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TechPulse 2026

Editors:

**Dr. Rasika Mallya, Dr. Swapnali Mahadik,
Dr. Ruchi Gupta**



TechPulse 2026

5th Edition

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FROM THE DESK OF THE DIRECTOR



It gives me immense pleasure to present TechPulse'26, the annual ISBN publication of the MCA Department at DES's Navinchandra Mehta Institute of Technology for the academic year 2025–26.

TechPulse serves as a vibrant platform for aspiring IT professionals, researchers, and faculty members to explore, share, and disseminate knowledge in the domains of Technology, Computer Applications, and Computer Science. The publication reflects the department's commitment to fostering research aptitude, innovation, and lifelong learning among students.

This year's edition is inspired by the theme of **INCMAT-2026 – “New Horizons: Integrating AI, Business, and Sustainable Future.”** As emerging technologies, particularly Artificial Intelligence, continue to reshape industries and societies, it is essential to develop solutions that are innovative, ethical, and sustainable. The articles featured in this volume showcase the intellectual curiosity, analytical thinking, and research capabilities of our students as they explore contemporary technological advancements and their impact on business and society.

The publication aligns with the vision of the MCA Department, “To ignite computing minds and nurture their full potential for contribution to the knowledge economy.” At DES's NMITD, we continuously strive to create an ecosystem that encourages creativity, critical thinking, entrepreneurship, and academic excellence. We are committed to equipping our students with cutting-edge technological skills and research competencies that prepare them to excel in a dynamic global environment.

DES's NMITD is more than an institution; it is a family where the management, faculty, staff, students, parents, and alumni work together to nurture talent and build a culture of learning and innovation.

I am confident that the readers will find this publication informative, insightful, and inspiring. I congratulate all the student authors, faculty mentors, and members of the editorial team for their dedicated efforts in making **TechPulse'26** a meaningful repository of knowledge and research.

With my best wishes for continued learning, innovation, and success.

Dr. Rasika Mallya
Director In-Charge
DES's Navinchandra Mehta Institute of Technology

FROM THE EDITORIAL TEAM

We are pleased to present **TechPulse 2026**, the annual ISBN publication of the MCA Department, DES's Navinchandra Mehta Institute of Technology. This edition is inspired by the theme of **INCMAT-2026 – “New Horizons: Integrating AI, Business, and Sustainable Future.”**

In today's rapidly evolving digital landscape, Artificial Intelligence is transforming industries, redefining business practices, and creating opportunities for sustainable growth. Through this edition of TechPulse 2026, we aim to encourage students to explore emerging technologies, innovative business solutions, and research-driven approaches that contribute to a smarter and more sustainable future.

TechPulse 2026 serves as a platform for nurturing research aptitude, technical writing skills, and intellectual curiosity among students. The magazine showcases research articles in the domains of Technology, Computer Applications, Computer Science, Artificial Intelligence, Data Analytics, Cyber Security, and other emerging fields. It reflects the creativity, analytical thinking, and academic excellence of our budding researchers.

We sincerely appreciate all the student authors, faculty mentors, reviewers, and editorial team members whose dedication and contributions have made this publication possible. Their commitment to knowledge creation and dissemination strengthens the culture of research and innovation within our institution.

As we embrace new horizons in technology and management, may this publication inspire learners to think critically, innovate responsibly, and contribute meaningfully to society through research and lifelong learning.

Dr. Rasika Mallya
Dr. Swapnali Mahadik
Dr. Ruchi Gupta

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