

COMPUTER ENGINEERING NEWSLETTER

Sanjivani Rural Education Society's

Sanjivani College of Engineering, Kopargaon-423603

(An Autonomous Institute Affiliated to Savitribai Phule Pune University, Pune)

NAAC 'A' Grade Accredited, ISO 9001:2015 Certified Department of Computer Engineering

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UG Program NBA Accredited

VISION

To develop world class engineering professionals with good moral characters and make them capable to exhibit leadership through their engineering ability, creative potential and effective soft skills which will improve the quality of life in society.



MISSION OF THE DEPARTMENT

To impart quality technical education to the students through innovative and interactive teaching and learning process to acquire sound technical knowledge, professional competence and to have aptitude for research and development. Develop students as excellent communicators and highly effective team members and leaders with full appreciation of the importance of professional, ethical and social responsibilities.



Dr. M. A. Jawale Professor and Head Department of Computer Engineering

It gives me an immense pleasure to express my views towards the development of Computer Engineering Department. Besides a very strong and disciplined Academics, Department has started various practices for the overall development of students which includes SPEAK and Coding Club for enhancing the Employability Skills, , RID Forum for the Project development based on innovative ideas, Software Consultancy Cell for software development , Mentorship activities and regular Alumni interaction with students. Students are having enormous talents and creativity which are being explored by extra cocurricular activities like Group Discussion, debate, Extempore, Programming contests, project competition etc. organized under different professional bodies like IEEE, CSI as well Departmental association.

Every year we observe lots of achievements in both academics and extra-curricular activities. Throughout the year on behalf of professional bodies and department association, lots of activities are conducted. Many students participated in these activities and the activities outside the college and bagged number of prizes. Hearty congratulations to all of them!!!

FROM EDITOR's DESK



Prof. A. B. Mokal Asst. Prof. & Dean IIIC

Dear Spectators,

"Remember that you will find treasure wherever your heart is". Some opportunities make us feel alive, engaged, connected and fulfilled. I am thankful to our honourable management and director Dr. Ajaykumar Thakur and our

head Dr. M. A. Jawale for providing me the chance to serve as editor of the Computer Engineering newsletter, which is published twice a year. We are able to deliver the special and worthwhile reading edition of Computer Engineering Newsletter "December 2024", thanks to our ongoing work. I am honoured to acknowledge the contributions made towards the completion of this issue by my students, illustrious alumni, and my academic colleagues. I anticipate continuing to receive the same level of support. We want to set up the new editorial board in the following semester. Students, alumni, and faculty members who are interested may contribute. See you in the next Edition.

NEWS AT GLANCE

 Department of Computer Engineering Achieves Prestigious NBA Accreditation (Tier-1)



It is a proud moment that Department of Computer Engineering has been accredited by NBA (Tier-1) for the next three academic years. This remarkable achievement underscores our unwavering commitment to delivering excellence in education, fostering innovation, and equipping students with industry-relevant skills to thrive in a competitive global landscape.

This milestone reflects the hard work, dedication, and collective efforts of our highly qualified faculty, motivated students, and supportive stakeholders. We are grateful for their invaluable contributions, which have played a pivotal role in achieving this recognition. Together, we continue to pave the way for academic excellence and professional success!

"A reader today is a leader tomorrow."



An inspiring **Book Reading Activity** organised by the computer engineering department to promote the joy of reading and cultivate lifelong learning habits among students. This interactive session aims to spark curiosity, enhance knowledge, and foster a love for literature. Let's turn pages and discover new worlds together!.

Industry Programs & Social Events under IIIC

• Workshop on "Unlocking the Power of AWS AI" Successfully Conducted



The Sanjivani AWS Cloud Club of Department of Computer Engineering at Sanjivani College of Engineering, in collaboration with IIPS, DAVV Indore, organized a global-level workshop titled "Unlocking the Power of AWS AI: Seamless Intelligence for Every Engineer" on 1st August 2024. Led by Mr. Chirag Oswal, Technical Account Manager at Amazon, the online session introduced participants to AWS AI and machine learning applications. Students explored hands-on use cases such as text-to-speech, Amazon Transcribe & Translate, and AWS Rekognition, gaining practical insights into these technologies.

