



Vision of the Department

To inspire and educate female students in Computer Science and Engineering to become skilled, ethical, and innovative professionals prepared for future technologies and challenges.

Mission of the Department

- M1: To provide strong foundational and advanced knowledge in core areas of Computer Science and Engineering, enabling students to design, analyse, and solve engineering problems using modern Computing tools.
- M2: To promote research skills, innovation, entrepreneurship and lifelong learning by encouraging students to participate in research, development, and interdisciplinary activities in emerging technologies.
- M3: To inculcate professional ethics, social responsibility, and sustainable practices, enabling graduates to contribute positively to society.

Program Educational Objectives

- PEO1: To acquire logical and analytical skills in core areas of Computer Science & Information Technology.
- PEO2: To adapt new technologies for the changing needs of IT industry through self-study, graduate work and professional development.
- PEO3: To demonstrate professional and ethical attitude, soft skills, team spirit, leadership skills and execute assignments to the perfection.

Program Specific Outcomes

- PSO1: **Software Development:** Ability to grasp the software development life cycle of software systems and possess competent skill and knowledge of software design process.
- PSO2: **Industrial Skills Ability:** Ability to interpret fundamental concepts and methodology of computer systems so that students can understand the functionality of hardware and software aspects of computer systems.
- PSO3: **Ethical and Social Responsibility:** Communicate effectively in both verbal and written form, will have knowledge of professional and ethical responsibilities and will show the understanding of impact of engineering solutions on the society and also will be aware of contemporary issues.

EDITORIAL BOARD

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Ms. Shahana, CSE (Student)

Ms. G S Yamini Devi CSE (Student)

Ms. Ojasvi Pattanaik CSE (Student)

COMPUTER SCIENCE AND ENGINEERING



Established in 2008, the CSE Department at VMTW has grown from an intake of 90 to 240 students, reflecting its commitment to excellence. The department earned NBA accreditation in 2019 and reaccreditation in 2022, ensuring high academic standards.

With experienced and research-driven faculty, the department promotes innovation through Centres of Excellence in IoT and AI & ML and collaborations with MSME, ALEAP, and TASK. Active associations with ISTE, CSI, and IETE enrich student learning through workshops and seminars.

Boasting 90% placements in leading companies like Amazon, Flipkart, Accenture, and Cognizant, and a highest package of ₹ 20 LPA, the department stands as a hub of innovation, research, and success.



HOD'S MESSAGE

Dr. Phijik Battula,

Associate Professor &
HoD, DEPARTMENT OF
COMPUTER SCIENCE AND
ENGINEERING

Dr. Phijik Battula brings over 20 years of academic and research experience to his role as Associate Professor and Head of the Department of Computer Science & Engineering at Vignan's Institute of Management and Technology for Women (VMTW), Hyderabad. He earned his Ph.D. in Computer Science from Osmania University, Hyderabad in 2023. He holds an M.Tech. in Computer Science and Engineering from Jawaharlal Nehru Technological University Hyderabad (JNTUH). Dr. Battula's expertise spans Computer Networks, Software Engineering, Operating Systems, Machine Learning, and Blockchain Technologies. He has made significant scholarly contributions, including: 3 national patents, 1 authored book, 10 journal publications, including (1 in SCIE-indexed journal, 4 in SCOPUS-indexed journals, 5 in UGC-approved journals, 2 international conference papers). He also served as an Academic Counsellor with the Indra Gandhi National Open University (IGNOU), Regional Services Division, Maidan Garhi, New Delhi, through Aurora Degree College Study Center (Code: 0111), Hyderabad. A dedicated mentor and educator, Dr. Battula has guided over 100 B.Tech graduates from VIGNAN's Group Institutions, Hyderabad. He is an active member of several professional organizations, Life Member, Indian Society for Technical Education (ISTE) – LM-137313, Life Member, International Association of Engineers (IAENG) – Member No: 277087, Life Member, Society of Digital Information and Wireless Communication (SDIWC) – ID: 30616.

FACULTY ARTICLE ON NEURAL NETWORKS

By, **Samreen Begum**, Assistant Professor (CSE)

Metaverse: Reality, Virtual Worlds, and Human Connection The Metaverse is a digital universe where real and virtual worlds merge, creating immersive spaces for work, play, and connection. Unlike traditional online platforms, it's interactive, shared, and persistent—continuing to exist even after users log off. With technologies like Virtual Reality (VR), Augmented Reality (AR), and Blockchain, the metaverse is transforming how we live, learn, and interact.



