



**GOJAN SCHOOL OF
BUSINESS AND TECHNOLOGY**

AN AUTONOMOUS INSTITUTION
(Conferment of Autonomous Status by UGC)

APPROVED BY AICTE | AFFILIATED TO ANNA UNIVERSITY | ACCREDITED BY NAAC
80 FEET ROAD, EDAPALAYAM, ALAMATHI VIA, REDHILLS, CHENNAI - 600052



**NATIONAL CONFERENCE ON RECENT TRENDS IN
ENGINEERING AND TECHNOLOGY
(NCRTEET '25)**

**CONFERENCE
PROCEEDINGS**

ISBN: 978-93-49653-99-3

NCRTEET



2025

April 25th 2025

April 26th 2025

ASSOCIATE WITH



VIPS.Tech
Virtual Intelligence and Programming Services



REGARDS,

Dr. Natarajan G
CHAIRMAN

MESSAGE

I am pleased to share that all departments have come together to organize the “National Conference on Recent Trends in Engineering and Technology (NCRTEET'25)” and have successfully published its proceedings. This collaborative effort highlights the dedication, hard work, and enthusiasm of our faculty and students. Such initiatives not only foster academic excellence but also encourage innovation and research across disciplines. I extend my heartfelt gratitude to all Heads of Departments and staff members for their unwavering support. A special note of appreciation to the Editorial Board for their valuable contributions in making this conference a grand success. Congratulations to all!



REGARDS,

Mrs. Brindha Natarajan
CHAIRPERSON

MESSAGE

I am glad to have the opportunity to congratulate the faculty and students of all the departments who have shown remarkable interest and shared their valuable knowledge in creating the “**National Conference on Recent Trends in Engineering and Technology (NCRTEET'25)**”. Their enthusiasm, dedication, and boundless energy have played a vital role in the success of this conference. I am confident that their hard work, detailed planning, and sincere execution will yield immensely rewarding outcomes. My best wishes to all committee members and participants of **NCRTEET'25**. I deeply appreciate the committed efforts of our faculty and students who made this possible.



REGARDS,

**Mr. Viswanathan N
VICE-CHAIRMAN**

MESSAGE

It gives me immense pleasure to witness the successful organization of the “**National Conference on Recent Trends in Engineering and Technology (NCRTEET'25)**” by **Gojan School of Business and Technology**. Such events reflect our institution's strong commitment to fostering academic excellence and encouraging a research-driven mindset among both students and faculty. At Gojan, we believe true learning happens when knowledge meets application. Our college promotes innovation, practical exposure, and collaborative growth. This conference enables participants to explore emerging trends, share research, and engage with new technologies. I congratulate the organizing team and contributors for their dedication. Wishing you all success at **NCRTEET'25**.



REGARDS,

Dr. Selvakumar C
PRINCIPAL

MESSAGE

On behalf of **Gojan School of Business and Technology**, I warmly welcome all delegates, faculty members, research scholars, and student participants to the “**National Conference on Recent Trends in Engineering and Technology (NCR TET'25)**”. At GSBT, we are committed to academic excellence and a vibrant learning environment that fosters exploration, innovation, and collaboration. This conference reflects our dedication to research and knowledge sharing. As technology rapidly evolves, our management takes proactive steps to align with emerging trends. **NCR TET'25** is a platform for exchanging ideas and showcasing innovations. We thank our management, faculty, organizing team, and students for their unwavering efforts and support.



REGARDS,

Dr. Arunsankar G
VICE PRESIDENT
ACADEMIC AFFAIRS

MESSAGE

I take great pride in stating that our college is organizing the “**National Conference on Recent Trends in Engineering and Technology (NCRTEET'25)**”. The primary goal of this conference is to bring together students, researchers, and academicians to exchange innovative ideas, particularly those aligned with emerging trends and technological advancements. In today’s rapidly evolving world, where engineering and technology job opportunities are vast, platforms like NCRTEET’25 are crucial for enhancing skill sets. Participation in such events sharpens technical knowledge, critical thinking, and research capabilities essential traits for thriving in the modern engineering landscape. We believe **NCRTEET'25** will foster collaboration, learning, and professional growth.



