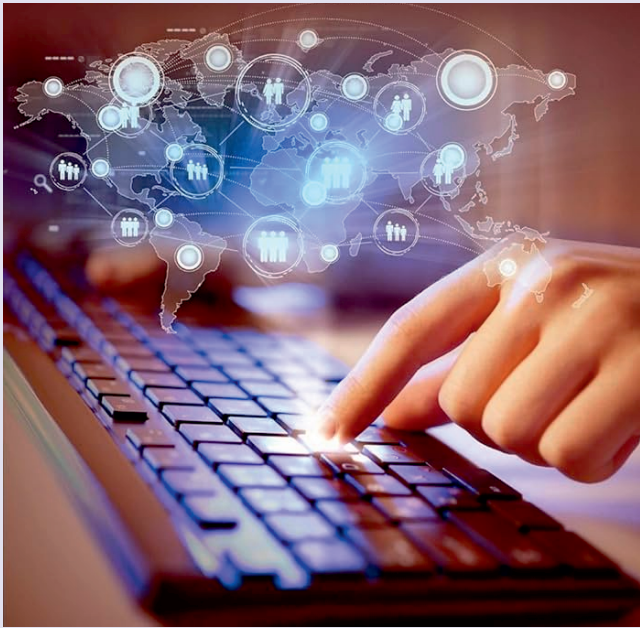
INFORMATION TECHNOLOGY

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 SMART AGRICULTURE

By Mr. Venkat Rao Ubbala
Assistant Professors
Dept of IT

Title: Smart Agriculture



Agriculture has always been the backbone of human civilization, but with rapid population growth and climate challenges, traditional farming methods are no longer sufficient. Smart Agriculture, powered by modern technologies such as the Internet of Things (IoT), Artificial Intelligence (AI), Machine Learning (ML), and Drones, is transforming the way crops are cultivated, monitored, and managed. Through the use of sensors and data analytics, farmers can now monitor soil moisture, weather conditions, and crop health in real time. Machine learning models help predict pest attacks, irrigation needs, and yield outcomes with remarkable accuracy. Drones and automated machines assist in precision spraying, field mapping, and resource management—reducing waste and increasing efficiency. Smart Agriculture not only enhances productivity but also promotes sustainability by optimizing the use of water, fertilizers, and energy. As technology continues to evolve, the integration of AI-driven systems will ensure that farming becomes more data-driven, eco-friendly, and profitable, shaping the future of global food security.



2. FACULTY ARTICLE'S SMART EVALUATION OF RICE GRAINS USING DIGITAL IMAGE PROCESSING

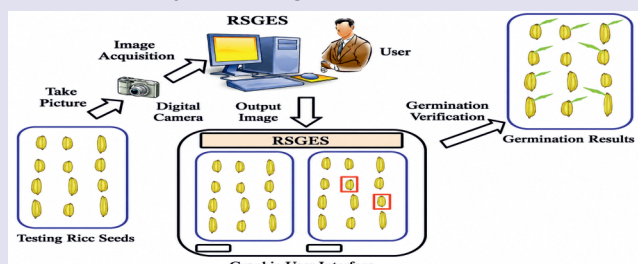
By Mrs. K Sandhya Rani
Assistant Professors
Dept of IT



Title: Smart Evaluation Of

Rice Grains Using Digital Image Processing

Rice is one of the most widely consumed staple foods in the world, and its quality directly affects market value, export potential, and consumer satisfaction. Traditionally, rice grain quality assessment—based on size, shape, color, and texture—has been performed manually, making it time-consuming and subjective. With advancements in digital technology, image processing has emerged as a precise and efficient tool for automatic rice grain quality evaluation. High-resolution imaging systems combined with computer vision algorithms can accurately analyze grain characteristics such as length-to-width ratio, broken percentage, chalkiness, and color uniformity. These parameters are crucial in determining the grade and purity of rice varieties. The integration of machine learning further enhances the classification accuracy, allowing rapid and consistent quality control across large sample sets. By adopting image processing-based quality assessment, rice industries and research institutions can ensure higher standards, reduce human error, and strengthen global competitiveness. This technology-driven approach marks a significant step toward modernization and sustainability in the agro-industrial sector.



1. Student's Article Cybersecurity Awareness – Defending The Digital Era

By B. Shailaja
22UP1A1206 III-IT

Title: Cybersecurity

Awareness Defending The Digital Era



In today's digital world, technology connects every part of our lives — from online banking to social media. However, this growing dependence on technology also brings serious risks like hacking, phishing, and identity theft. Cybersecurity awareness is the first line of defense in protecting our personal and institutional data. Students, as frequent internet users, must learn to create strong passwords, avoid suspicious links, and understand the importance of privacy settings. Regular software updates and using verified websites can prevent most cyberattacks. Educational institutions should also conduct workshops and awareness campaigns to promote safe online habits.