Originally rooted in gaming, the metaverse now extends to virtual offices, concerts, museums, and even shopping experiences. It's redefining human connection in the digital age—making remote meetings more engaging and online friendships more meaningful through lifelike avatars and shared experiences.

Blockchain adds a new dimension by enabling digital ownership of virtual assets such as NFTs and virtual land, creating a thriving digital economy.



While the metaverse offers endless opportunities—from virtual tourism and education to digital entrepreneurship—it also brings challenges like privacy risks, cybercrime, and addiction.

The metaverse isn't just a tech trend; it's a glimpse into a future where innovation meets imagination. As virtual and physical worlds continue to blend, this new digital frontier is set to redefine how humanity connects, creates, and collaborates.

BOOKS & CHAPTERS PUBLISHED:

S.NO.	AUTHOR	TITLE OF THE BOOK	TITLE OF PAPER	ISSN NUMBER
1.	Dr. Rajendra Prasad	Lecture Notes in Networks and System	An Integrated methodology of TsF KNN Based automated data classification and security for mobile Cloud Computing	978-981-19-1976-3
2.	Mr. C Sunil	Challenges and Possible Solutions for emerging emerging trends trends in Technologies	Creating a Chabot Using Python and Machine Learning Techniques	78-93-5627-706-9
3.	Mrs B Geetha	Challenges and Possible Solutions for emerging emerging trends trends in Technologies	Liver Detection Using Artificial Neural Networks Image Processing Techniques T echniques	978-93-5627-706-9
4.	Mr. M Vishnuvardhan Rao	Challenges and Possible Solutions for emerging emerging trends trends in Technologies	Artificial Image Classification and Detection Using Machine Learning CNN, Learning CNN, SVM and k-NN Techniques	978-93-5627-706-9

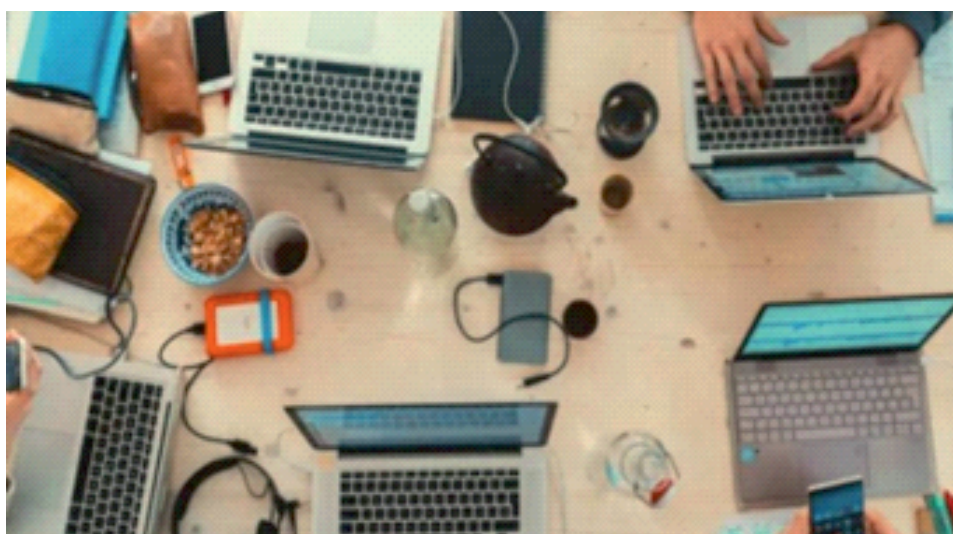
STUDENT ARTICLE ON THE GEN Z WAY OF MAKING CHANGE

By, Shahana IV year (CSE)

From Online Movements to Start-Up Moments: The Gen Z Way of Making Change

In today's digital world, a single post or video can spark a global movement. Gen Z is redefining what it means to create change—turning hashtags into real-world impact and ideas into innovation.

From climate action campaigns to mental health awareness drives, young voices are using social media not just for expression but for empowerment. Movements like Fridays for Future and #MeToo show how digital activism can lead to lasting social transformation.



