K.S.R COLLEGE OF ENGINEERING
AUTONOMOUS | TIRUCHENGODE

(Autonomous)

Department of
Computer Science and Engineering

TECH EXPLORER
ACADEMIC YEAR 2024-2025
EVEN SEMESTER

K.S.R. COLLEGE OF ENGINEERING

An Autonomous Institution

Thiru. R . SRINIVASAN, B.B.M., MISTE,
Chairman,
KSR Educational Institutions.

Message

Education is the foundation of a brighter tomorrow, and this magazine reflects the vibrant spirit of our learners. May it continue to inspire creativity, excellence, and lifelong curiosity in every reader. The college's proactive approach to research and development plays a pivotal role in shaping both students and faculty into intellectuals capable of meeting the challenges of the modern world. Through various initiatives, KSRCE explores new areas of practice and enhances the quality of professional services, ensuring that its community remains at the forefront of innovation and excellence.

The upcoming magazine promises to be a significant milestone in this journey, reflecting the vibrant spirit of KSRCE's learners and their relentless pursuit of knowledge. It serves as a testament to the institution's unwavering commitment to inspiring creativity, excellence, and lifelong curiosity in every reader.

As you eagerly anticipate the release of this magazine, it stands as a beacon of the collective efforts and aspirations of the KSRCE community. May it continue to inspire and guide future generations towards a brighter tomorrow.

With best wishes,
Mr. R. Srinivasan
Chairman
KSR Educational Institutions

K.S.R. COLLEGE OF ENGINEERING

An Autonomous Institution

Dr. M. Venkatesan, M.E., Ph.D.,
Dean,
K.S.R. College of Engineering.

Message

With immense pride and joy that I present to you the latest edition of our CSE Department magazine, a vibrant reflection of the creativity, talent, and achievements of our students and staff. Over the past one decade, KSRCE has served the young engineering aspirants of our nation by providing state-of-the-art facilities and well-knowledgeable faculty members.

The Institute has held high the lighted torch of teaching and learning and has not failed in its duty in the hour of need. The students imbibe qualities of an excellent teacher and researcher to set academic standards. The last couple of years marked several milestones in the history of KSRCE.

Technology is constantly evolving, and staying up to date with the latest trends can help us stay competitive in the job market, and give you access to new features and capabilities. I congratulate the editorial team, contributors, and all those who have worked tirelessly to bring this edition to life. Let this magazine serve not only as a record of our accomplishments but also as an inspiration for the journeys yet to come.

With best wishes,
Dr. M. Venkatesan M.E., Ph.D.,
Dean

K.S.R. COLLEGE OF ENGINEERING

An Autonomous Institution

Dr. P. Meenakshi Devi, M.E., Ph.D.,
Principal,
K.S.R. College of Engineering.

Message

My heartiest welcome to all the young budding Engineers who have joined in "K.S.R. College of Engineering". With the help of highly qualified and dedicated staff members, we will be moulding the students to the required shape which will make them employable. The composite unit of Students, Parents, and Society is our customer. The K.S.R. College of Engineering will strive hard to provide customer satisfaction. In our college, we give top priority to discipline. A series of tests and examinations will be conducted to achieve good performance in the university examinations. An effective Training and Placement (T&P) cell is formed to provide placement to all our students. Importance will be given to extra-curricular and co-curricular activities also. Excellent infrastructure facilities and good learning atmosphere is an added advantage of this great Institute. I hope all the students admitted here will enjoy the four years of study. Let us all work hard to produce the most competent scientists, engineers, Entrepreneurs, Managers and researchers through Quality Education.

With best wishes,
Dr. P. Meenaksi Devi, M.E., Ph.D.,
Principal

K.S.R. COLLEGE OF ENGINEERING

An Autonomous College

Dr. V. Sharmila, M.E., Ph.D.,
Associate Professor,
Head of the Department,
Computer Science and Engineering,
K.S.R College of Engineering.

Message

The HOD of CSE takes great honor in congratulating the students who have contributed for the current year's Evolve magazine. I really hope that this would be as useful as the last Evolve editions. Acknowledging the fact that the magazine is completely created and designed by the students, I really hope this would kindle a spark in the minds of the students who are yet to contribute towards the progress of the Evolve Initiative in the upcoming years. I also take this opportunity to express our gratitude to our alumni and industry partners, whose support and engagement continue to enrich our journey.