1. Student's Article Drones for Social Good

By O. Sanyogitha
22UP1A1244 - IT

Title: Drones for Social Good



Drones, once known mainly for military or recreational use, are now transforming society in positive ways. These flying machines are being used for disaster management, medical aid, agriculture, and environmental protection. During natural calamities like floods and



In agriculture, drones assist farmers by monitoring crop health, mapping fields, and optimizing water usage. Environmentalists use them to track wildlife, prevent poaching, and study deforestation patterns. Even in healthcare, drones are saving lives by delivering medicines and vaccines to isolated regions. By combining innovation and compassion, drones are becoming powerful tools for social good. With proper regulation and awareness, they can help build a safer, healthier, and more sustainable world.

SAC Activities

Title: Debate Competition on Bharatiya Value Systems Held

The Department organized a Debate Competition on “Are Bharatiya Value Systems Relevant in Modern Times?” on November 28, 2024, to promote critical thinking and cultural awareness among students. The event witnessed enthusiastic participation, with students presenting thought-provoking arguments on the relevance of traditional Indian values in today's globalized world. The session was graced by distinguished guests — Dr. U. V. N. Narasimha Murthy, Government of Andhra Pradesh and Retired IAS Officer, and Dr. S. P. Raju, Executive Chairman of Vayhan Coffee Ltd. Both guests shared inspiring insights on how ethical living, respect, and harmony—core Bharatiya principles—remain vital in shaping modern society. The competition concluded with an interactive discussion and prize

distribution ceremony. The event successfully emphasized the importance of integrating cultural wisdom with contemporary thinking.

NSS Activities

Title: “Swachhata The VMTW NSS Unit, in association with the JNTUH-NSS Cell, organized a cleanliness drive titled “Swachhata Hi Seva” on October 2, 2024, marking the celebration of Gandhi Jayanthi. The event aimed to spread awareness about cleanliness and community responsibility, reflecting the ideals of Mahatma Gandhi's vision of a clean and self-reliant India.



NSS volunteers actively participated in cleaning the campus premises, nearby roads, and public areas. They also conducted an awareness campaign encouraging students and residents to adopt hygienic habits and reduce plastic usage. Faculty members appreciated the volunteers for their enthusiasm and commitment to social service. The program concluded with a pledge to maintain cleanliness and continue similar activities regularly. The event truly embodied the spirit of “Swachh Bharat Abhiyan” and inspired everyone to contribute to a cleaner nation. Hi Seva” – On the Occasion of Gandhi Jayanthi.



Conducted Events In Department

A Two-Day National Technical Extravaganza – KYROS 2024:



The Department of Information Technology organized a grand national-level technical fest KYROS 2024 on October 18th and 19th, 2024, showcasing innovation, creativity, and technical excellence. The event brought together enthusiastic participants from various institutions across the country. It featured a wide range of events including paper presentations, coding challenges, project expos, and technical quizzes that encouraged students to explore emerging technologies. Workshops and expert talks by industry professionals enriched the participants' knowledge and inspired innovation. The fest provided a dynamic platform for students to exhibit their talents, share ideas, and foster collaboration. The closing ceremony recognized outstanding performers with awards and certificates. KYROS 2024 stood as a testament to the department's commitment to nurturing technical skills and promoting a culture of research and innovation among budding technocrats.



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	ABSCINDEX	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

October – Dussehra Celebration



The month of October began on a festive note with the grand celebration of Dussehra. The campus was adorned with colorful decorations, symbolizing the triumph of good over evil. Students participated in traditional games, cultural performances, and rituals that spread joy and unity across the campus.

November – Creative Carnival 2024 & Freshers' Celebration

November was marked by the grand success of Creative Carnival 2024, organized by Click Talks. The event became a center of attraction with the presence of several renowned guests, including: Nainika Anasuru, Kavyah Jagana (Actress), VJ Sunny, Pavan Sidhu, Shrikant Sinha, Siri Raasi, Premalatha Chinnu, Ananya Ongram, and Vaishali Raj. Their presence added star power and excitement to the event. Students from the IT Department actively participated in interactive sessions, performances, and creative showcases, gaining motivation and valuable insights from these personalities.

Freshers' Party

The same month, the Freshers' Party was celebrated with great enthusiasm to welcome the new batch of IT students. The event included band performances, dance shows, skits, and musical programs, creating a warm and lively environment. It strengthened the bond between juniors and seniors, marking the start of an exciting journey in college life.

December – Christmas Celebration

December brought with it the spirit of joy and togetherness as the IT Department joined in the Christmas Celebrations. The campus was beautifully decorated with stars, Christmas trees, and lights. Students sang carols, exchanged gifts, and shared festive treats, filling the atmosphere with cheer and positivity. The event reflected unity, peace, and happiness, perfectly ending the year 2024 on a festive note.

VMTW



Celebration

Freshers' Party



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.