At the same time, Gen Z is reshaping the world of work. With freelancing, content creation, and start-up culture on the rise, students are becoming creators, innovators, and entrepreneurs. Platforms like YouTube, Fiverr, and Upwork have become classrooms for skill,

creativity, and independence.

Hackathons, late-night coding sessions, and brainstorming marathons are now the breeding grounds of next-gen start-ups. These events spark not just projects but a mindset of entrepreneurship and problem-solving.



What truly defines Gen Z is their ability to link passion with purpose—combining creativity with consciousness. From apps that promote mental health to start-ups tackling sustainability, they prove that success and social impact can go hand in hand.

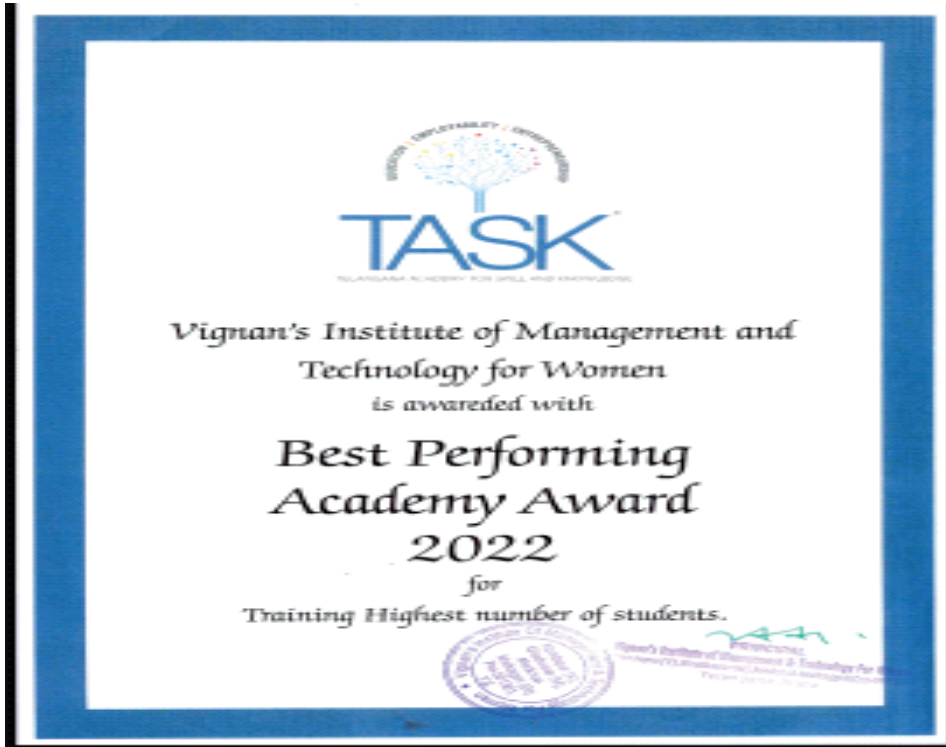
Armed with technology, empathy, and collaboration, Gen Z isn't waiting for opportunities — they're creating them. From hashtags to hustles, from likes to launches, this generation is building a bold, connected, and unstoppable future.

STUDENTS ATTEMPTED COMPETITIVE EXAMS:

Sl No	Roll No	Name	Exam Reg No	Name of the Exam
1	19UP1A1214	NIHARIKA REDDY KOTHAKAPU	1985995	GRE
2	19UP1A1214	NIHARIKA REDDY KOTHAKAPU		DUOLINGO
3	19UP1A05C3	HEMA KATKURI	1767104	GRE

STUDENT ACHIEVEMENTS

CSE students proudly participated in the TASK initiatives, contributing to the institution being honored with the Best Performing Academy Award 2022. Their active involvement in various training programs helped VMTW achieve this remarkable recognition for training the highest number of students.



The Department of CSE played a key role in the institution being recognized as a Top Contributing Institution in the IBM Hack Challenge 2022. CSE students showcased exceptional innovation and technical skills by actively participating in various problem-solving and coding challenges. Their enthusiasm and creativity not only brought laurels to the department but also strengthened the college's reputation for excellence in technical competitions.



