

SKCT DIGEST

THE PRIDE OF OUR REFLECTION



ISBN NUMBER



978-93-5895-815-7

Engineering is the closest thing to magic
that exists in the world - Elon Musk

Contact Us

☎ 0422-2984567 - 68
Kovaipudur,
Coimbatore - 641 042.



SRI KRISHNA INSTITUTIONS COMBINED

SKCT supports the Sustainable Development Goals



SUSTAINABLE DEVELOPMENT GOALS



NAAC



NBA NATIONAL BOARD OF ACCREDITATION CSE | CIVIL | EEE | ECE MECH | IT



nirf Band 151-200 Engineering 2024



INSTITUTION'S INNOVATION COUNCIL (University of Education Initiative) ★★★★★

SKCT DIGEST VOL 24 - ISSUE 14 09 - 21 SEP 2024

ARTIFICIAL INTELLIGENCE AND DATA SCIENCE

Student Placement

The Students of Final B.Tech. ADS received an offer from “**Mu Sigma**” Bangalore with a package of 8 LPA.



Sneha R S
727821TUAD048

Batch 2021-25/ADS



Kiran kumar R
727821TUAD026

Batch 2021-25/ADS



Sairam N
727821TUAD040

Batch 2021-25/ADS

for getting placement offer with



Mu Sigma



SRI KRISHNA
INSTITUTIONS
COMBINED

SKCT supports the Sustainable Development Goals



SUSTAINABLE
DEVELOPMENT
GOALS



NAAC
ACCREDITED



NBA
NATIONAL BOARD
OF ACCREDITATION



nirf
Band 151-200
Engineering 2024



INSTITUTION'S
INNOVATION
COUNCIL

★ ★ ★ ★ ★

SKCT DIGEST
VOL 24 - ISSUE 14
09 - 21 SEP 2024

ARTIFICIAL INTELLIGENCE AND DATA SCIENCE

Student Placement

Mr Aathithiya D, Student of Final B.Tech. ADS received an offer from **“Mindsprint”** Bangalore / Chennai with a package of 5.2 LPA.





SKCT supports the Sustainable Development Goals



SUSTAINABLE DEVELOPMENT GOALS



SKCT DIGEST
VOL 24 - ISSUE 14
09 - 21 SEP 2024

ARTIFICIAL INTELLIGENCE AND DATA SCIENCE

Student Achievement

Ms Srinithi V, Student of Third B.Tech. ADS completed the certification course on **“Power BI Job Simulation”** on 18 September 2024.





SKCT supports the Sustainable Development Goals



SUSTAINABLE DEVELOPMENT GOALS



NBA NATIONAL BOARD OF ACCREDITATION CSE | CIVIL | EEE | ECE MECH | IT

nirf Band 151-200 Engineering 2024



SKCT DIGEST VOL 24 - ISSUE 14 09 - 21 SEP 2024

ARTIFICIAL INTELLIGENCE AND DATA SCIENCE

Student Achievement

Ms Birundha M S, Student of Second B.Tech. ADS completed the certification course on **“Object Oriented Programming using Python”** on 16 September 2024.



COURSE COMPLETION CERTIFICATE

The certificate is awarded to

BIRUNDHA M S

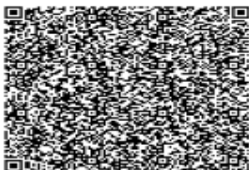
for successfully completing the course

Object Oriented Programming using Python

on September 16, 2024

Infosys | Springboard

Congratulations! You make us proud!



Issued on: Monday, September 16, 2024
To verify, scan the QR code at <https://verify.careerinfosys.com>

Thirumala Arohi
Executive Vice President and Global Head
Education, Training & Assessment (ETA)
Infosys Limited

CSE (CYBER SECURITY)

Students' Participation



Mr Thiru Murugan, Student of Second B.E. CSE (CyS), completed an online Course on **“JAVA OOPs Concept”** offered through Infosys Springboard.

Ms Dharshana S, Student of Second B.E. CSE (CyS), completed an online Course on **“JAVA Certified Foundations Associate”** offered through Infosys Springboard.



