



A.V.C. COLLEGE OF ENGINEERING, MANNAMPANDAL, MAYILADUTHURAI
DEPARTMENT OF INFORMATION TECHNOLOGY
“INFO LETTER”



Volume: 04

Month: December' 25

Issue:2

HOD'S DESK

Dear Students,

Warm greetings to each one of you. As we continue to progress in our academic and professional journeys, I extend my sincere wishes for your ongoing growth and success. It is both an honour and a privilege to lead a department that consistently strives for excellence in education, research, and innovation.

To our dear students, I encourage you to remain curious, proactive, and committed to lifelong learning. In today's rapidly evolving technological landscape, staying updated with current trends is not just beneficial—it is essential. Actively participate in workshops, internships, certification courses, and competitions. These opportunities will enrich your knowledge, enhance your skills, and prepare you to become industry-ready professionals.

I also urge you to take part in co-curricular and extra-curricular activities. Such involvement nurtures leadership, teamwork, and holistic development—qualities that are vital in today's competitive

world. To our dedicated faculty members, I extend my heartfelt appreciation for your continuous support, guidance, and commitment to shaping young minds. Your efforts play a significant role in the success of our students and the growth of our department. Let us move forward together, uphold the highest standards of academic integrity, and work towards achieving greater milestones. Wishing you all success in all your future endeavors.

With warm regards,
Dr. V. Padmavathi
Professor & Head
Department of Information Technology
A.V.C. College of Engineering

Department Events

A.V.C. College of Engineering hosted TECHNOTHIRST 25-26

The Department of Information Technology, A.V.C. College of Engineering, successfully conducted **Technothirst 25–26**, a National Level Students' Technical Symposium, on **10 October 2025**. The symposium featured paper presentations on emerging technologies, including Artificial Intelligence, Robotics, Cyber Security, IoT, and

Cloud Computing. Technical events such as **Website Designing** and **Technical Quiz** received enthusiastic participation from students across various institutions. The event provided a platform for showcasing research skills and innovative ideas. Winners were awarded cash prizes, and certificates were distributed to all participants. The symposium concluded with positive feedback, reflecting its effectiveness in promoting technical excellence and student engagement.



Guest Lecture Programmes

The Department of Information Technology organized multiple guest lectures during **August–October 2025**. On **21.08.2025**, **Mr. K. Aakash Prasanna**, 2025 batch alumnus and GATE aspirant, delivered a lecture on GATEWay to Opportunities for all branch students. On **03.09.2025**, **Mr. Sujith Sridhar and Mr. V. Amarnath**, 2024 SIH Finale alumni, conducted a session on SIH problem statement awareness. **Prof. Dr. G. Kulanthaivel**, NITTTR, Chennai, delivered a lecture on Industry 4.0 on **30.09.2025**. A career guidance lecture by **Mr. T. Kalaivanan**, TCS, was held on **04.10.2025**.

Alumni Interaction Programmes

The department organized alumni interaction programmes to bridge academic and industry gaps. An online alumni webinar on Artificial

Intelligence was conducted on **13.09.2025** by **Mr. J. Bhagidharan**, Project Manager at ZOHO Corporation, Chennai, benefiting IT and CSE students. On **27.09.2025**, an Alumni Guest Lecture was delivered by **Mr. Silambarasan Raju**, 2018–2022 batch alumnus and Member Technical Staff at ZOHO Corporation. The session focused on industry expectations, workplace skills, and career readiness. These interactions provided students with real-world insights, motivation, and guidance for successful professional careers.

Ceremony, Workshop & Special Programmes

A MoU Signing Ceremony and Workshop was conducted on **11.09.2025** with **Mr. Arunkumar Gopal**, Software Developer, Marcello Tech, Tiruchirappalli. The workshop on Generative AI introduced II year students to emerging AI tools and applications. An SIH Awareness Webinar titled SIH 2025: Cracking the Code of Innovation was held on **28.09.2025** by **Er. B. Baraniraj**, Technical Staff at Athena Health, Chennai, for final year IT students. Additionally, a Skill Upgradation Programme on **25.10.2025** by **Dr. M. S. Gayathri** focused on communication skills for career growth.