The interactive session saw active participation from 50 students, with engaging discussions on AWS trends, gaming applications, and more. The event successfully bridged academia and industry, leaving participants enriched with knowledge and new perspectives.

• Sanjivani AWS Cloud Club Hosts "Cloud Mastery: Embark on Your AWS Adventure" Event

Sanjivani AWS cloud club, hosted the event "Cloud Mastery: Embark on Your AWS Adventure" on April 25th, 2024. The two-hour technical session, organized by the Department of Computer Engineering, aimed to raise awareness about Cloud Computing and AWS services. It featured international speakers Mr. Agyapal Singh, Sr. Cloud Engineer at AWS, and Mr. Stephen Howell, Academic Developer Advocate at AWS. The event included an inauguration of the AWS Cloud Club, with speeches from Dr. D. B. Kshirsagar, Prof. Atul Mokal, and Ms. Bhoomi Raut. Participants engaged in an insightful session followed by a quiz competition, offering a great opportunity to network with AWS professionals.

 "Dr. Akashdeep Bhardwaj Leads Expert Session on Exposing Real-Time Vulnerabilities in System and Device Security"



Dr. Akashdeep Bhardwaj, a renowned expert in Cybersecurity and Digital Forensics, recently conducted an insightful session on "Exposing Real-Time Vulnerabilities: Live System and Device Security." The session, aimed at cybersecurity professionals, provided in-depth analysis of current vulnerabilities in live systems and devices, along with practical methods to identify and mitigate risks. Dr. Bhardwaj emphasized the importance of proactive security measures in safeguarding critical data and devices, offering valuable insights into the evolving landscape of cyber threats. The event was well-received by attendees seeking to enhance their cybersecurity knowledge and skills. • "Dr. K. Bharath Hosts Expert Talk on 'You, Me, Finance & Society'"



Dr. K. Bharath will lead an insightful expert talk on "You, Me, Finance & Society" on 9th August 2024. The session aims to explore the interconnectedness of personal finance, societal dynamics, and economic growth. Dr. Bharath will delve into the role of individual financial decisions in shaping broader societal trends, offering practical guidance for navigating financial landscapes. This talk promises to equip attendees with valuable knowledge for understanding the complex relationship between personal and societal finance in today's evolving economy.



• Sanjivani AWS Cloud Club Hosts "From Novice to Ninja: Mastering AWS Container Services" Workshop



Sanjivani College of Engineering, in collaboration with IIPS, DAVV Indore, conducted the online workshop "From Novice to Ninja: Mastering AWS Container Services" on July 22nd, 2024. The event, organized by the Department of Computer Engineering, provided students with hands-on experience in AWS Container Services and Docker commands. Mr. Ramneek Kalra, Cloud Support Engineer at AWS, led the session, explaining AWS infrastructure and demonstrating Docker commands. Students actively engaged with the speaker, discussing a variety of topics such as AWS applications and the latest trends, making the session interactive and informative.

• Sanjivani College Hosts "How to Become a Next Cloud Club Leader!" Webinar

Sanjivani College of Engineering's Department of Computer Engineering organized a successful online event titled "How to Become a Next Cloud Club Leader!" on November 9th, 2024. The session, aimed at reading awareness about AWS Cloud Clubs and AWS services, featured three dynamic AWS Cloud Club Captains—Bhoomi Ganesh Raut, Karen Tam, and Sidharth Sreekumar.



The event explored leadership qualities, with Bhoomi sharing insights on leadership, Karen detailing her journey from AWS Student Ambassador to Cloud Club Captain, and Sidharth engaging the audience with an exploration of PartyRock. This cross-regional event, with 40 participants, provided a valuable opportunity for students to network and learn from industry leaders.