CSE (CYBER SECURITY)

Student Participation

Mr Hariharan S, Student of Second B.E. CSE (CyS), completed a online course on **“Ethical Hacking 101”** offered through Simplilearn and **“Learning ReactJS”** offered through Infosys Springboard.



CSE (CYBER SECURITY)

Student Participation

Ms Akshara A S, Student of Second B.E. CSE (CyS), completed a 15-day internship in the field of Cyber Security offered by GOZLER Tech. Pvt. Ltd., Bangalore during 13-28 August 2024 .





SRI KRISHNA INSTITUTIONS
COMBATOR

SKCT supports the Sustainable Development Goals



SUSTAINABLE DEVELOPMENT GOALS



NAAC



NBA
NATIONAL BOARD OF ACCREDITATION
CSE | CIVIL | EEE | ECE
MECH | IT



nirf
Band 151-200
Engineering 2024



INSTITUTION'S INNOVATION COUNCIL
(University of Education Initiative)
★★★★★

SKCT DIGEST
VOL 24 - ISSUE 14
09 - 21 SEP 2024

CSE (INTERNET OF THINGS)

Student Participation

Ms Gomathi G, Student of Third B.E. CSE (IoT), participated in the “**TATA Crucible Campus Quiz 2024**” organised by the Tata Group .



Certificate of Participation

This is to certify that
Gomathi Gnanamoorthi

from Sri Krishna College of Technology (SKCT),
Coimbatore has participated in the TATA Crucible Campus
Quiz 2024 organised by the Tata Group .



CSE (CYBER SECURITY)

Student Participation

Mr Deepak B, Student of Second B.E. CSE (CyS), achieved the **“21 Day Milestone”** in the NxtCode Challenge conducted by CCBP 4.0 Academy Students.

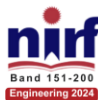




SRI KRISHNA INSTITUTIONS
COMBINED



SUSTAINABLE
DEVELOPMENT
GOALS



SKCT DIGEST
VOL 24 - ISSUE 14
09 - 21 SEP 2024

CSE (ARTIFICIAL INTELLIGENCE AND MACHINE LEARNING)

Student Achievement

Mr. Aaghash M, Third B.E. CSE, AML, and **Ms. Apoorva J**, Third B.E. CSE, IoT, completed 200 problems each on LeetCode.

Mr. Sanjey G M, Third B.E. CSE, AML, completed 150 problems.

Mr. Vinod Hariharan R, Third B.E. CSE, IoT, completed 100 problems.



Aaghash M

727822TUAM001

B.E. CSE (AML) | Batch 2022-26

for completing

200

Problems in



Apoorva J

Batch 2022-26/ B.E. CSE (IoT)

for completing

200

Problems in



Sanjey G M

727822TUAM048

B.E. CSE (AML) | Batch 2022-26

for completing

150

Problems in



Vinod Hariharan R

Batch 2022-26/ B.E. CSE (IoT)

for completing

100

Problems in



CIVIL ENGINEERING

Student Participation

Mr Sanjaykumar S, Student of Second B.E. Civil Engineering, attended an International Indo-UK Workshop on **“Emerging Innovations in Sustainable Construction Materials (E-SCM 2024)”** sponsored by MHRD-SPARC, organised at BITS Pilani Hyderabad Campus during 13-14 September 2024.



CIVIL ENGINEERING

Faculty Participation

The following Members of Faculty completed the AICTE Training and Learning (ATAL) Academy Faculty Development Program on **“Biodegradability and Environmental Impact Assessment of Biofibres and Green Composites** during 19-24 August 2024:

1. Dr N Shanmugasundaram, AP/Civil
2. Mr G Jayakumar, AP/Civil
3. Mr Manoj K M, AP/Civil





SKCT supports the Sustainable Development Goals



SUSTAINABLE DEVELOPMENT GOALS



SKCT DIGEST
VOL 24 - ISSUE 14
09 - 21 SEP 2024

CIVIL ENGINEERING

Faculty Participation

Dr P Subashree, Assoc. Professor, completed One-week FDP on **“Coastal Engineering: Comprehensive Insights for Onsite Solutions”** organised by Dr D Y Patil Institute of Technology, Pune during 02-06 September 2024.