Student Excellence in Competitive Technical Events

IV and III Year IT students actively participated in Smart India Hackathon 2025 and Girl Geeks 2025 – Geekathon during December 2025. IV Year students participated from 08.12.2025 to 12.12.2025 at Banaras Hindu University, Varanasi, as Team Tech Phoenix, comprising Thirumaran P.M (TL), Sahana V, Azrina B, Praveen S, Vigneshkumaran B, and Dhaneshwar R, mentored by Ms. Ezhilarasi V and Mr. Baraniraj B. III Year students competed at IIM Lucknow, Noida, on 08.12.2025–09.12.2025 as Team Code Blasters (Logesh R (TL), Ragul R, Lakshmisri A, Valli C, Pradeep Kumar R, Santhosh N), mentored by Ms. Jeevitha S and Mr. Silambarasan R, and won Second Prize (₹15,000). Additionally, III Year students participated in Girl

Geeks 2025 – Geekathon on 13.12.2025 at RV College of Engineering, Bangalore, as Team SparkX (Yazhini S (TL), Yasardeen P, Sushmitha H.A, Sushmasri R, Srimanivoli S) and Team Tech Titans (Sunmathi K (TL), Sri Sakthipriya K, Rajkiran R), mentored by Dr. K. Aruna.



Articles

1. The Quantum Internet

[Prepared by P.M. Nedumaran II Year]

1.1. Abstract

The Quantum Internet marks a revolutionary advance in communication, harnessing quantum mechanics for superior security, speed, and computation. Utilizing qubits, superposition, and entanglement, it surpasses classical networks, enabling secure

News letter/Dept of IT

encryption, distributed quantum computing, and novel discoveries. As research intensifies worldwide, this technology shifts from theory to reality.



1.2.Introduction

The digital era nears a quantum transformation. Unlike binary internet, the Quantum Internet employs qubits in superposition and entanglement for tamper-proof, high-speed data exchange. Global progress signals its imminent integration into everyday tech.

1.3.Important Points

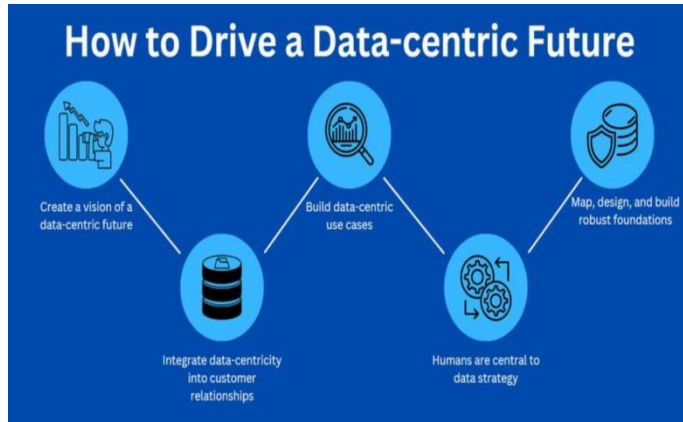
- **Quantum Entanglement:** Linked particles instantly influence each other across distances, ensuring detectable interception for secure channels.
- **Unbreakable Quantum Encryption:** QKD leverages entanglement for uncopyable keys, thwarting cyber threats.
- **Quantum Cloud Computing:** Enables global access to quantum power, advancing medicine, finance, and more.
- **Global Research:** Tests of repeaters and satellites pave the way for deployment.

1.4. Conclusion

Prepared by: N.S ,AP/IT

The Quantum Internet redefines connectivity with secure, potent quantum principles. Despite scaling hurdles, rapid global strides herald a smarter, interconnected future.

2. Data-centric computing (Prepared by D .Vedika III year)



2.1. Abstract

Data-centric computing revolutionizes system design by prioritizing data as the core, enduring asset over adaptable compute and applications. Amid surging unstructured data

from AI and IoT, it enhances scalability, performance, and agility, though demanding new infrastructure and governance.

2.2.Introduction

Organizations drown in data from IoT and interactions, exposing application-centric limits. Data-centric computing stabilizes data centrally while fluidizing compute, reshaping scalable architectures for the data-driven decade ahead.

News letter/Dept of IT

2.3.What It Is

This paradigm centers persistent data, with flexible applications adapting around it—enabling optimized, modular system structures beyond traditional app-driven models.

2.4. Why It Matters

Unstructured data explosion strains legacy systems; data-centric optimizes movement, processing near sources, and compute-storage interplay for superior agility without data migrations.

2.5. How It Could Influence IT & Business

- **Edge & IoT:** Processes data locally, reducing cloud transmission.
- **AI & ML:** Boosts data quality for better training.
- **Infrastructure:** Spurs data-optimized chips and fabrics.
- **Business Agility:** Reuses data platforms across apps.