• "B.Tech. 2025 Students Secure Top 5 Percentile in Adobe GenSolve Hackathon"

Mr. Gaurav Bombale, Mr. Shubham Chaudhri, and Mr. Ketan Biradar, from the B.Tech. 2025 batch, have achieved an impressive milestone by securing a rank in the top 5 percentile in the Adobe GenSolve Hackathon organized by GeeksforGeeks. This achievement highlights their strong problem-solving skills and technical expertise. The hackathon, known for its challenging tasks, provided a platform for participants to showcase their innovative thinking and coding proficiency. Their success underscores the growing talent and potential within the student community.

 "Mr. Rahul Patil Leads Expert Session on Industry Trends and Essential Skills"



On 25th October 2024, Mr. Rahul Patil, Solutions Architect at Benchmark IT Solutions, conducted an expert session on "Recent Trends & Skills Required for Industry." The session provided valuable insights into the evolving technology landscape and the key skills professionals need to stay competitive in the industry. Mr. Patil discussed the latest trends in IT and how professionals can adapt to emerging technologies, offering practical advice for career growth in a rapidly changing environment. The session was aimed at equipping attendees with the knowledge to navigate current and future industry demands.

• "Chaitanya Tekane Highlights the Value of Higher Studies in Career Growth"



On 20th October 2024, Chaitanya Tekane, a master's student at McGill University, delivered a talk on the importance of higher studies. He emphasized how advanced education not only provides specialized knowledge but also enhances critical thinking and opens doors to global opportunities, shaping long-term professional success.



The Department of Computer Engineering at Sanjivani College of Engineering celebrates the incredible success of five students who have secured prestigious placements at JUSPAY. Heartfelt congratulations to: Vaishnavi Mohodkar and Prathamesh Sonawane with outstanding packages of ₹27 LPA, and Rushikesh Wabale, Dnyaneshwari Dolzake, and Yashodeep Bhamare with impressive packages of ₹21 LPA each.

This achievement reflects the dedication of students, the unwavering support of faculty, and the college's commitment to fostering excellence. Kudos to our talented students for making us proud!

Kudos to Ms. Pranjal Arote!

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Adding another feather to Sanjivani College of Engineering's cap, Ms. Pranjal Arote from the B.Tech. 2025 batch has secured a prestigious placement at Avalara with an impressive package of ₹11 LPA. Wishing her continued success ahead! • Sanjivani College of Engineering Launches "Hirameki Centre of Excellence for Japanese Learning"



Sanjivani College of Engineering, Kopargaon, has established the "Hirameki Centre of Excellence for Japanese Learning" in collaboration with the "Study Go Work Japan" program. This initiative aims to provide students with comprehensive language training and cultural immersion opportunities to enhance their employability in the Japanese market. The center will offer courses in Japanese language, culture, and business etiquette, and facilitate student exchange programs with Japanese universities and companies. This collaboration is expected to create a strong foundation for students seeking to pursue academic and professional opportunities in Japan.

Best Academic Practices

- ICT based learning: Use of LCD projectors/smart boards and provision for interactive teaching learning.
- Collaborative / Cooperative teaching / learning: Students share knowledge or discuss topics in small group or in peer mode.
- NPTEL and SWAYAM: The faculty members are using E-sources such as NPTEL and SWAYAM courses for effective teaching. The same also provided to the students in order to develop selflearning and life-long learning skills.
- Assignments based problem solving: Assignments are given to students on problems and they solved by themselves. Assignments are based on COs which helps to achieve Program Outcomes.
- Laboratory / video based demonstration: Demonstration of system or parts of a real world system using modern tools.
- **Group discussion/ presentation:** Students learn through group discussion or asked to deliver short presentation on a topic.
- Expert Lecture: Department, with the prime vision of enhancing technical competency of our students, has organized various guest lectures by inviting experts from Industry and Academia to lend valuable guidance on latest technical drive, industry expectations and avenues for knowledge
- Internship: At the end of every semester or in vacation time students is allowed to carry out internship in reputed industries/companies to get practical exposure from industries. It helps the students to bridge the gap between the subject's studies and industrial need.
- Industrial Visits: Industrial visits are arranged to get the student's acquainted with industrial environment and work ethics.

