TECH OZRIC

MAGAZINE

Volume:5 Issue No:1

ADVANCING KNOWLEDGE THROUGH TECHNOLOGY

DEPARTMENT OF INFORMATION TECHNOLOGY

KGISL INSTITUTE OF TECHNOLOGY, COIMBATORE – 641035

TECH OZRIC MAGAZINE

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DEPARTMENT OF INFORMATION TECHNOLOGY

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

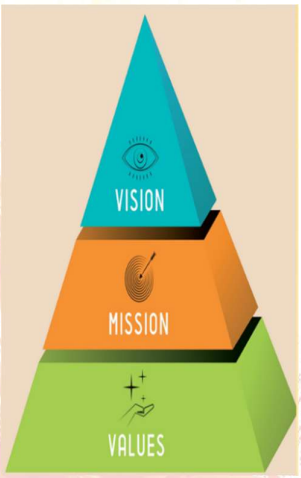
MD-1: To accomplish an effective teaching learning process through innovative practices for empowering the graduates to face societal challenges.

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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(12) PATENT APPLICATION PUBLICATION (21) Application No.202341052784 A
(19) INDIA
(22) Date of filing of Application :07/08/2023 (43) Publication Date : 01/09/2023
(54) Title of the invention : ARTIFICIAL INTELLIGENCE BASED APPROACHES FOR FAKE NEWS DETECTION IN SOCIAL MEDIA
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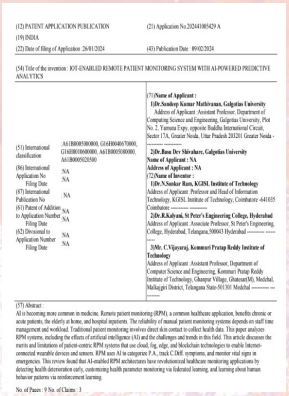
(19) INDIA
(22) Date of filing of Application :06/06/2023 (43) Publication Date : 08/09/2023
(54) Title of the invention : STRUCTURAL AND TECHNICAL USER RENDERED DIGITAL ASSISTANT ENTITY (SATURDAE)
No. of Pages : 11 No. of Claims : 4



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No. of Pages : 9 No. of Claims : 3

Patent Publication Recognition – KGiSL Innovators

KGiSL Institute of Technology proudly celebrates the remarkable achievements of its faculty members who have contributed as co-inventors to notable Indian patent publications in the field of emerging technologies. Their innovative work reflects the institution's commitment to fostering research excellence and technological advancement.We are delighted to announce that faculty members from KGiSL Institute of Technology have been listed as co-inventors in the Indian patent titled **"Artificial Intelligence Based Approaches for Fake News Detection in Social Media"** (Application No. *202341052784 A*, published on *01 September 2023*). The contributors from KGiSL include:

- **Dr. P. Rajkumar**, Head, CSBS
- **Ms. Ananthi M**, Associate Professor, Information Technology
- **Ms. Shirley Josephine Mary R**, Assistant Professor, Information Technology

We are equally proud to highlight that **Mr. Rajasekaran Selvaraj**, Department of Information Technology, has been listed as a co-inventor in the Indian patent titled **"Structural and Technical User Rendered Digital Assistant Entity (SATURDAE)"** (Application No. *202341038832 A*, published on *08 September 2023*).

In addition, we congratulate **Dr. N. Sankar Ram**, Professor and Head of Information Technology, for being listed as a co-inventor in the patent titled **"IoT-Enabled Remote Patient Monitoring System with AI-Powered Predictive Analytics"** (Application No. *202441005429 A*, published on *09 February 2024*). These accomplishments stand as a testament to the dedication, expertise, and innovative spirit of the faculty members of KGiSL Institute of Technology. Their contributions continue to inspire students and strengthen the institution's research culture.

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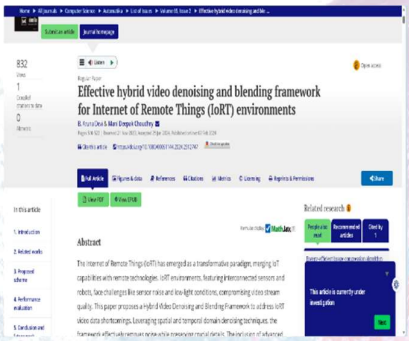
Research Publication Highlights – Department of Information Technology



DOI:
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We are delighted to share the recent research accomplishments of our esteemed faculty members from the Department of Information Technology, KGiSL Institute of Technology. Their contributions in high-impact journals and international conferences continue to elevate the research profile of the institution.

We proudly announce that **Mr. M. D. Choudhry, Assistant Professor, IT**, has published his latest research article titled **"Effective Hybrid Video Denoising and Blending Framework for Internet of Remote Things (IoRT) Environments"** in *Automatika*, Volume 65, Issue 2, pages 510–522 (2024).