2.6. Challenges

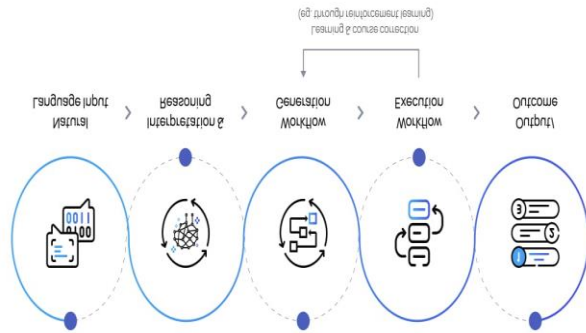
Legacy transitions need re-engineering, new skills, hardware; heightens governance, security demands with data centrality.

2.7.Conclusion

Data-centric computing elevates data to redefine scalability, efficiency, and agility in AI/IoT eras, urging proactive architecture and skill shifts for future readiness.

Prepared by: N.S ,AP/IT

3. Agentic AI (Prepared by Thirumaran, Dhiyanesh IV year)



3.1. Abstract

Agentic AI evolves AI into autonomous agents that plan, execute, and adapt tasks independently, unlike reactive models. It automates workflows in customer service, finance, healthcare, and research, boosting productivity while demanding skills in ethics and oversight for students.

3.2.Introduction

AI shifts to Agentic systems that handle multi-step tasks, data, and real-time adaptation, streamlining operations from support to academia amid industry adoption.

3.3.The Rise and Potential of Agentic AI

News letter/Dept of IT

Agents plan, reason, and act across platforms—like resolving tickets, compliance checks, healthcare scheduling, or research automation—raising ethics and oversight needs.

Tech Updates & Industry News

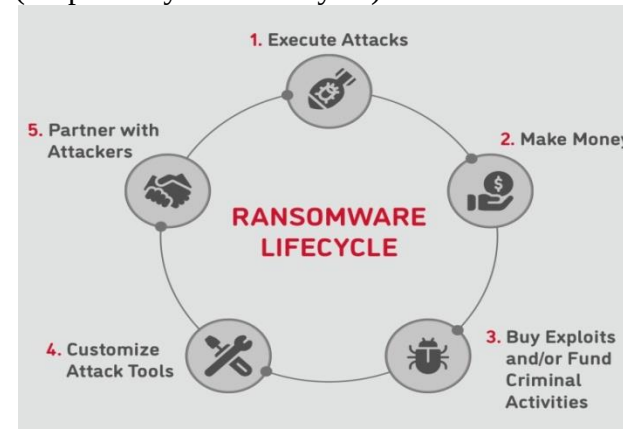
- Typepad shuts down September 30; export to WordPress.
- Xcode 26 beta integrates GPT-5, Claude for dev tools.
- Web3Auth's protocol enables secure dApp access.
- Indian startups halt real-money gaming per 2025 bill.
- Microsoft enforces Azure MFA from October 1.
- Warestack's tool monitors DevOps for safety.

3.4. CONCLUSION

Agentic AI remains systems with autonomy, amid rapid tech shifts; early adaptation in skills and collaboration ensures thriving in this revolution.

4. Ransomware Attacks: Trends and Prevention

(Prepared by Harini III year)



Prepared by: N.S ,AP/IT

4.1. Abstract

Ransomware poses a severe cyber threat, encrypting data and demanding payment while evolving via double extortion, RaaS, AI attacks, and phishing. Preventive measures like backups, updates, awareness, and multi-layered defenses are crucial for resilience.

4.2.Introduction

Ransomware disrupts via encryption for ransom, amplified by digital shifts and remote work. Evolving tactics demand understanding trends and robust prevention to curb damage.

4.3. What is Ransomware?

Malware locks data, demanding cryptocurrency decryption; spreads via phishing, downloads, sites, vulnerabilities. Payment offers no guarantees, risking leaks.

4.4.Current Trends in Ransomware Attacks

- **Double Extortion:** Steals data pre-encryption, threatens leaks.
- **Critical Infrastructure:** Targets hospitals, governments for quick payouts.
- **RaaS:** Kits enable novice attacks.
- **AI-Powered:** Automates evasion, targeting.
- **Phishing:** Tricks via convincing emails.

4.5.Prevention Techniques

- Frequent offline backups for recovery.
- Updated antivirus, firewalls.
- Patch systems promptly.

- Email caution, verify senders.
- MFA for access.
- Staff awareness training.

4.6. Conclusion

Ransomware advances with AI, RaaS, targeting essentials; countermeasures like backups, updates, MFA, training build defenses for a secure digital realm.