All the best students!

With best wishes,
Dr. V. Sharmila, M.E., Ph.D.,
Associate Professor & Head
CSE

Institution Vision & Mission

Vision of the Institute

- To become a globally renowned institution in engineering and management, committed to providing holistic education that fosters research, innovation and sustainable development.

Mission of the Institution

- **IM 1** Deliver value-based quality education through modern pedagogy and experiential learning.
- **IM 2** Enrich engineering and managerial skills through cutting-edge laboratories to meet evolving global demands.
- **IM 3** Empower research and innovation by integrating collaboration, social responsibility, and commitment to sustainable development.

Department Vision & Mission

Vision of the Department

- To produce globally competent researchers and innovators in computer science and engineering, committed to ethical values and sustainable development.

Mission of the Department

- **DM 1** Provide high-quality learner-centric education in computer science and engineering through experiential learning and modern pedagogy.
- **DM 2** Enhance holistic, value-driven education through state-of-the-art laboratory facilities to meet global industry demand.
- **DM 3** Promote interdisciplinary innovation and research committed to sustainable development.

Programme Educational Objectives (PEOs)

The graduates of the programme will be able to

- **PEO 1 Core Competency:** Graduates will integrate engineering fundamentals and computing to devise innovative solutions and effectively resolve complex problems.
- **PEO 2 Professionalism:** Graduates will drive sustainable and ethical solutions by integrating creative thinking and collaborative learning.
- **PEO 3 Career Development:** Graduates will enhance their careers through continuous learning, innovation, and research to meet the evolving needs of the industry.

PROGRAMME OUTCOMES (POs)

PO1 Engineering Knowledge: Apply knowledge of mathematics, natural science, computing, engineering fundamentals and an engineering specialization as specified in WK1 to WK4 respectively to develop to the solution of complex engineering problems.

PO2 Problem Analysis: Identify, formulate, review research literature and analyze complex engineering problems reaching substantiated conclusions with consideration for sustainable development. (WK1 to WK4)

PO3 Design/Development of Solutions: Design creative solutions for complex engineering problems and design/develop systems/components/processes to meet identified needs with consideration for the public health and safety, whole-life cost, net zero carbon, culture, society and environment as required. (WK5)

PO4 Conduct Investigations of Complex Problems: Conduct investigations of complex engineering problems using research-based knowledge including design of experiments, modelling, analysis & interpretation of data to provide valid conclusions. (WK8).

PO5 Engineering Tool Usage: Create, select and apply appropriate techniques, resources and modern engineering & IT tools, including prediction and modelling recognizing their limitations to solve complex engineering problems. (WK2 and WK6).

PO6 The Engineer and The World: Analyze and evaluate societal and environmental aspects while solving complex engineering problems for its impact on sustainability with reference to economy, health, safety, legal framework, culture and environment. (WK1, WK5, and WK7).

PO7 Ethics: Apply ethical principles and commit to professional ethics, human values, diversity and inclusion; adhere to national & international laws. (WK9)

PO8 Individual and Collaborative Team work: Function effectively as an individual, and as a member or leader in diverse/multi-disciplinary teams.

PO9 Communication: Communicate effectively and inclusively within the engineering community and society at large, such as being able to comprehend and write effective reports and design documentation, make effective presentations considering cultural, language, and learning differences.

PO10 Project Management and Finance: Apply knowledge and understanding of engineering management principles and economic decision-making and apply these to one's own work, as a member and leader in a team, and to manage projects and in multidisciplinary environments.

PO11 Life-Long Learning: Recognize the need for, and have the preparation and ability for i) independent and life-long learning ii) adaptability to new and emerging technologies and iii) critical thinking in the broadest context of technological change. (WK8)

PROGRAMME SPECIFIC OUTCOMES (PSOs)

PSO1 Technical competency: Develop and Implement computer solutions that accomplish goals to the industry, government or research by exploring new technologies.

PSO2 Professional awareness: Grow intellectually and professionally in the chosen field.

Editorial Board

Faculty Awards

Dr. M. Venkatesan, Dean & Professor in the Department of CSE received **"Life Time Achiever Award"** from **STEP Professional Society.** The award ceremony held in K.S.R. College of Engineering on 15.05.25 at Platinum Hall.