- Project Based Learning (PBL): Project Based Learning (PBL) is significantly more effective than traditional instruction to train competent and skilled practitioners and it promotes long-term retention of knowledge and skills. It is an innovative practice that is used to implement Outcome Based Education Students is encouraged to carry out mini projects to apply their engineering knowledge from third semester onwards till seventh semester.
- Continuous Internal Assessment CIA: Continuous assessment is conducted for theory as well as laboratory courses. In theory courses, questions are asked based on the Course Outcomes and RBT levels. Whereas in lab courses, continuous assessment is conducted on the basis of predefined rubrics.
- Mentoring System: Faculty members assigned 20 students of respective class and accordingly mentor them to achieve their goals and grades. Mentoring happens at the departmental level.
- Foreign Languages exposure for global opportunities.
- Foreign University collaborations.
- Choice Based Subjects.
- Professional and open electives.
- Online Courses, training and certification courses.
- Industry based training and hire program.

Faculty Achievements

Prof. A. B. Mokal



Professor Atul Mokal actively participated in a one-week National Level Faculty Development Program, "Mastering Research Excellence: Al-Assisted Scientific Writing and High Impact Publication," held from November 25th to 30th, 2024. The program focused on enhancing research and publication skills, equipping faculty with valuable insights into the use of Al in scientific writing.



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Prof. Vikas Nirgude and Prof. Jaydeep Kale of the Computer Engineering Department have acquired certifications in Java Full Stack and.NET Full Stack through Wipro TalentNext. This achievement demonstrates their dedication to staying current with industry standards and expanding their expertise in these critical technologies. The department takes pride in its ongoing expansion and commitment to professional development.



GeeksforGeeks Honors Prof. Atul Mokal for Community Contributions

GeeksforGeeks, a leading educational platform, has recognized Prof. Atul Mokal with a Certificate of Appreciation. This honor acknowledges his unwavering enthusiasm, selfless dedication, and tireless efforts in enhancing community initiatives. The platform values his high level of community involvement and positive influence.

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Faculty Achievements

Breaking New Ground: SCOE Computer Engineering

Faculty Leads in Diverse Research

In an impressive display of academic excellence, faculty members from SCOE's Computer Engineering Department have published groundbreaking research across various cutting-edge domains in 2024-25.

- Prof. M. Rajesh has made significant contributions to environmental monitoring through remote sensing technology. His research explores human activity impacts on the Ulansuhai Lake Basin ecology and innovative approaches to climate change resilience. These studies, published in Remote Sensing in Earth Systems Sciences, offer valuable insights into environmental protection and climate risk management.
- Prof. P.N. Kalavadekar has advanced the field of artificial intelligence with his work on neural networks and social media analysis. He has also contributed to real-time image processing technology, with both papers appearing in Advances in Nonlinear Variational Inequalities. Contributing to environmental technology.
- Prof. B.J. Dange has published research on Alpowered environmental monitoring and conservation strategies in the International Journal of Engineering Trends and Technology, showcasing innovative approaches to environmental protection.
- Prof. H.E. Khodke has been working at the intersection of healthcare and technology, publishing research on machine learning applications in predictive healthcare analytics. His forward-looking research also explores the evolution of wireless communication technologies from 5G to 6G.
- Prof. A.B. Pawar has ventured into materials science with research on polymer nanocomposites, publishing findings in the Journal of Nano- and Electronic Physics. His work specifically focuses on intelligent honey applications in nanocomposites.
- Also, Dr. A B Pawar authored multiple papers, including "An Approach with Machine Learning for Heart Disease Risk Prediction" and "Cyber Extortion Unveiled: The Evolution, Tactics,

Challenges, and Future of Ransomware", both published with IEEE.