Other event by Department:

Bhagyavidhata's Silence Retreat Centre – An Oasis of Silence:

Students of the Department of Computer Science and Engineering visited Bhagyavidhata's Silence Retreat Centre – An Oasis of Silence, as part of a unique experiential learning program. The visit offered students an opportunity to step away from their daily routines and embrace the power of mindfulness and inner peace. Through guided meditation, reflective activities, and tranquil surroundings, students experienced mental calmness and self-awareness. The serene atmosphere of the centre encouraged them to reconnect with themselves, fostering emotional balance and focus. The visit was a rejuvenating experience that helped students realize the importance of silence and self-reflection in leading a balanced life.



CAMPUS RECRUITMENT

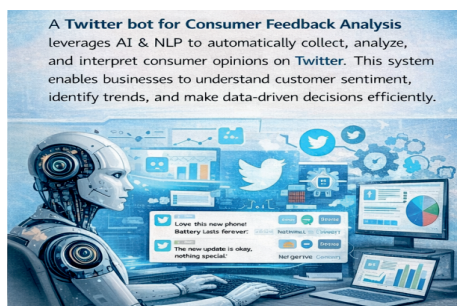
S.NO.	COMPANY'S NAME	OFFERS	PACKAGE	ROLE
1.	Veon consulting	1	3.363 LPA	Programmer analyst
2.	Eunimart	1	5 LPA	Software developer
3.	Turing minds	6	6.2 LPA	Data Scientist
4.	UST Global	1	3.5 LPA	Software developer
5.	Vodafone	1	4.5 LPA	GET
6.	Wipro	17	3.5 LPA	Software developer
7.	Workshot	23	3 LPA	Data scientist

STUDENT PROJECTS

Twitterbot for consumer feedback analysis:

Silver Akhila (19UP1A05E4)

With the rapid growth of social media platforms, Twitter has become a powerful medium for consumers to express opinions, reviews, and feedback about products and services in real time. Analyzing this massive volume of user-generated content manually is impractical. A Twitter Bot for Consumer Feedback Analysis leverages Artificial Intelligence and Natural Language Processing (NLP) to automatically collect, analyze, and interpret consumer opinions. This system helps organizations understand customer sentiment, identify trends, and make data-driven business decisions efficiently.



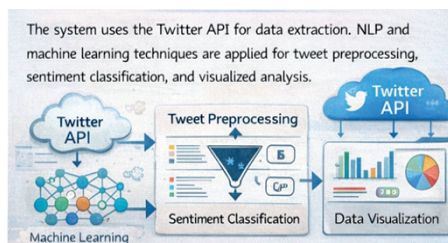
Existing System

In traditional systems, consumer feedback analysis was carried out using surveys, feedback forms, and manual review of social media posts. These methods were time-consuming, limited in scale, and often delayed. Earlier automated approaches relied on basic keyword matching and rule-based sentiment classification, which failed to capture context, sarcasm, and complex language patterns. As a result, accuracy and real-time responsiveness were limited.



Proposed System

The proposed system introduces an intelligent Twitter Bot that automatically fetches tweets related to specific brands, products, or hashtags using the Twitter API. The collected tweets are processed using machine learning and NLP techniques to perform sentiment analysis and feedback classification. The system categorizes tweets into positive, negative, or neutral sentiments and generates insights through visual reports and summaries. This automated and scalable approach provides real-time, accurate, and actionable consumer feedback.



Methodologies Used

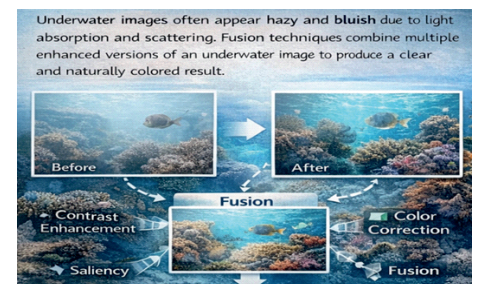
The system uses the Twitter API for real-time data extraction. Text preprocessing techniques such as tokenization, stop-word removal, stemming, and lemmatization are applied to clean the data. NLP models and machine learning algorithms like Naive Bayes, Support Vector Machines (SVM), or deep learning models (LSTM or BERT) are used for sentiment

classification. Data visualization tools are employed to present insights through charts and dashboards. The bot continuously learns and improves performance through training on large tweet datasets.