CIVIL ENGINEERING

Faculty Participation

Dr V Sathish Kumar, Assoc. Professor, attended a webinar on **“Engineering Tomorrow: Preparing for the Present and Future of Infrastructure Development”** organised by Dr N G P Institute of Technology, Coimbatore.



CIVIL ENGINEERING

Student Achievement

Mr C Yokeshwaran, Student of Final B.E. Civil Engineering, received the “**Thiru S V Subramaniam Memorial Award 2024**” along with a Cash Prize from Dr K Indra Devi, IEI Corporate Member and hosted by the **Institution of Engineers (India), Coimbatore Local Centre**.





SKCT supports the Sustainable Development Goals



SUSTAINABLE DEVELOPMENT GOALS



NAAC



NATIONAL BOARD OF ACCREDITATION CSE | CIVIL | EEE | ECE MECH | IT



Band 151-200 Engineering 2024



INSTITUTION'S INNOVATION COUNCIL (Ministry of Education Initiative) ★★★★★

COMPUTER SCIENCE AND ENGINEERING

Faculty Achievement

Dr R Gnanakumari, Asst. Professor, completed the following courses offered through Coursera on 19 September 2024

- Introduction to Generative AI
- Introduction to Responsible AI
- Introduction to Large Language Models



COMPUTER SCIENCE AND ENGINEERING

Students' Achievement

Ms T Shanmuhapriya, Student of Second B.E. CSE, secured the **“Third Position”** in a Quiz Competition on Engineers Day Celebration.



Ms T Shanmuhapriya, Student of Second B.E. CSE, completed **“Big Data 201 Course”** offered through Infosys Springboard.



COMPUTER SCIENCE AND ENGINEERING

Student Achievement

Ms K Sugena Munavara, Student of Second B.E. CSE completed **“Advanced Tech Workshop Series' 24 | Level 2”** organised at IIT Madras during 14-15 September 2024.



Ms K Sugena Munavara, Student of Second B.E. CSE completed online internship on **“Web Development”** offered by Prodigy Info Techard.



COMPUTER SCIENCE AND ENGINEERING

Student Achievement

Ms T Shanumapriya, Student of Second B.E. CSE, completed the following courses offered through Coursera:

1. Advanced Angular Development
2. Artificial Intelligence Privacy and Convenience
3. Advanced Angular Topics
4. Advanced Techniques for Implementing Security Services



COMPUTER SCIENCE AND ENGINEERING

Student Achievement

Ms Shalini, Student of Second B.E. CSE, planted a sapling as a part of **“AICTE Activity”** at Gudiyatham, Vellore.



COMPUTER SCIENCE AND ENGINEERING

Faculty Achievements

Ms P Divya, Asst. Professor, completed a course on **“Introduction to MongoDB”** offered through Infosys Springboard.



Ms Gomathy A, Asst. Professor, completed a course on **“Introduction to Cyber Security”** offered through Infosys Springboard.



COMPUTER SCIENCE AND ENGINEERING

Student Participation

Ms Thilagavathi, Student of Third B.E. CSE, completed a One-month Internship on **“Data Science”** offered through Nextlogic and completed a course on **“Techniques for Big Data Analytics”** offered through Infosys Springboard.



COURSE COMPLETION CERTIFICATE

The certificate is awarded to

Thilagavathi k

for successfully completing the course

Techniques for Big Data Analytics

on August 20, 2024



Congratulations! You make us proud!



Issued on Tuesday, August 27, 2024
To verify, scan the QR code at <https://verify.onelink.com/skct>

Thirumala Arochi
Executive Vice President and Global Head
Education, Training & Assessment (ETA)
Infosys Limited

COMPUTER SCIENCE AND ENGINEERING

Student Participation

Ms Sriharini R, Student of Second B.E. CSE, Completed the Advanced Techo Workshop Series 24 - Level 2 on **“Mastering Generative AI”** at Indian Institute of Technology, Madras organised by Techobytes Technologies and Chemplus 24 and completed One-month Internship on **“Web Development”** at Prodigy Infotech.



