



TECH OZRIC

MAGAZINE

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**ADVANCING KNOWLEDGE
THROUGH TECHNOLOGY**

DEPARTMENT OF INFORMATION TECHNOLOGY

KGISL INSTITUTE OF TECHNOLOGY, COIMBATORE – 641035

VISION

To produce Competent Graduates suitable for Industry and Organization in the field of Information Technology by providing industry embedded learning with social responsibility.

MISSION

- MD-1:** To accomplish an effective teaching learning process through innovative practices for empowering the graduates to face societal challenges.
- MD-2:** To enhance the proficiency of faculty members across various domains of information technology through skill development programs.
- MD-3:** To nurture IT professionals through the provision of essential infrastructure and facilities for effective learning.
- MD-4:** To attain research excellence in the field of information technology by instilling the values of self-directed learning and fostering creative thinking through collaborative partnerships with institutes and industries.
- MD-5:** To foster holistic student growth by engaging them in cocurricular and extracurricular activities.



PROGRAM EDUCATIONAL OBJECTIVES (PEO'S)

- PEO1:** Demonstrate technical competence with analytical and critical thinking to understand and meet the diversified requirements of industry, academia and research.
- PEO2:** Exhibit technical leadership, team skills and entrepreneurship skills to provide business solutions to real world problems.
- PEO3:** Work in multidisciplinary industries with social and environmental responsibility, work ethics and adaptability to address complex engineering and social problems.
- PEO4:** Pursue lifelong learning, use cutting edge technologies and involve in applied research to design optimal solutions.: Exhibit technical leadership, team skills and entrepreneurship skills to provide business solutions to real world problems.

PROGRAM SPECIFIC OUTCOMES (PSO'S)

- PSO1:** Develop and deploy software applications using advanced programming languages, data structures, and algorithms to address real-world IT challenges in areas such as system design, web development, and mobile computing.
- PSO2:** Design and manage IT-based business solutions by leveraging cloud computing, data analytics, and automation tools, demonstrating entrepreneurial capabilities in the IT services and product development sectors.
- PSO3:** Adapt to the dynamic IT industry by ethically embracing advancements such as artificial intelligence, cybersecurity, and blockchain, while contributing responsibly to societal, environmental, and organizational IT needs.



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Faculty Achievement: Advancing Frontiers in Quantum Machine Learning

The Department of Information Technology at KGiSL Institute of Technology proudly



celebrates the academic accomplishment of **Mrs. Jeevitha T, Assistant Professor**, who successfully completed the **AICTE ATAL Faculty Development Programme (FDP) on Quantum Machine Learning in Healthcare**.

The FDP, hosted by **DR N.G.P. Institute of Technology, Coimbatore**, was conducted from **04–09 December 2023** and focused on the transformative potential of quantum computing when combined with machine learning techniques in the healthcare domain. Participants explored advanced topics such as quantum algorithms for medical data analysis, optimization methods for drug discovery, and predictive models for patient care.

Mrs. Jeevitha's successful completion of this program reflects her dedication to continuous professional growth and her commitment to integrating cutting-edge technologies into teaching and research. By engaging with emerging fields like **quantum machine learning**, she strengthens the institution's

vision of preparing students for the next era of technological innovation.

This achievement not only enhances the academic profile of KGiSL Institute of Technology but also inspires students and fellow faculty members to pursue knowledge in interdisciplinary areas where **computer science, engineering, and healthcare converge**.

Faculty Recognition: Expert Seminar Delivery

The Department of Information Technology at **KGiSL Institute of Technology** proudly acknowledges the achievement of **Mr. E. Joel Anandraj, Assistant Professor**, who was formally recognized by **R P Sarathy Institute of Technology** with a *Letter of Appreciation* for his impactful academic contribution.



On **15 May 2024**, Mr. Joel Anandraj delivered an inspiring **online seminar on “File Processing in C Language”**, engaging participants with practical insights and clear explanations of fundamental programming concepts. His session not only enhanced technical understanding but also motivated

students to explore deeper applications of C programming in real-world problem solving.

This recognition highlights his dedication to knowledge sharing and his commitment to fostering academic excellence beyond institutional boundaries. It also reflects KGiSL Institute of Technology's vision of empowering faculty to contribute meaningfully to the wider academic community.

Celebration 2024: International Women's Day at KGiSL Institute of Technology

The Women Development Cell, in collaboration with the Department of Information Technology, proudly hosted an inspiring session to mark International Women's Day on 8 March 2024 at the CDIO Hall.



The event featured Mrs. C. Savitha, Humanities Coordinator at BVM Global School, Coimbatore, as the distinguished resource person. In her engaging address, Mrs. Savitha shared valuable perspectives on empowerment, education, and leadership,

emphasizing the importance of nurturing confidence, fostering equality, and encouraging women to take on transformative roles in society.

The celebration created a platform for dialogue and reflection, inspiring students and faculty alike to embrace inclusivity and recognize the pivotal contributions of women in academia and beyond. By combining thought leadership with community spirit, the program reinforced KGiSL Institute of Technology's commitment to promoting gender equity and empowering future leaders.

