



**LLOYD INSTITUTE OF
ENGINEERING & TECHNOLOGY**

Departmental Technical Magazine

TECHVIST

Volume -3, Issue: 01

**Department of Computer
Science & Engineering**

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**Session
2024-2025**



About



LIET, Lloyd Institute of Engineering & Technology has become a place where dreams are indeed transformed into reality. The institute is affiliated to Dr. A.P.J. Abdul Kalam Technical University (Formerly UPTU) and recognized by the A. I. C. T. E. (Min of HRD), New Delhi, and the U.P. Govt. LIET has been constantly engaged in moulding the lives of future engineers with the employment of innovative approaches that are job-oriented only.

Affiliated to



Lucknow

Approved by



New Delhi



VISION

“To emerge as an Institute of academic excellence by empowering young minds through problem-solving skills, knowledge & ethical values and transforming them into professionals of global competence”.



MISSION

M1: To equip the students with state-of-the-art technological advancement and skills.

M2: To create a conducive environment for teaching and learning through continuous engagement with industry for corporate understanding and Professionalism.

M3: To focus on holistic development of students through enhanced learning along with moral and ethical value system.



About Department

The Computer Science Engineering department strives to equip students with a strong foundation in technology, innovation, and problem-solving, preparing them for successful careers in the ever-evolving tech industry.

LIET is committed to addressing the industry's need for digitally skilled engineers by upgrading its curriculum through academic collaborations with major IT leaders. The department offers a full-time B.Tech in Computer Science and Engineering is approved by AKTU and AICTE.

In response to emerging digital technologies like Big Data, AI, Cloud, and IoT, Lloyd is preparing students for high-demand roles in areas like mobile app development and data science. As digital technologies are expected to significantly boost India's economy by 2025, Lloyd has infused its CSE curriculum with relevant tech skills, including Full Stack Programming, Big Data, Machine Learning, AI, and IoT.



Transforming students through skill-based learning with ethical values, producing competent Computer Science Professionals, to cater technological and industrial challenges of global need.



DM1: Provide support and facilities to create and disseminate knowledge in the area of Computer Science and Engineering.

DM2: Provide practical learning and exposure on advanced tools and technologies.

Dm3: To instill global level competence and skills with innovative thoughts maintaining ethical values and professionalism.





Program Educational Objectives (PEOs)

The Program Educational Objectives of the Computer Science & Engineering department are:

- PEO-1:** Graduates will work in the area of application software development, testing and cyber security domain.
- PEO-2:** Graduates will become successful professional with managerial quality in different IT industry.
- PEO- 3:** Graduates will exhibit professional understanding and ethics, will able to work as a team to continue effectively for the growth of industry and society.

PROGRAM SPECIFIC OUTCOMES (PSOs)

- PSO-1:** Problem solving by applying computational concepts and design solutions using suitable data structures and algorithmic techniques.
- PSO-2:** Apply the advanced Coding techniques and framework in product development process.
- PSO-3:** Exposure to advanced cyber security tools and practices to secure critical infrastructure.

President

Mr. Manohar Thairani



It gives me immense pride and satisfaction to witness the remarkable growth and achievements of the CSE & Allied Branches at LIET. In an age where technology drives progress and innovation shapes the future, Computer Science stands at the core of global transformation.

At LIET, we believe that education must evolve alongside technology. Our vision is to create a dynamic academic ecosystem that nurtures innovation, leadership, ethical values, and a spirit of entrepreneurship. The CSE & Allied Branches are playing a pivotal role in realizing this vision by producing future-ready professionals equipped with technical excellence and strong moral foundations.

This magazine is a reflection of the intellectual energy, creativity, research excellence, and innovative mindset of our students and faculty members. It highlights their accomplishments and reinforces our commitment to academic distinction and continuous improvement.

This magazine is a reflection of the intellectual energy, creativity, research excellence, and innovative mindset of our students and faculty members. It highlights their accomplishments and reinforces our commitment to academic distinction and continuous improvement.