COMPUTER SCIENCE AND ENGINEERING

Placement

Mr Rishi Sundar C, Student of Final B.E., CSE, received a placement offer from “**MUSIGMA**” with a package of **5 LPA**.



Ms SHREENA CHRISTOPHER, Student of Final B.E., CSE, received a placement offer from “**GEP**” with a package of **3.5 LPA**.





SRI KRISHNA
INSTITUTIONS
COMMITTEE

SKCT supports the Sustainable Development Goals



SUSTAINABLE
DEVELOPMENT
GOALS



NAAC
NATIONAL ASSOCIATION
OF ACCREDITED COLLEGES
& UNIVERSITIES



NBA
NATIONAL BOARD
OF ACCREDITATION
CSE | CIVIL | EEE | ECE
MECH | IT



nirf
Band 151-200
Engineering 2024



INSTITUTION'S
INNOVATION
COUNCIL
University of Education Initiatives
★★★★★

SKCT DIGEST
VOL 24 - ISSUE 14
09 - 21 SEP 2024

ELECTRONICS AND COMMUNICATION ENGINEERING

Placement

Mr Karthikeyan P, Mr Rithick R and Mr Sachin B,
Students of Final B.E. ECE, received a placement offer from
“**Procyon.**”.



Procyon



SKCT supports the Sustainable Development Goals



SUSTAINABLE DEVELOPMENT GOALS



NBA NATIONAL BOARD OF ACCREDITATION CSE | CIVIL | EEE | ECE MECH | IT

nirf Band 151-200 Engineering 2024



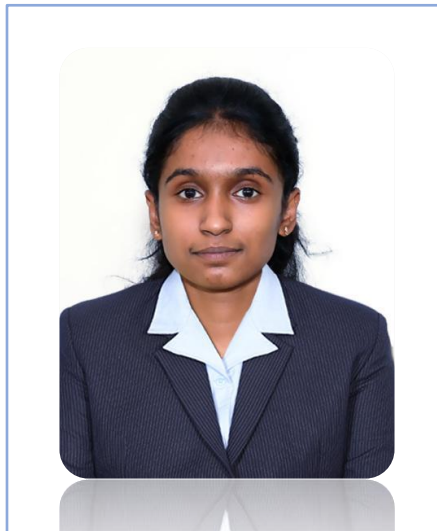
SKCT DIGEST VOL 24 - ISSUE 14 09 - 21 SEP 2024

ELECTRONICS AND COMMUNICATION ENGINEERING

Placement

Ms Yoga R, Student of Final B.E. ECE. received a placement offer from **“Musigma.”**

Ms Yoga R, Student of Final B.E. ECE, received a placement offer from **“GEP.”**



ELECTRONICS AND COMMUNICATION ENGINEERING

Student Achivement

Mr Sushanth S, Student of Third B.E. ECE, has been selected for an internship at **Daloft Aerospace, Chennai**.



Sushanth S

727822TUEC236

Batch 2022-26/ECE

for getting Internship offer with





SKCT supports the Sustainable Development Goals



SKCT DIGEST
VOL 24 - ISSUE 14
09 - 21 SEP 2024

ELECTRONICS AND COMMUNICATION ENGINEERING

Faculty Publication

Dr M G Sumithra, Principal and Professor/ECE, published a research article on “**SwinDFU-Net: Deep Learning Transformer Network for Infection Identification in Diabetic Foot Ulcer**” in the journal of Technology and Health Care, Vol. Pre-press No. Pre-press, pp. 1-18, 2024.

SwinDFU-Net: Deep learning transformer network for infection identification in diabetic foot ulcer

Cite

Article type: Research Article

Authors: M.G, Sumithra | Venkatesan, Chandran*

Affiliations: Department of Electronics and Communication Engineering, Sri Krishna College of Technology, Coimbatore, India

Correspondence: [*] Corresponding author: Chandran Venkatesan, Department of Electronics and Communication Engineering, Sri Krishna College of Technology, Coimbatore, India. E-mail: chandrany76@gmail.com.