Faculty Recognition: Reviewer Role at ICCDS 2024

The Department of Information Technology at KGiSL Institute of Technology proudly congratulates Mrs. R. Shirley Josephine Mary, Assistant Professor, for her distinguished academic contribution as a Reviewer at the *International Conference on Computing and Data Science (ICCDs 2024)*.

The conference, held on 26–27 April 2024 at Rajalakshmi Engineering College, Chennai, and technically sponsored by the IEEE Madras Section, brought together researchers, academicians, and industry experts to discuss emerging trends in computing and data science. Serving as a reviewer, Mrs. Shirley Josephine Mary played a vital role in ensuring the quality and integrity of scholarly submissions, contributing to the advancement of knowledge in this rapidly evolving domain.

Her recognition as a reviewer underscores her expertise in computer science and her commitment to academic excellence. It also reflects KGiSL Institute of Technology's

vision of encouraging faculty to engage with global research communities and contribute meaningfully to the dissemination of innovative ideas. This achievement not only enhances the institution's academic profile but also inspires students and colleagues to pursue active participation in international forums, reinforcing the culture of research and collaboration.



Technical Article: The Growth of Online Learning: Transforming Education in the Digital Era

By S.Subashree



The past decade has witnessed a remarkable transformation in education, and by 2024 online learning had firmly established itself as a mainstream mode of knowledge delivery.

What began as a supplementary tool for distance learners has now evolved into a global ecosystem, reshaping how students,

professionals, and institutions engage with education.

One of the primary drivers of this growth is **accessibility**. Online platforms break down geographical barriers, allowing learners from remote regions to access the same quality of education as those in metropolitan areas. With the proliferation of smartphones and affordable internet, participation in online courses has surged, particularly in countries like India, where digital adoption is accelerating at an unprecedented pace.

Equally important is **flexibility**. Unlike traditional classrooms, online learning offers learners the freedom to study at their own pace and convenience. This has proven invaluable for working professionals who seek to upgrade their skills without disrupting their careers. Corporate training programs have increasingly shifted online, enabling organizations to reskill employees efficiently and at scale.

Technological innovation has further fueled this expansion. **Artificial intelligence and machine learning** now power adaptive learning systems that personalize content based on individual progress. Cloud computing ensures scalability, while interactive tools such as gamified quizzes, virtual labs, and collaborative dashboards replicate classroom dynamics in digital spaces. These advancements have made online learning not only accessible but also engaging and effective.

The numbers reflect this momentum. By 2024, millions of learners worldwide were enrolled in online courses, with the global e-learning market projected to surpass **\$200 billion by 2025**. Universities have embraced hybrid models, delivering 30–80% of their content online, while platforms like Coursera, edX, and Udemy continue to expand their reach with specialized programs in computer science, engineering, healthcare, and business.

However, challenges remain. Ensuring **quality of instruction, equitable access, and sustained learner engagement** are critical issues that institutions must address. The digital divide persists in regions with limited connectivity, and the absence of face-to-face interaction can sometimes hinder collaborative learning. Yet, these challenges are being met with innovative solutions, such as low-bandwidth platforms, blended learning models, and community-driven forums.

In essence, the growth of online learning represents more than just a technological shift; it is a cultural transformation in education. By combining accessibility, flexibility, and innovation, online learning is redefining how knowledge is created, shared, and applied — preparing learners for a future where continuous learning is not optional but essential.

LeetCode: The Standard for Coding & Interviews

By S.Praveena



LeetCode remains one of the most widely used platforms for coding interview preparation, competitive programming, and skill development. It continues to be a go-to resource for software engineers aiming to strengthen their algorithmic problem-solving abilities and prepare for roles at top technology companies.

Around 80% of technical interviews at major firms such as Google, Amazon, Meta, and Microsoft still rely heavily on algorithmic puzzles similar to those found on LeetCode, making it the industry standard for interview

readiness. Its extensive problem bank, covering data structures, algorithms, databases, and system design, remains central to job seekers worldwide, with many candidates reporting that they solve hundreds of problems before attempting FAANG-level interviews.

Beyond interviews, LeetCode's community has grown significantly, with discussion boards and contests fostering a global peer-learning environment where developers exchange solutions, optimizations, and experiences. Weekly and bi-weekly contests attract thousands of participants, allowing coders to benchmark their skills against international peers. The platform is also increasingly used for continuous learning, as professionals solve problems for fun, practice, or to maintain sharpness in algorithmic thinking.

While some critics argue that LeetCode's focus on puzzles does not always reflect real-world software engineering, this has sparked discussions about balancing practice with system design, project work, and applied coding. Nevertheless, LeetCode's relevance lies in its ability to standardize interview preparation across the industry. For students, it provides a structured pathway to mastering algorithms, while for professionals, it offers a safety net in competitive job markets, ensuring readiness for rigorous hiring processes.

Despite debates about its limitations, LeetCode remains a critical tool for career advancement in computer science and engineering, shaping how engineers learn, practice, and compete.



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