Contrast & color improvement based haze removal of underwater images using fusion techniques:

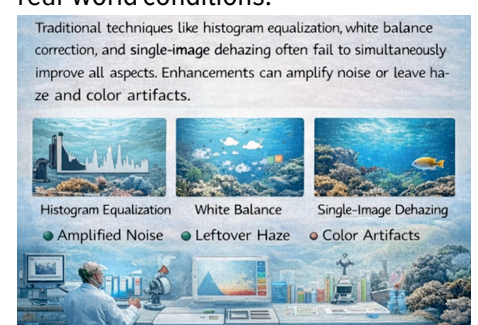
Thota Tushara Priya (19UP1A05E8)

Underwater images often suffer from poor visibility due to light absorption and scattering caused by water and suspended particles. These effects introduce haze, low contrast, and severe color distortion, making underwater images unclear and unsuitable for analysis. Improving contrast and restoring natural colors are critical for applications such as marine biology, underwater exploration, surveillance, and robotic vision. This project focuses on contrast and color improvement-based haze removal using image fusion techniques, which combine multiple enhanced versions of an image to produce a visually improved result.



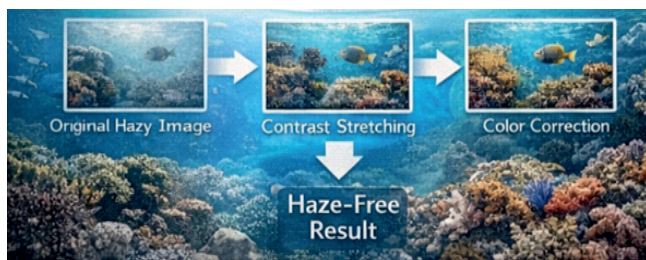
Existing System

Traditional underwater image enhancement techniques include histogram equalization, white balance correction, and single-image dehazing methods. While these approaches improve certain aspects of image quality, they often fail to handle all degradations simultaneously. Some methods enhance contrast but amplify noise, while others correct color but leave haze artifacts. Physics-based underwater models require accurate depth information, which is difficult to obtain, limiting their effectiveness in real-world conditions.



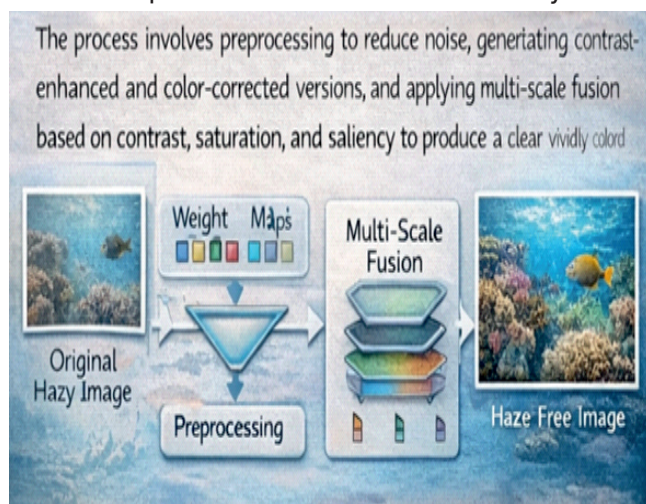
Proposed System

The proposed system uses fusion-based image enhancement techniques to remove haze and improve contrast and color simultaneously. Multiple versions of the same underwater image are generated using different enhancement methods such as contrast stretching and color correction. These enhanced images are then fused using weight maps based on contrast, saturation, and saliency. The fusion process integrates the strengths of each enhancement technique, resulting in a haze-free image with improved visibility, natural color balance, and enhanced detail.



Methodologies Used

The methodology begins with preprocessing the underwater image to reduce noise and normalize intensity. Contrast enhancement techniques such as histogram stretching are applied to generate one version of the image, while color correction techniques compensate for color attenuation in another version. Weight maps are computed based on contrast, saturation, and visual saliency. Multi-scale fusion techniques are then applied to combine the enhanced images into a single output. The performance of the system is evaluated using visual quality assessment and metrics such as contrast improvement and color consistency.



Program Outcomes (Adapted from NBA)

Engineering Graduates will be able to:

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 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.

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 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 lifelong learning in the broadest context of technological change.