I extend my heartfelt congratulations to the entire CSE & Allied Branches team for their dedication and commendable efforts in bringing out this publication. I encourage all students to think big, stay curious, and lead the technological revolution with confidence and integrity.

Together, let us build a future driven by knowledge, innovation, and excellence.

Senior Director

Prof. (Dr.) Rajeev Agrawal



In the era of exponential technological evolution, I extend a warm welcome to all students, faculty members, and readers of the CSE Magazine at LIET. Today, technology is not merely advancing — it is transforming the way we live, learn, and innovate. At LIET, we recognize the importance of staying ahead in this ever-evolving digital landscape.

Our commitment goes beyond conventional education. We strive to nurture future-ready engineers equipped with cutting-edge technical expertise, innovative thinking, and the adaptability required to excel in a fast-paced global environment. The Department of Computer Science & Engineering plays a pivotal role in driving this vision by fostering creativity, research, and industry-oriented learning.

This magazine reflects the intellectual vibrancy, technical achievements, research initiatives, and creative pursuits of our CSE students and faculty. It stands as a testament to their dedication and the institution's progressive academic environment.

I encourage all students to embrace innovation, think beyond boundaries, and continuously upgrade their skills. The future belongs to those who are prepared to evolve with technology and lead with vision.

Embrace the evolution. Shape your future.

Dean (R & D)– LIET

Dr. S.P. Dwivedi



At Lloyd Institute of Engineering and Technology, the Department of Computer Science & Engineering is emerging as a dynamic center of technological excellence and research-driven innovation. As Dean (R&D), I am proud of the enthusiasm and dedication shown by our CSE students and faculty in rapidly evolving fields such as Artificial Intelligence, Machine Learning, Data Science, Cyber Security, Cloud Computing, and the Internet of Things. Our focus is not only on academic achievement but also on nurturing analytical thinking, creativity, and a strong problem-solving mindset that prepares students to lead in the digital era.

The Research & Development ecosystem within the CSE branch is designed to encourage curiosity, experimentation, and collaboration. Through funded research projects, industry-driven problem statements, hackathons, coding competitions, and interdisciplinary innovation initiatives, students are provided with hands-on exposure that bridges the gap between academic learning and industry expectations. We actively promote research publications, patent filing, startup incubation, and participation in national and international technical competitions to strengthen our students' global outlook.

Collaboration remains the cornerstone of our growth. We continuously seek partnerships with technology companies, research organizations, and academic institutions to provide our students with advanced laboratories, expert mentorship, internships, and real-time project opportunities. Our aim is to build a dynamic research culture where innovation thrives and ideas transform into impactful technological solutions.

I firmly believe that the future belongs to those who innovate. Through strong academic foundations, ethical values, and a spirit of continuous learning, the CSE branch at LIET is committed to shaping future-ready professionals who will contribute significantly to society, industry, and the nation. Together, let us continue to explore, innovate, and excel in the ever-evolving world of computing and technology.



“Code Contest Pro” A Revolution in Coding

2025

The **Codetantra Club** of **Lloyd Institute of Engineering and Technology (LIET)** successfully organized “**Code Contest Pro**” – A Revolution in Coding! on 19th March 2025.

The event was designed to ignite competitive programming spirit among students and enhance their logical thinking, coding efficiency, and real-time problem-solving abilities. Code Contest Pro provided a high-energy platform where aspiring programmers tested their skills against challenging algorithmic problems in a competitive environment.

The contest fostered innovation, precision, and speed—essential qualities for modern software developers.



National Level Blockchain Bootcamp 2025

The Coding Club of **Lloyd Institute of Engineering and Technology (LIET)** successfully organized the **2 Days National Level Blockchain Bootcamp 2025** on 21st–22nd April 2025.