5. AgentGPT(Prepared by Santhosh II year)



5.1. Abstract

AgentGPT shifts AI from reactive chatbots to autonomous agents that plan, execute, evaluate, and refine tasks based on goals. It boosts productivity in research, coding, writing, and automation for students, developers, and professionals.

5.2.Introduction

AI evolves to autonomous systems like AgentGPT, which independently plans, executes, and iterates on user goals, automating complex tasks without step-by-step guidance.

5.3.What is AgentGPT?

Autonomous AI that understands goals, creates plans, executes steps, reviews outcomes, and iterates—transforming reactive tools into proactive assistants.

5.4.Key Features of AgentGPT

- **Autonomous Planning:** Breaks goals into steps, e.g., researching solar energy.
- **Multi-Skill:** Researches, writes, codes, schedules, analyzes.
- **Self-Improvement:** Refines outputs iteratively.
- **Productivity:** Frees focus for creativity.
- **User-Friendly:** No expertise needed.

5.5. Real-World Applications

- **Students:** Research, essays, summaries, notes.
- **Developers:** Code, debugging, docs.
- **Professionals:** Presentations, emails, research.
- **General:** Tasks, lists, writing, learning.

5.6. Why It Saves Time

Replaces manual hours with automated, adaptive execution, outperforming traditional AI by delegating fully.

5.7.Conclusion

Agent GPT pioneers action-taking AI, enhancing productivity across domains; it completes work autonomously, shaping a future of efficient automation.

6. Google Big Sleep AI Tool Finds Critical Chrome Vulnerability (Prepared by Sarankumar III year)

6.1. Abstract

Google patched a critical Chrome vulnerability, CVE-2025-9478, rated 9.8, found in the ANGLE graphics library. The flaw, a use-after-free issue, was discovered by Google's autonomous AI tool, Big Sleep. It could allow attackers to exploit memory errors through malicious webpages. Chrome version 139.0.7258.154/.155 fixes the issue and improves ANGLE's memory handling.

6.2. Introduction

As browser threats grow, Google now uses AI systems for rapid detection. Big Sleep identified this flaw on August 11, 2025, proving AI's value in securing complex software.

6.3. Important points

1. Overview

CVE-2025-9478 is a critical UAF bug in ANGLE causing memory corruption and possible code execution.

2. Role of Google Big Sleep

Big Sleep autonomously detected the issue before humans, enabling fast verification and patching.

3. ANGLE Importance

ANGLE powers WebGL and GPU rendering; flaws here threaten browser stability and device security.

4. Chrome Update

The latest Chrome update enhances memory safety, with no exploitation reported.

5. Other Browsers

Edge, Brave, and Vivaldi will also patch due to shared Chromium code.

6.4. Conclusion

This incident highlights AI-driven security's growing role in identifying hidden vulnerabilities and protecting users.

Creative corner



Drawing by sahana IV year



Drawing by Vaishnavi .V III year B



Drawing by P.M.Nedumaran II year B



Drawing by Jeevitha R II year A

Quiz

Q1: Mystery Tech

I store data on multiple disks. If one fails, your data still survives.

Who am I?

- A) RAID
- B) RAM
- C) Cache
- D) ROM

Q2: Escape the Bug!

Your app is freezing only when clicking a “Save” button.
What’s the **FIRST** move?

- A) Restart computer
- B) Add more features
- C) Check console/log errors
- D) Delete the “Save” button

Q3: AI Detective

A model predicts wrong results because the training data was biased.
Who is the *real culprit*?

- A) Algorithm
- B) Training Data
- C) CPU
- D) Compiler

Q4: Cyber Ninja Challenge

You're attacked by ransomware.
Which shield saves you?

- A) Backup
- B) Antivirus
- C) VPN
- D) Dark mode

Q5: Guess the Gadget

I can talk to devices, turn off lights, and remind you to drink water.
Who am I?

- A) IoT Assistant
- B) Router
- C) GPU
- D) Compiler

QUOTES

"Any sufficiently advanced technology is indistinguishable from magic."

~ Arthur C. Clarke

"The advance of technology is based on making it fit in pockets."
– Theo Jansen.

"One machine can do the work of fifty ordinary men. No machine can do the work of one extraordinary man."
– Elbert Hubbard.

"Engineering is the art of directing the great sources of power in nature for the use and convenience of man."
– Thomas Tredgold.

Rush your ideas to,

N.Shuruthi,

Assistant Professor/IT

INFOLETTER EDITOR

Mail Id: avcitnewsletter@gmail.com.

Copy to: Department ,

Dept Faculty, Students