Dr. V. Sharmila, The Head of the department of CSE received **"Best Supporting Department Award"** from **STEP Professional Society.** The award ceremony held in K.S.R. College of Engineering on 15.05.25 at Platinum Hall.

Faculty Achievements

Faculty Achievements & Awards:

Mr. O. K. Gowrishankar served as the PALS mentor for the BLOCKSMITHS team, which received a Certificate of Appreciation for reaching the finals of PALS Innowah 2024–2025, an innovation challenge competition organized by PALS at IIT Madras on 22nd March 2025.

Department Activities

Programme Conducted by the Department (Seminar/Webinar/Guest lecturer/Conference/FDP):

Seminar on, **"A Technical Deep Dive into Git Workflows and Strategies"** has been conducted by the Department of CSE and the session was handled by the Chief guest **Mr. L. Manikandan, Software Developer, Propel Technology Solutions,Chennai** on 08.03.2025. The session emphasized real-world use cases, conflict resolution, and efficient version control for team projects.

Seminar on, **"Microservices and API Gateways in Modern Applications: Driving Innovation & Enterpreneurship"** has been conducted by the Department of CSE and the session was handled by the chief guest **Mr. Divakaran Senthilkumar, Software Developer, Compliance Cow, Chennai** on 23.03.2025. Participants explored real-world use cases where microservices enabled faster innovation and adaptability in business models. The session inspired budding entrepreneurs to leverage these technologies for building agile, future-ready solutions.

Department Activities

Workshop conducted on, **"Generative AI: A Hands on training on Large Language Models"** has been conducted by the Department of **CSE** and the session was handled by the resource persons from KSRCE domain faculty members on 28.04.25 & 29.04.25. Participants explored the architecture and capabilities of large language models like **GPT**, gaining insights into their training and fine-tuning processes. Through interactive sessions, they learned to build and deploy AI applications using real-world datasets. The workshop empowered attendees to harness generative AI for innovation, research, and product development.

Faculty Publications

1. Dr. S. Savitha, S., Dr. A. Rajiv Kannan, and Dr. K. Logeswaran published and article titled on, "Augmenting Cardiovascular Disease Prediction Through CWCF Integration Leveraging Harris Hawks Search in Deep Belief Networks." Springer nature - Cognitive Computation 17, no. 1 (2025): 52.

2. V. Sharmila, Savitha, S., R. Keerthana, K. Logeswaran, P. Keerthika and M. Sangeetha. "Integration of Multi-Omics Data: Genomics, Proteomics, Metabolomics", In Harnessing AI and Machine Learning for Precision Wellness,IGI Global Scientific Publishing, Jan - 2025, pp. 149-184.

3. Keerthana, R., Savitha, S., Logeswaran, K., Rajivkannan, A., & Namasivayam M. (2025). "AI Technologies for Predicting Susceptibility and Outcomes of Immunological Disorders", In AI-Assisted Computational Approaches for Immunological Disorders, IGI Global Scientific Publishing, Jan - 2025, pp. 107-142.

4. Savitha, S., R. Keerthana, K. Logeswaran, V. Vennila, R. Manjuladevi, and M. Sangeetha, "Sustainable AI-Powered Systems and Cybersecurity for Health Diagnostics: Addressing Bias and Fairness in AI for Early Disease Detection", In AI-Driven Healthcare Cybersecurity and Privacy, IGI Global Scientific Publishing, 2025, pp. 205-244.

5. Namasivayam, M., O. K. Gowrishankar, V. Ramesh, P. Giriprasath, C. Kotteshwaran, and K. Lokeshwaran. "RCNN-based Respiratory Sound Analysis for Lung Disease Prediction in At-risk Individuals." In International Conference on Sustainability Innovation in Computing and Engineering (ICSICE 2024), Atlantis Press, 2025, pp. 1356-1367.

6. Dr.E.BabyAnitha, U.Kasthuri, P.Priyadharshini, R.Vijhayalakshmi authored the book titled, "Data Strcutures", in Charulatha publications with the ISBN-13:979-939620-566-5, 2025.