This intensive bootcamp was designed to introduce participants to the transformative world of blockchain technology & decentralized applications. Over two immersive days, students explored the architecture, principles, & practical implementation of blockchain systems, stepping into a domain reshaping finance, cybersecurity, supply chains, and digital governance.

The bootcamp served as a hands-on learning arena where theory met execution and curiosity evolved into code.



TECHTRONIX Club

Pitch-Cypher (National Level) 2025

The TECHTRONIX Club of Lloyd Institute of Engineering and Technology (LIET) successfully organized the Pitch-Cypher 2.0 (National Level) on 16th April 2025.

Pitch-Cypher 2.0 was designed as a dynamic platform for aspiring entrepreneurs, innovators, and visionary thinkers to present groundbreaking ideas and business models. The event brought together participants from various institutions across the country, fostering a competitive yet collaborative environment of innovation and strategic thinking.

The competition emphasized clarity of vision, feasibility of ideas, and impactful communication—key ingredients for entrepreneurial success.



**LLOYD INSTITUTE OF
ENGINEERING & TECHNOLOGY**
Empowering Through Skills



Techtronix Club
Presents

Pitch Cypher 2.0

Ignite your ideas...

An Idea Pitching Contest

Chief Guest



PRANAV KAUSHAL
Senior Manager
HCL Software





■ **NBT न्यूज, ग्रेनो** : ग्रेटर नोएडा स्थित लॉयड कॉलेज ने अपने कैम्पस में पिच-साइफर का आयोजन किया। यह आइडिया पिचिंग प्रतियोगिता नवाचार, उद्यमिता और रचनात्मक सोच को बढ़ावा देने की दिशा में एक महत्वपूर्ण कदम रही। इस प्रतियोगिता में 40 से अधिक टीमों के 165 छात्रों ने भाग लिया, जो एनसीआर और उत्तर भारत के विभिन्न संस्थानों से आए थे।

HackIndia 2025

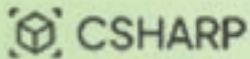
INDIA'S BIGGEST WEB & AI HACKATHON



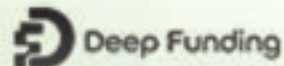
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MAY 09 - 10, 2025



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AN IMMERSIVE 3D DOCUMENTARY SERIES



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Advanced SQL & Performance Tuning Workshop

2025

The Cloud Computing & DevOps Club of Lloyd Institute of Engineering and Technology (LIET) successfully organized a workshop on **Advanced SQL and Performance Tuning** on 14th June 2025.

The workshop was designed to enhance participants' expertise in database management, query optimization, & performance enhancement techniques. With the growing importance of data-driven applications, mastering SQL performance tuning has become an essential skill for software developers, database administrators, and DevOps professionals.

The session provided both conceptual clarity and practical exposure to advanced SQL concepts and optimization strategies.



AI Ignite: Hands - on Workshop on Generative AI & ML Models 2025

The AI & ML Club of Lloyd Institute of Engineering and Technology (LIET) successfully organized "AI Ignite 2025: Hands-on Workshop on Generative AI & ML Models" on 20th–21st August 2025.

This two-day intensive workshop was designed to provide participants with in-depth knowledge and practical exposure to Generative AI and Machine Learning technologies. As AI continues to revolutionize industries such as healthcare, finance, cybersecurity, and automation, the workshop aimed to equip students with future-ready technical skills and industry-relevant knowledge.

AI Ignite 2025 created an engaging learning environment where theoretical foundations were integrated with real-time implementation and experimentation.



CODE ⚡ BLAZE

AWARDS AND ACHIEVEMENTS



AWARDS AND ACHIEVEMENTS



Behind the Screens: The Real Journey of Engineering Students

2025

Being a BTech student in today's digital world is both exciting and challenging. With rapid advancements in technology—Artificial Intelligence, Machine Learning, cybersecurity, and startups—engineering students constantly feel the need to learn more, build more, and achieve more. Along with academics, we are expected to complete internships, create projects, participate in hackathons, and prepare for placements.