Abstract: BACKGROUND: The identification of infection in diabetic foot ulcers (DFUs) is challenging due to variability within classes, visual similarity between classes, reduced contrast with healthy skin, and presence of artifacts. Existing studies focus on visual characteristics and tissue classification rather than infection detection, critical for assessing DFUs and predicting amputation risk. OBJECTIVE: To address these challenges, this study proposes a deep learning model using a hybrid CNN and Swin Transformer architecture for infection classification in DFU images. The aim is to leverage end-to-end mapping without prior knowledge, integrating local and global feature extraction to improve detection accuracy. METHODS: The proposed model utilizes a hybrid CNN and Swin Transformer architecture. It employs the Grad CAM technique to visualize the decision-making process of the CNN and Transformer blocks. The DFUC Challenge dataset is used for training and evaluation, emphasizing the model's ability to accurately classify DFU images into infected and non-infected categories. RESULTS: The model achieves high performance metrics: sensitivity (95.98%), specificity (97.08%), accuracy (96.52%), and Matthews Correlation Coefficient (0.93). These results indicate the model's effectiveness in quickly diagnosing DFU infections, highlighting its potential as a valuable tool for medical professionals. CONCLUSION: The hybrid CNN and Swin Transformer architecture effectively combines strengths from both models, enabling accurate classification of DFU images as infected or non-infected, even in complex scenarios. The use of Grad CAM provides insights into the model's decision process, aiding in identifying infected regions within DFU images. This approach shows promise for enhancing clinical assessment and management of DFU infections.

Keywords: Diabetic foot ulcer, infection classification, convolutional neural network, Swin Transformer, Grad CAM

DOI: 10.3233/THC-241444

Journal: Technology and Health Care, vol. Pre-press, no. Pre-press, pp. 1-18, 2024

Received 22 June 2024 | **Accepted** 1 August 2024 | **Published:** 29 August 2024



SKCT supports the Sustainable Development Goals



SUSTAINABLE DEVELOPMENT GOALS

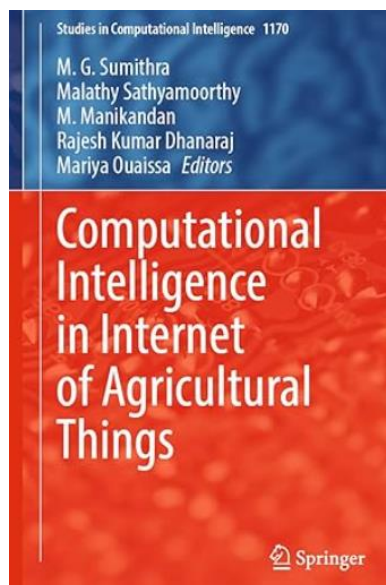


SKCT DIGEST
VOL 24 - ISSUE 14
09 - 21 SEP 2024

ELECTRONICS AND COMMUNICATION ENGINEERING

Faculty Publication

Dr M G Sumithra, Principal and Professor of ECE, published a book titled **Computational Intelligence in Internet of Agricultural Things**, which explores the integration of IoT, AI, and machine learning for data-driven solutions in agriculture. The book highlights key technologies, smart farming techniques, challenges, and case studies aimed at improving resource efficiency and addressing global food supply challenges.



ELECTRONICS AND COMMUNICATION ENGINEERING

Faculty Publication

Dr K Muthulakshmi, Professor, published a research article on **“Dynamic Resource allocation in 5G Networks using Hybrid RL-CNN Model for Optimized Latency and Quality of Service”** in the journal of Network: Computation in Neural Systems in Taylor & Francis, indexed in WoS.