- Dr. B J Dange published "Vehicle and Building Detection using Convolutional Neural Network for Drone Images" in IEEE.
- Dr. Monika Agrawal contributed significantly with research on "Framework to Design Multibeam Antenna Technologies for 5G Wireless Communications" and "Big Data and Machine Learning: Barriers and Methods".
- Dr. A B Mokal led a study on "Pomegranate Leaf Fruit Disease Prediction Using Machine Learning", published with Springer Nature.
- Dr. S. R. Deshmukh has made significant contributions to cloud security with two impactful research papers. His paper titled "Virtualization Techniques for Secure Cloud Architectures: An Analysis of Risks and Countermeasures" was published in IEEE and provides an in-depth examination of security threats in virtualized cloud environments. Another paper, "A Survey on Security Issues and Challenges in Cloud Computing", also published in IEEE, presents a comprehensive analysis of emerging security challenges in cloud-based systems.

These publications, predominantly featured in Scopus-indexed journals, demonstrate SCOE's Computer Engineering Department's commitment to advancing technology and scientific knowledge across multiple disciplines, from environmental protection to healthcare and communications technology.

Faculty Achievements in Patents and Innovations

The Department of Computer Engineering proudly acknowledges the remarkable contributions of its faculty members in the field of innovation and intellectual property. Their dedication to research and development has led to significant patent filings and grants, further strengthening the department's commitment to technological advancements.

Faculty Achievements

Key patent achievements include:

- Dr. T. Bhaskar has successfully published a patent titled "A Data Governance and Security Management System for Distributed Data Architecture" on September 6, 2024. This innovation focuses on enhancing security in distributed data systems.
- Dr. A. V. Brahmane has been granted a patent for "A Smart Tile with Health Monitoring Device" on October 4, 2024. This groundbreaking invention integrates health monitoring capabilities into smart infrastructure.
- Dr. T. Bhaskar has made a significant contribution to the field of cybersecurity with his book chapter titled "Securing the Digital Realm: Unleashing Hybrid Optimization for Deep Neural Network Intrusion Detection". This work, published by CRC Press (Taylor & Francis Group) on September 20, 2024, delves into advanced intrusion detection techniques using deep neural networks and hybrid optimization methods. The book is available at Taylor & Francis Group.

These achievements underscore the faculty's commitment to pioneering research and technological innovation. Congratulations to all faculty members for their exceptional contributions!

Student Achievements

• B.Tech Student Adesh Jadhav Selected for Fully Funded JENESYS Program by Embassy of Japan



Mr. Adesh Jadhav, a B.Tech. student from the Computer Engineering 2025 batch, has been selected for the prestigious Fully Funded JENESYS program by the Embassy of Japan. Recently, he attended a meeting with officials from the Indian Embassy for Japan in Tokyo, marking an important milestone in his academic journey. This opportunity will allow him to gain valuable international exposure and further enhance his knowledge in the field of technology, strengthening ties between India and Japan.



• Sanjivani College of Engineering Celebrates Student Success with Salesforce Certifications

Two students, Achyut Sarangdhar and Rutika Ghawate, have achieved the prestigious Salesforce 1X Global Certification, demonstrating their expertise in Salesforce platform development. This significant accomplishment highlights the dedication and hard work of these students and reflects the high-quality education provided by the Department of Training and Placement at Sanjivani College of Engineering.

• B.Tech Student Adesh Jadhav Selected for Fully Funded JENESYS Program by Embassy of Japan Cultural Excellence

In a remarkable display of artistic talent, Tushar Shinde (SY) secured first place in multiple Rangoli competitions, including the district-level "JALLOSH" organized by SPPU and the FLASH PLAZA event. His consistent performance demonstrates exceptional skill in traditional art forms.

The SPPU Youth Festival saw notable performances from several students:

- Arti Auti (SY) claimed third prize in the folk dance category
- Anjali Sonawane and Nikita Bansode (SY) collaborated to win first prize in the Installation category
- Ishwari Deshmukh (TY) showcased her artistic versatility by winning first place in both Rangoli and Mehandi competitions at Sanjivani Group of Institute events.