Social media often shows success stories—students getting placed in top companies, winning competitions, or launching startups. But what we rarely see are the struggles behind these achievements. We do not see the rejected internship applications, failed interviews, coding errors, or sleepless nights spent debugging programs. This hidden side creates a silent pressure that many students experience but seldom discuss.

Failure is a common part of engineering life. Sometimes our code doesn't run, our designs fail, or our results don't meet expectations. These moments can feel discouraging. However, failure is not the end—it is a powerful teacher. Each mistake helps us improve our logic, enhance our problem-solving skills, and think more creatively.

Success in technology is not a race. Growth happens step by step through consistent effort and patience. Instead of comparing ourselves with others, we should focus on becoming better than we were yesterday. College is not only about marks and placements; it is about building resilience, confidence, and the courage to try again.

Behind every successful engineer is a journey filled with errors, corrections, and learning. The real journey of engineering students happens behind the screens—where we struggle, adapt, improve, and grow stronger every day.

ADARSH CHAUHAN

B.Tech V Semester

KARTIK BHATNAGAR

Roll No. 2401531530060



The Rise of Artificial Intelligence in Modern Engineering

2025

Artificial Intelligence (AI) is no longer just a concept from science fiction—it has become a practical and powerful technology shaping modern industries. From healthcare diagnostics and financial analysis to smart transportation and automation, AI is transforming the way we live and work. Intelligent systems are now capable of performing tasks that once required human intelligence.

Organizations such as OpenAI are developing advanced AI models that assist in learning, research, content creation, and automation. These AI systems can analyze vast amounts of data, recognize patterns, optimize processes, and make accurate predictions. Industries use AI for predictive maintenance, quality control, robotics, and decision-making support.

For engineering students, understanding AI fundamentals has become increasingly important. AI is no longer limited to computer science; it integrates with mechanical engineering through robotics, with electronics through embedded systems, and with civil engineering through smart city planning. Technologies like autonomous vehicles, intelligent infrastructure, and industrial automation rely heavily on AI algorithms.

However, with great power comes great responsibility. Engineers must ensure the ethical use of AI, protect data privacy, and maintain cybersecurity standards. Transparency, fairness, and accountability should guide AI development.