Dynamic resource allocation in 5G networks using hybrid RL-CNN model for optimized latency and quality of service


Muthulakshmi Karuppiyan , Hariharan Subramani, Shanthi Kandasamy Raju & Manimekalai Maradi Anthony muthu Prakasam

Received 19 Oct 2023, Accepted 20 Mar 2024, Published online: 09 Apr 2024

“ Cite this article

 <https://doi.org/10.1080/0954898X.2024.2334282>

 Check for updates

 Full Article

 Figures & data

 References

 Citations

 Metrics

 Reprints & Permissions

Read this article

ABSTRACT

The rapid deployment of 5G networks necessitates innovative solutions for efficient and dynamic resource allocation. Current strategies, although effective to some extent, lack real-time adaptability and scalability in complex, dynamically-changing environments. This paper introduces the Dynamic Resource Allocator using RL-CNN (DRARL-CNN), a novel machine learning model addressing these shortcomings. By merging Convolutional Neural Networks (CNN) for feature extraction and Reinforcement Learning (RL) for decision-making, DRARL-CNN optimizes resource allocation, minimizing latency and maximizing Quality of Service (QoS). Utilizing a state-of-the-art “5G Resource Allocation Dataset”, the research employs Python, TensorFlow, and OpenAI Gym to implement and test the model in a simulated 5G environment. Results demonstrate the effectiveness of DRARL-CNN, showcasing an impressive R^2 score of 0.517, MSE of 0.035, and RMSE of 0.188,

Related Research

People also read

Recommended articles

Cited by

RETRACTED ARTICLE: Stable route selection for adaptive packet transmission in 5G-based mobile communications >

Muthulakshmi Karuppiyan et al.
Network: Computation in Neural Systems
Published online: 3 Mar 2024

Adaptive activation Functions with Deep Kronecker Neural Network optimized with Bear Snell Search Algorithm for preventing MANET



SKCT supports the Sustainable Development Goals



SUSTAINABLE DEVELOPMENT GOALS



NAAC



NBA NATIONAL BOARD OF ACCREDITATION CSE | CIVIL | EEE | ECE MECH | IT



nirf Band 151-200 Engineering 2024



INSTITUTION'S INNOVATION COUNCIL (University of Education Institute) ★★★★★

SKCT DIGEST VOL 24 - ISSUE 14 09 - 21 SEP 2024

ELECTRONICS AND COMMUNICATION ENGINEERING

Faculty Publication

Dr M Thillai Rani, Assoc. Professor, published a book chapter on “Data-enabled Phm Solutions for Robot Hemming In Automotive Production Lines” in the edited book - Futuristic Trends in Network & Communication Technologies Volume 3 Book 2, Iterative International Publishers, USA.



IIP Series
www.iipseries.org
Iterative International Publishers

Chikmagalur, Karnataka-577102, India
Paisley Circle, Novi, Michigan-48377, USA

Unit of Selfpage Developers Pvt Ltd

ISO 9001:2015 certified, registered as Publisher with imprint IIP under Raja RamMohun Roy National Agency, Ministry of Education, Government of India and also under Bowker ISBN Agency, USA



Certificate of Publication

This is to certify that

Dr. Thillairani.M

has published a chapter titled

DATA-ENABLED PHM SOLUTIONS FOR ROBOT HEMMING IN AUTOMOTIVE PRODUCTION LINES

in the edited book

Futuristic Trends in Network & Communication Technologies Volume 3 Book 2

e-ISBN: 978-93-6252-806-3

Print-ISBN: 978-93-6252-270-2

Publication Date: 25-Febrary-2024

Publication Date: 30-April-2024

Nanjesh Bennur
Nanjesh Bennur
Director, IIP Series

ELECTRONICS AND COMMUNICATION ENGINEERING

Faculty Online Certification

Dr K Muthulakshmi, Professor, completed the courses on “Deep Learning with PyTorch : Image Segmentation” and “Web Scraping with Python” through Coursera.



ELECTRONICS AND COMMUNICATION ENGINEERING

Faculty Online Certifications

Dr M Thillai Rani, Assoc. Professor, completed the course on **“Introduction to Generative AI”** offered by Google Cloud through Coursera.