REGARDS,

Mr. Ramadhurai R
VICE PRESIDENT
STUDENT AFFAIRS

MESSAGE

Our institution has always embraced a mission to achieve the impossible, and with the dynamic team at Gojan, failure is never an option. The central theme of **NCRTET'25** focuses on interdisciplinary challenges, requiring diverse academic perspectives and innovative solutions. I firmly believe this multidisciplinary conference will provide participants with a transformative experience, expanding their knowledge and broadening perspectives to tackle complex societal issues. This year, we are proud to have received a remarkable number of high-quality papers from reputed institutions, reflecting the growing interest in this conference. I sincerely thank our Management and Principal for their unwavering support. Let this platform inspire innovation and collaboration.



REGARDS,

Dr. Nafeez Ahmed L
CONFERENCE CHAIR
DIRECTOR - R&D

MESSAGE

Engineering technologies are crucial in driving modern innovations, accelerating progress in applied sciences and automation. Their continuous evolution is reshaping lifestyles, offering cutting-edge solutions across various sectors, and promoting a more efficient, sustainable global ecosystem. **NCRTET'25** has been meticulously designed as a platform for students, researchers, academicians, and industry professionals to exchange technical insights, research findings, and collaborative approaches across engineering disciplines. I sincerely thank our Honorable Chairman, Dr. G. Natarajan, and Respected Chairperson, Mrs. Brindha Natarajan, for their visionary leadership and guidance in realizing this conference. Thank you all for your engagement and contributions, making **NCRTET'25** a transformative academic milestone.

ASSOCIATE PARTNER



We are proud to be associated as an Associate Partner for the “**National Conference on Recent Trends in Engineering & Technology (NCRTE’25)**”, organized by **Gojan School of Business and Technology**. This collaboration highlights our shared vision to advance knowledge, foster research, and drive innovation across various disciplines.

As a technology-driven organization, we contribute our expertise in **AI & ML, Web and App Development, Business Application Development (ODOO), UI/UX Design, API & Cloud Technologies, and Research & Publication Support**. Our offerings include **hands-on workshops, bootcamps, real-world projects, and guidance in technical writing**, all tailored to bridge academic learning with industry needs.

Our involvement in **NCRTE’25** underscores our commitment to empowering future innovators and strengthening academia-industry ties.

This partnership is guided by our leadership:

Mr. Dev Anand. D – Chief Editorial Advisor

Mr. Lokesh. K – Executive Coordinator

Ms. Sneharshini. S – Senior Content Curator

Ms. Kaviya. M – Lead Tech Narrator

Instagram Trends Analyzer: Real-Time Extraction and Visualization of Instagram Engagement Metrics

V Swetha¹, Dr. G Revathy²

UG Scholar¹, Assistant Professor²

^{1,2} Vels Institute of Science Technology and Advanced Studies, Chennai, Tamil Nadu, India.

Abstract

In today's fast-evolving digital landscape, Instagram plays a central role in communication, branding, and audience engagement. However, identifying trending content manually is time consuming and inefficient. This project introduces the Instagram Trends Analyzer, a Python-based system that automates the extraction, analysis, and visualization of Instagram data in real-time. Using the Instagram Graph API, the system collects post-level metrics such as URLs, captions, like counts, comment counts, hashtags, and timestamps. The extracted data is stored in CSV format for structured analysis. A Streamlit dashboard is integrated to visualize key engagement trends, including hashtag rankings, post engagement over time, and real-time filtering features. This user friendly interface allows digital marketers, content creators, and social media analysts to make informed decisions quickly without the need for manual tracking. Unlike existing methods that rely on static datasets or manual reviews, this solution delivers dynamic insights, is scalable for multi-platform extension, and supports future upgrades such as sentiment analysis and influencer identification. The project bridges a critical gap between social media data availability and decision-making in marketing strategies.

References:

1. G. M. Gálvez, J. A. Garcia-Molina, A. J. Calderon, *Appl. Sci.*, vol. 11, no. 2, (2021), Real-Time Social Media Analytics for Predicting Online Engagement Using Machine Learning.
2. R. M. Rodríguez, A. Rodríguez-González, C. A. Iglesias, *Inf. Process. Manag.*, vol. 58, no. 3, (2021), Analyzing User Interactions in Instagram: A Case Study on Popularity Prediction.
3. J. Smith, L. Nguyen, *Soc. Netw. Anal. Min.*, vol. 10, no. 4, (2020), Deep Learning Models for Predicting Social Media Post Popularity.
4. T. Zhao, M. Li, *Comput. Commun.*, vol. 152, (2020), Engagement Prediction on Social Platforms Using Hybrid Machine Learning Models.