Conference Publication Highlight

We are also pleased to share that **Ms. M. Ananthi, Assistant Professor, IT**, presented her research paper titled **"An Innovative Method for Improving Speech Intelligibility in Automatic Sound Classification Based on Relative-CNN-RNN"** at the **2023 International Conference on Sustainable Communication Networks and Application (ICSCNA)** held in Theni, India. Her work contributes to the growing field of sound classification and deep learning, emphasizing improved speech clarity and intelligent audio processing techniques.

S.Boomaswari

Gen-AI

By S.Boomaswari

Generative AI (GenAI) emerged as the most transformative technology, reshaping industries from education to healthcare. In 2023, large language models and image generators became mainstream, enabling students, researchers, and professionals to automate content creation, coding, and design tasks. By 2024, the focus shifted from experimentation to **ROI-driven applications**, with enterprises embedding GenAI into workflows for customer service, drug discovery, and predictive analytics. Gartner's 2024 Hype Cycle noted that GenAI had moved past the "Peak of Inflated Expectations," accelerating the development of

autonomous AI systems capable of decision-making without human intervention. This timeline also saw advances in **human-centric security and privacy programs**, ensuring AI adoption aligned with ethical standards. Autonomous vehicles, robotics, and smart assistants began integrating GenAI modules, creating adaptive systems that learn continuously. The impact was profound: productivity gains of up to 30% were reported in developer environments, while industries like finance and logistics leveraged AI for real-time optimization. The 2023–2024 period thus marked the transition of AI from novelty to necessity, laying the foundation for scalable autonomous ecosystems.

Breakthroughs in Clean Energy and Computing

By S. Dinesh Vishnu

S. DINESH VISHNU

Parallel to AI's rise, **clean energy technologies** and **advanced computing** defined the 2023–2024 innovation timeline. In 2023, breakthroughs in **quantum computing** and **multicloud management** addressed long-standing challenges in scalability and complexity. Quantum processors achieved new milestones in error correction, making them more viable for real-world applications. Meanwhile, cloud innovations simplified hybrid deployments, enabling enterprises to balance performance and cost.

By 2024, **solar energy** and **next-generation batteries** gained prominence as part of global decarbonization efforts. MIT Technology Review highlighted that most solar panels still fail to capture the majority of sunlight, spurring research into **high-efficiency photovoltaic materials**. TIME's "Best Inventions of 2024" showcased consumer-ready innovations such as transparent TVs, foldable smartphones, and surgical micro-robots, but the most impactful were energy solutions that promised sustainability at scaleTIME.

Together, these advances underscored a dual trajectory: **AI-driven intelligence** and **sustainable energy systems**. The synergy between computing power and clean energy positioned 2023–2024 as a pivotal era where technology not only enhanced productivity but also addressed pressing global challenges.

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Computer Science and Engineering in 2024: A Year of Convergence and Acceleration

By S.Dharun Kumar

In 2024 marked a pivotal year in computer science and engineering, defined by the convergence of artificial intelligence, quantum computing, and sustainable technology. The discipline, long considered the backbone of the digital economy, experienced both consolidation of established innovations and expansion into new frontiers that promise to reshape industries and academia alike.

One of the most significant developments was the **mainstream adoption of generative AI**. Large language models and multimodal systems moved beyond experimental use into enterprise workflows, powering customer service, software development, and even drug discovery. The IEEE Computer Society predicted that generative AI would have the **greatest impact in 2024**, with applications ranging from misinformation management to remote healthcare. For computer science students and professionals, this meant a renewed emphasis on **AI ethics, privacy-preserving frameworks, and explainable models**, ensuring that innovation remained aligned with human values.

Parallel to AI's rise, **quantum computing achieved early successes in error correction and scalability**, making it more viable for real-world applications. Research labs reported breakthroughs in stabilizing qubits, while hybrid quantum-classical algorithms began to show promise in optimization and cryptography. This progress positioned quantum computing not as a distant dream but as an emerging toolset that engineers must prepare to integrate into existing infrastructures.

Cloud computing also matured significantly in 2024, with **multicloud and edge architectures** becoming standard practice. Enterprises sought resilience and cost efficiency by distributing workloads across providers, while edge computing supported latency-sensitive applications such as autonomous vehicles and industrial IoT. This shift demanded new skills in **distributed systems engineering, container orchestration, and cybersecurity**, reinforcing the interdisciplinary nature of modern computer science.

Another defining trend was the **integration of robotics and AI**, particularly in manufacturing and healthcare. Advanced robotics systems, powered by machine learning, demonstrated greater autonomy and adaptability. In hospitals, robotic assistants supported surgeries and patient monitoring, while in factories, collaborative robots enhanced productivity and safety. Finally, sustainability became a core theme. Computer engineers focused on **energy-efficient hardware design, green data centers, and AI-driven optimization of renewable energy systems**. This reflected a broader recognition that computing power must grow responsibly, balancing innovation with environmental stewardship.

RUN BEFORE YOU CRAWL

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