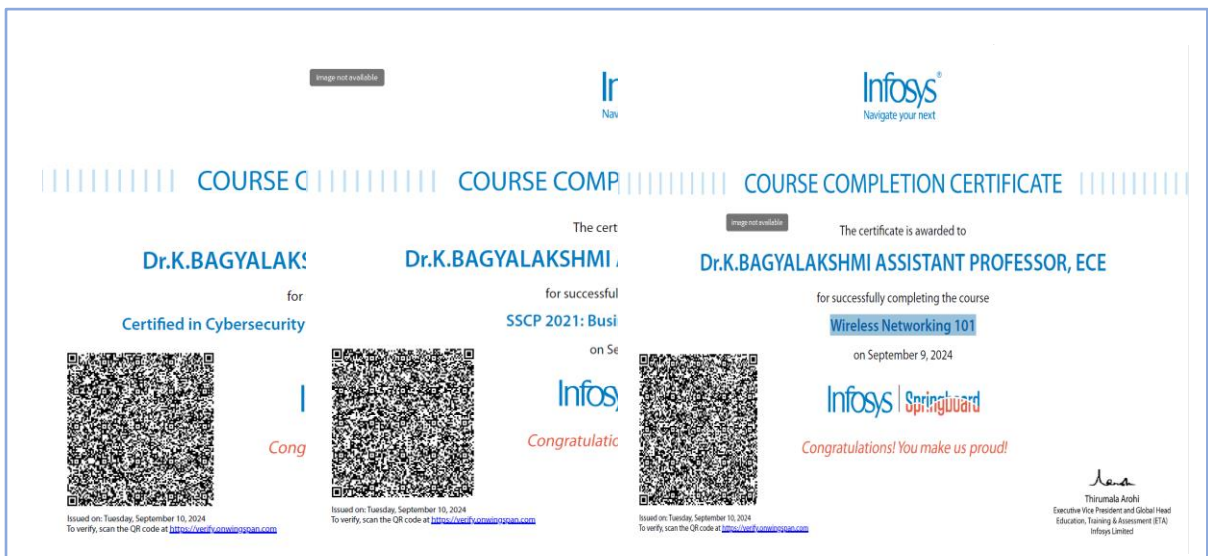
Dr Tamil Nidhi Marimuthu, Asst. Professor, completed a course on **“Generative AI: Elevate Your Data Science Career”** offered by IBM through Coursera.



ELECTRONICS AND COMMUNICATION ENGINEERING

Faculty Online Certification

Dr K Bagyalakshmi, Asst. Professor, completed the Infosys Springboard Courses on **“Certified in Cybersecurity (CC): Security Best Practices & Security Awareness, Business Continuity Planning, Wireless Networking.”**





SKCT supports the Sustainable Development Goals



SUSTAINABLE DEVELOPMENT GOALS



SKCT DIGEST
VOL 24 - ISSUE 14
09 - 21 SEP 2024

ELECTRONICS AND COMMUNICATION ENGINEERING

Faculty Online Certification

Mr M Arun Kumar, Asst. Professor, completed the Infosys Springboard Courses on **“Certified in Cybersecurity (CC): Security Best Practices & Security Awareness and Data Security & System Hardening.”**



COURSE COMPLETION CERTIFICATE

The certificate is awarded to
ARUN KUMAR MUNUSAMY
for successfully completing the course
Certified in Cybersecurity (CC): Security Best Practices & Security Awareness
on September 6, 2024



Infosys | SpringBoard
Congratulations! You make us proud!


Thirumala Anohi
Executive Vice President and Global Head,
Education, Training & Assessment (ETA),
Infosys Limited

Issued on: Saturday, September 7, 2024
To verify, scan the QR code at <https://cert.completion.com>



COURSE COMPLETION CERTIFICATE

The certificate is awarded to
**ARUN KUMAR MUNUSAMY ASSISTANT PROFESSOR IN
ECE DEPARTMENT**
for successfully completing the course
in Cybersecurity (CC): Data Security & System Hardening
on September 14, 2024



Infosys | SpringBoard
Congratulations! You make us proud!


Thirumala Anohi
Executive Vice President and Global Head,
Education, Training & Assessment (ETA),
Infosys Limited

Issued on: Sunday, September 15, 2024
To verify, scan the QR code at <https://cert.completion.com>

ELECTRONICS AND COMMUNICATION ENGINEERING

Event Organised

On behalf of the Engineer's Day celebration, an event on **"Marketing a Product"** was conducted in the Linear and Digital Integrated Circuits Lab on 18 September 2024. Students from various departments actively participated, showcasing their enthusiasm and marketing skills.