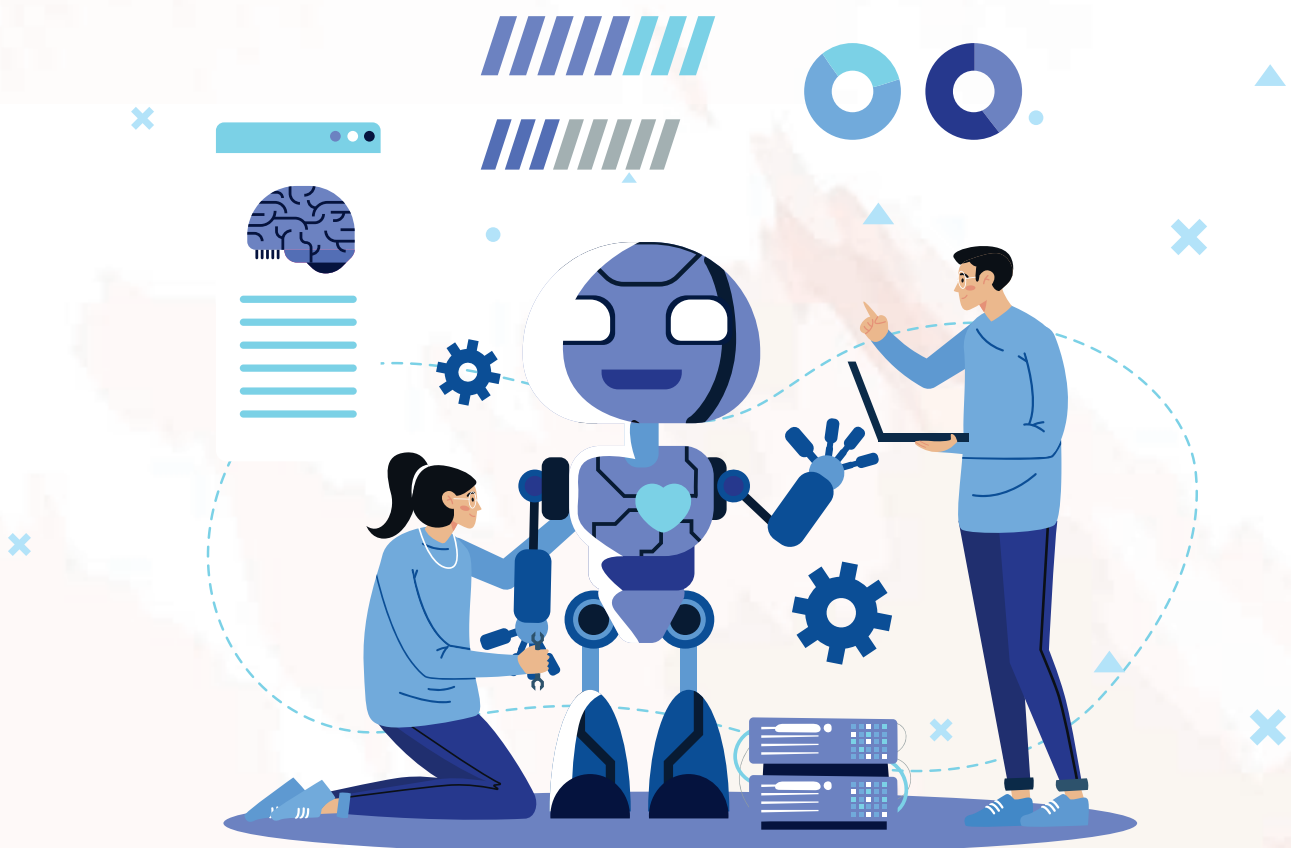
As AI continues to evolve, future engineers must not only learn how to build intelligent systems but also ensure they are used responsibly for the benefit of society.

ADITYA RAO

B.Tech V Semester

AMAN TIWARI

B.Tech V Semester



Green Engineering: Balancing Progress and Sustainability

2025

Industrial growth has significantly improved human life by providing better infrastructure, transportation, communication, and technology. However, this rapid development has also created serious environmental challenges such as climate change, air and water pollution, and depletion of natural resources. These issues demand urgent and innovative solutions, and engineers play a crucial role in addressing them.

Across the world, companies like Tesla are promoting electric vehicles to reduce carbon emissions and dependence on fossil fuels. Engineers are designing large-scale solar power plants, efficient wind energy systems, and smart grids to generate clean and renewable energy. Green buildings with energy-efficient designs and eco-friendly construction materials are becoming an essential part of urban development.

Green engineering focuses on creating systems and technologies that meet present human needs without compromising the ability of future generations to meet theirs. It emphasizes energy efficiency, waste reduction, recycling systems, water conservation, and sustainable manufacturing processes. The goal is not just technological progress, but responsible progress.

Future engineers must understand that innovation and sustainability must go hand in hand. True development is not only about faster growth but also about protecting the planet. By combining creativity with environmental responsibility, engineers can build a future that is both advanced and sustainable.

ANKUSH PAL

B.Tech V Semester

HARSH RAJ

B.Tech III Semester



Digital Learning Platforms and the Modern Engineering Student

2025

The digital era has transformed how engineering students learn. Education is no longer limited to classrooms and textbooks. With internet access, students can explore advanced topics, programming languages, and emerging technologies anytime and anywhere.