In college-level competitions:

- Vedashree Joshi (FY) won first prize in the fashion show
- Rohan Kumatkar (Final Year) secured second rank in the singing competition
- Saniya Pathan (TY) achieved second rank in the Extempore Competition
- Samruddhi Kohokade (FY) secured third prize in dance
- Prachi Lahoti (SY) earned runner-up position in Art Making with a cash prize of ₹500

International Recognition

 Adesh Jadhav (Final Year) represented the institution in a prestigious Cultural Exchange Program organized by the Ministry of Foreign Affairs, Japan.

Japanese Language Proficiency

An impressive number of students demonstrated their Japanese language skills:

- Anushka Deshmukh and Rohit Bargal (TY) achieved N4 certification
- Multiple TY students including Akanksha Belhekar, Aaditi Dethe, Sakshi Rajale, Nikita Bhoge, Saniya Pathan, Jagruti Chaudhari, Rutuja Gosavi, and others successfully cleared their N5 level certifications

Sports Achievements

Students showed exceptional performance in various sports:

- Om Patil (SY) won first place in state-level chess and third prize in inter-college Masterminds chess tournament
- Aaditi Dethe (TY) emerged victorious in the Intercollegiate chess tournament
- Nilam Parande (TY) secured second position in Long Jump and qualified for Zonal competitions
- Sumit Dhavale (SY) achieved second position in intercollegiate Boxing and qualified for zonal level

- Several students were selected for Inter-zonal competitions:
- Khushi Gurave (TY) Basketball
- Yash Gawali (TY) Sports
- Rehan Attar (TY) Lawn Tennis
- Nilam Parande (TY) Football, representing Nagar district

Technical Excellence

- A team of Final Year students including Vaishnavi Mohadkar, Ketan Biradar, Gaurav Bombale, and Shubham Chaudhari achieved a remarkable milestone by securing positions in the top 5 percentile at the Adobe Gensolve Hackathon 2024.
- Multiple Final Year students completed professional certifications in Full Stack Java Development through Wipro TalentNext program, including Tushar Gaikwad, Poonam Kharde, Om Bade, Yash Agre, Sujata More, and Kshitija Thakur.
- In coding platforms, Atharva Kote (SY) achieved a 5-star rating in Java on HackerRank, demonstrating strong programming skills.
- These achievements reflect the diverse talents and dedication of Sanjivani College students across cultural, technical, sports, and language domains.

• "B.Tech. 2025 Students Secure Top 5 Percentile in Adobe GenSolve Hackathon"

Mr. Gaurav Bombale, Mr. Shubham Chaudhri, and Mr. Ketan Biradar, from the B.Tech. 2025 batch, have achieved an impressive milestone by securing a rank in the top 5 percentile in the Adobe GenSolve Hackathon organized by GeeksforGeeks. This achievement highlights their strong problem-solving skills and technical expertise. The hackathon, known for its challenging tasks, provided a platform for participants to showcase their innovative thinking and coding proficiency. Their success underscores the growing talent and potential within the student community.

Programs Educational Objectives (PEOs)

- To prepare the committed and motivated graduates by developing technical competency, research attitude and life-long learning with support of strong academic environment.
- To train graduates with strong fundamentals and domain knowledge and update with modern technology to analyse, design and create novel products & provide effective solutions for social benefits.
- 3. To exhibit employability skills. Leadership and right attitude to succeed in their professional career.

Program Specific Outcomes (PSOs)

- The ability to apply knowledge of problem solving, algorithmic analysis, software engineering, Data Structures, Networking, Database with modern recent trends to provide the effective solutions for Computer Engineering Problems.
- The ability to inculcate best practices of software and hardware design for delivering quality products useful for the society.
- 3. The ability to employ modern computer languages, environments, and platforms in creating innovative career paths.

Editorial Board



Dr. Ajaykumar Thakur Director SCOE





Prof. A Editor

Prof. A. B. Mokal Editor-in-chief





Mr. Krushna Shinde

Prof. P. B. Dhanwate Faculty Member









Mr. Tanay Sasane Student Member



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