Internships

227 Students attended Internships in the company listed below,

1. **Cube AI solutions, Bangalore.**
2. **TANSAM, Chennai.**
3. **Zero Touch Cyber, Hyderabad**
4. **Neura AI Solutions, Chennai.**
5. **Stack and Queue, Salem.**
6. **Aero space India, Mysore.**
7. **Top Freshers, Chennai.**
8. **Rejola Tech, Chennai.**
9. **United IT & CAD Division, Salem**

NPTEL COURSE COMPLETION

150 Students obtained **NPTEL** Certificates in the following courses,

1. Design Thinking
2. Industry 4.0 and Introduction to Internet of Things
3. Software Testing
4. Operating System fundamentals
5. Distributed Systems
6. Google Cloud Computing Foundation
7. Cloud Computing

KSR College of Engineering

AN AUTONOMOUS INSTITUTION

NAAC ACCREDITED **A++** | NBA ACCREDITED PROGRAMMES

25 YEARS 2001 – 2026 *Celebrating* Academic Excellence

DEPARTMENT OF COMPUTER SCIENCE AND ENGINEERING
NPTEL ACHIEVERS - (2024 - 2025) EVEN SEMESTER
II & III- YEAR (Course Name : Introduction to Industry 4.0 and Industrial Internet of Things)

ABISECK D ELITE + SILVER	**AJAY B** ELITE + SILVER	**BHAVAGEETHA S** ELITE + SILVER	**CHANDRAPRADEEP R** ELITE + SILVER	**DHARSHINI E** ELITE + SILVER	**GOWRINATH S** ELITE + SILVER
KARTHI K ELITE + SILVER	**KEERTHIKA K** ELITE + SILVER	**KIRUTHIKA P** ELITE + SILVER	**MANEESH ADHITHYA S** ELITE + SILVER	**NITHIYAN S** ELITE + SILVER	**PRAGADEESHWARAN S** ELITE + SILVER
SANJAY G ELITE + SILVER	**SONIKA SHARMA** ELITE + SILVER	**SWETHA T S** ELITE + SILVER	**TEENA S** ELITE + SILVER	**UMASANKARI K** ELITE + SILVER	**USHADEVI K** ELITE + SILVER
VIGNESH G ELITE + SILVER	**SIVA PRAKASH K** ELITE + SILVER				

No. of students Secured Elite + Gold & Topper	: 01
No. of students Secured Elite + Silver	: 41
No. of students Secured Elite	: 76
No. of students Successfully Completed	: 30

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VALUE ADDED COURSES

Value Added course on "Mern Stack Developer" has been conducted in association with ETS solutions, Bangalore for the duration of 15 days from 30.12.2024 to 08.03.2025. The course is used to equip students with full-stack web development skills using MongoDB, Express.js, React.js, and Node.js. The course provided a comprehensive understanding of both front-end and back-end technologies, enabling participants to build dynamic and scalable web applications. Through hands-on sessions, students developed real-time projects, practiced API integration, and gained exposure to version control using Git. Emphasis was placed on industry-relevant practices, deployment strategies, and debugging techniques. The training bridged academic knowledge with practical expertise, enhancing students' employability in the software development field. By the end of the course, participants were confident in creating complete web applications and pursuing roles as full-stack developers.

ALUMNI CORNER

The Alumni Meet conducted on 14.06.2025. The occasion was a heart warming gathering that brought together former students, faculty, in a celebration of shared memories and achievements. The event served as a platform for alumni to reconnect with their alma mater, exchange experiences, and contribute ideas for the institution's growth. The meet not only strengthened the bond between the alumni and the institution but also opened avenues for mentorship, career support, and collaborative development. It was a memorable occasion that reinforced the spirit of belonging and lifelong connection.

AI SUMMIT

Conducted a flagship Event on, "AI Summit", from 23.04.25 to 25.04.25. The event lead by the Chief Guest **Mr. S. SENDHIL KUMAR, Founder & Chairman, Global Knowledge Technologies, Bangalore** along with his team. The event featured keynote sessions on machine learning, natural language processing, and AI-driven innovations across various sectors. Interactive demos and panel discussions highlighted real-world applications and ethical considerations in AI deployment. The summit encouraged collaboration and inspired participants to pursue impactful AI research and entrepreneurial ventures.