Platforms like YouTube provide free technical tutorials, coding demonstrations, and project explanations that help students understand concepts at their own pace. Professional networking platforms such as LinkedIn allow students to connect with industry professionals, explore internships, and stay updated with technological trends. AI-based tools like ChatGPT and Google Gemini assist in clarifying doubts, explaining complex topics, and improving productivity.

Online course platforms also offer certifications in skills beyond the college syllabus, enhancing knowledge and employability.

However, digital tools should support learning—not replace critical thinking. True engineering skills develop through practical implementation, experimentation, project work, and consistent practice. Technology is a powerful resource, but becoming a skilled engineer requires effort, curiosity, and real-world problem solving.

DEEPTI

B.Tech III Semester

NISHA GUPTA

B.Tech III Semester



A LIFE OF A TEACHER

The Silent Architect of the Future

2025

In a world where doctors save lives, engineers build technology, and leaders shape nations, we often forget the profession that makes all of them possible — teachers. Teaching is not merely a career; it is a lifelong commitment filled with patience, responsibility, and silent sacrifice. A teacher carries the power to influence generations.

"Behind every successful person, there is a teacher who once believed in them."

Every day, teachers walk into classrooms carrying more than books and lesson plans. They carry hope, encouragement, and the determination to shape young minds. They manage different personalities, understand different learning speeds, and ensure that no student feels left behind.

Their role goes far beyond explaining concepts — they inspire curiosity and ignite confidence. Teaching is not about completing chapters or finishing the syllabus on time. It is about building character, teaching discipline, and helping students discover their strengths. Sometimes they are strict to correct us, sometimes gentle to comfort us, but always dedicated to our growth.

"A teacher is like a candle — it burns itself to light the path for others."

After school hours, when students return home, a teacher's work often continues. They check assignments, prepare future lessons, attend meetings, and think about how to help a struggling student improve. Their true reward is not limited to salary or recognition; it is the smile of a student who finally understands a concept or the success of a student who achieves their dreams. The confidence with which we speak, the discipline we follow, and the resilience we show in difficult times — all are lessons silently taught by our teachers.

PUSHPENDRA YADAV

B.Tech III Semester

SHUBHAM GOND

B.Tech III Semester



The Ghost of the syllabus

2025

Every semester starts with the same "New Year, New Me" energy. You see the reading list. You see the 60-page PDF on Stress Analysis posted to the portal. You think, "This is it. This is the semester I actually read the b before the problem set hits me like a freight train." By Week 3, the "Ghost of the Syllabus" begins to haunt you. You open the book to page 222, read three sentences about Karnaugh map, and your brain immediately hits "System Restart."

Five minutes later, you're on YouTube. You've found a guy in a basement in Bangalore who is explaining the entire chapter using a whiteboard and a markers that are running out of ink. In ten minutes, he has taught you more than the "required" 80-page reading ever could.

The "Coaster" Hierarchy

If you walk into an engineering common room, you can tell exactly how hard a module is by what's sitting on the textbook.

Level 1 Ghost: Intro to CAD. Usually holds a single, clean notebook. There's still hope here.

The Level 5 Ghost: Fluid Mechanics. This is the primary base for a 1:00 AM ramen bowl. The steam from the noodles is the most "fluid" interaction this book will ever see.

The Level 10 Ancient Spirit: Multivariable Calculus. This book hasn't been moved since 2024. It is currently fused to the desk by a prehistoric spill of Red Bull. It has become a permanent geological feature of the dorm.

The "Holy Grail" Folder: That one Google Drive link passed down from seniors containing "Sample Problems" that are suspiciously identical to the actual exam Resting in Peace (Or Pieces).

Ultimately, the Ghost of the Syllabus is a rite of passage. It's the expensive bridge between who we thought we were in August—a disciplined scholar with a color-coded highlighter habit—and who we actually are in February—a person eating dry cereal out of a Tupperware lid while praying for a generous curve on the midterm.

The Ghost isn't there to teach you Engineering. It's there to teach you the most important engineering lesson of all: How to survive with a 15% efficiency rating.

The "In Memoriam" Sign-off: Here lies my GPA. Killed by a PDF I thought I'd read tomorrow. Gone, but definitely not "Ctrl+F-ed."



ANUSHKA SINGH

Roll. No - 2401720100030

Cybersecurity: Protecting the Digital World 2025

In today's digital age, technology has become an inseparable part of our lives. From online banking and shopping to social media and cloud storage, we depend heavily on digital platforms. While these advancements have made life easier and more efficient, they have also increased the risk of cyber threats. This is where Cybersecurity becomes extremely important. Cybersecurity refers to the practice of protecting computers, networks, and data from unauthorized access, attacks, and damage.

Every day, millions of people share personal information online. Without proper security, this data can be stolen or misused. Cybercriminals use techniques like phishing, malware, and hacking to gain access to sensitive information. One of the major global cyberattacks was the WannaCry ransomware attack, which affected thousands of systems worldwide. Such incidents show how vulnerable digital systems can be and why strong cybersecurity measures are necessary.

Cybersecurity is not only important for individuals but also for businesses and governments. Companies store customer data, financial records, and confidential information online. A single data breach can damage a company's reputation and cause huge financial losses. Governments also rely on cybersecurity to protect national security systems, public databases, and critical infrastructure like electricity and communication networks.

For engineering students, cybersecurity offers a wide range of career opportunities. Fields such as ethical hacking, network security, digital forensics, and information security are growing rapidly. As future engineers, we have the responsibility to design secure software and systems that protect user data. Learning about encryption, firewalls, and secure coding practices can help us contribute to a safer digital world.

However, cybersecurity is not just about technology—it is also about awareness and responsibility. Simple habits like creating strong passwords, avoiding suspicious links, and regularly updating software can prevent many cyberattacks. Every digital user plays a role in maintaining security.

In conclusion, cybersecurity is the backbone of the digital world. As technology continues to grow, so do cyber threats. Therefore, protecting digital information is more important than ever. By gaining knowledge, spreading awareness, and developing secure systems, we can ensure that the digital world remains safe, reliable, and trustworthy for everyone.

ADITYA TOMAR

Roll. No - 2401721530005



Cloud Computing: The Backbone of Modern IT 2025

Today, technology is a part of our daily life. We store photos on Google Drive, watch movies online, attend online classes, and share files with friends. But have we ever thought about where all this data is stored? The answer is Cloud Computing. In simple words, cloud computing means storing and accessing data and services through the internet instead of using our personal computer or physical hard drives.

Cloud computing has become the backbone of modern IT because almost every company and organization depends on it. Big companies like Amazon Web Services, Microsoft Azure, and Google Cloud provide cloud services to businesses all over the world. These platforms help companies store large amounts of data, run applications, and manage their work smoothly without buying expensive hardware.

One of the biggest advantages of cloud computing is that it saves money and time. Companies do not need to set up big server rooms or hire large maintenance teams. They can simply pay for the services they use. Another benefit is flexibility. If a company needs more storage or computing power, it can easily increase it. If not needed, it can reduce it. This makes cloud computing very useful for both small startups and big companies.

Cloud computing also supports work from anywhere. During online classes and work-from-home situations, cloud technology played a very important role. We can access our files, projects, and software from any device with an internet connection. This makes teamwork and collaboration much easier.

Security is also an important feature. Cloud service providers use strong security systems and data encryption to keep information safe. As engineering students, learning about cloud computing is very important for our future careers. Many job roles today require knowledge of cloud platforms and services. Understanding cloud technology will help us stay updated with modern IT trends.

In conclusion, cloud computing is the foundation of today's digital world. It makes technology faster, cheaper, and more accessible. Without cloud computing, modern IT systems would not function so smoothly. It is truly the backbone of modern technology.

BHASKAR SHARMA

Roll. No - 2401530100040



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