Jury's for the Event: Dr K P Suresh, Asst. Professor, Department of EEE and **Dr C Senthilkumar**, Assoc. Professor, Department of ECE.

Event Coordinators: Dr C Senthilkumar, Assoc. Professor, Department of ECE and **Mr M Arunkumar**, Asst. Professor, Department of ECE.



ELECTRONICS AND COMMUNICATION ENGINEERING

Event Organised

The Department of Electronics and Communication Engineering organised a **"Slow learners Counseling for Improving Academic Performance"** on 19 September 2024. **Ms B Boomika**, Asst. Professor, Department of Psychology, Sri Krishna Aditya College of Arts & Sciences, Coimbatore, served as the resource person for this counseling session





SKCT supports the Sustainable Development Goals



SUSTAINABLE DEVELOPMENT GOALS



NBA NATIONAL BOARD OF ACCREDITATION CSE | CIVIL | EEE | ECE MECH | IT

nirf Band 151-200 Engineering 2024



SKCT DIGEST VOL 24 - ISSUE 14 09 - 21 SEP 2024

ELECTRICAL AND ELECTRONICS ENGINEERING

Faculty Participation

Dr Jency Joseph J, the Member of Faculty, attended a webinar on “Personal Development and IEEE Membership” organised by IEEE AP-S, Student chapter society of CEG, Anna University on 14 September 2024.



ELECTRICAL AND ELECTRONICS ENGINEERING

Faculty Participation

Mr Bharaniprakash T, the Member of Faculty, attended the “**Teacher’s Day Conclave**” at CII Office, Elysium Central, Coimbatore on 20 September 2024.





SKCT supports the Sustainable Development Goals



SUSTAINABLE DEVELOPMENT GOALS



NBA NATIONAL BOARD OF ACCREDITATION CSE | CIVIL | EEE | ECE MECH | IT

nirf Band 151-200 Engineering 2024



SKCT DIGEST VOL 24 - ISSUE 14 09 - 21 SEP 2024

ELECTRICAL AND ELECTRONICS ENGINEERING

Faculty Achievement

Dr Jaisiva S, Asst. Professor, received the “**Reviewer Certificate**” from Springer Nature for his contributions in reviewing articles.





SKCT supports the Sustainable Development Goals



SUSTAINABLE DEVELOPMENT GOALS



NBA NATIONAL BOARD OF ACCREDITATION CSE | CIVIL | EEE | ECE MECH | IT



SKCT DIGEST VOL 24 - ISSUE 14 09 - 21 SEP 2024

ELECTRICAL AND ELECTRONICS ENGINEERING

Student Participation

Mr Harish S, Student of Third B.E. EEE, secured the Second Place in “**Science Facts Quiz**” conducted by Sri Krishna College of Technology, Coimbatore on 18 September 2024.



ELECTRICAL AND ELECTRONICS ENGINEERING

Student Participation

Mr Hariprasad J, Student of Second B.E. EEE, secured the Third Place in **“Speech Competition”** conducted by Sri Krishna College of Technology, Coimbatore on 18 September 2024.



ELECTRICAL AND ELECTRONICS ENGINEERING

Students' Participation

Mr Nitish J and Ms Muthubharathi M, Students of Second B.E. EEE participated in “Altruisty Coding Challenge”, conducted by Altruisty, Chennai on 18 September 2024.





SKCT supports the Sustainable Development Goals



SUSTAINABLE DEVELOPMENT GOALS



SKCT DIGEST
VOL 24 - ISSUE 14
09 - 21 SEP 2024

ELECTRICAL AND ELECTRONICS ENGINEERING

Students' Participation

Ms Praveena P and **Ms Vavuniya S**, Students of First B.E. EEE participated in an IEEE Training on **"IEEE Xplore"**, conducted by EBSCO Information Services, India on 17 September 2024.



This is a computer generated certificate no signature/seal required.



This is a computer generated certificate no signature/seal required.



SKCT supports the Sustainable Development Goals



SUSTAINABLE DEVELOPMENT GOALS

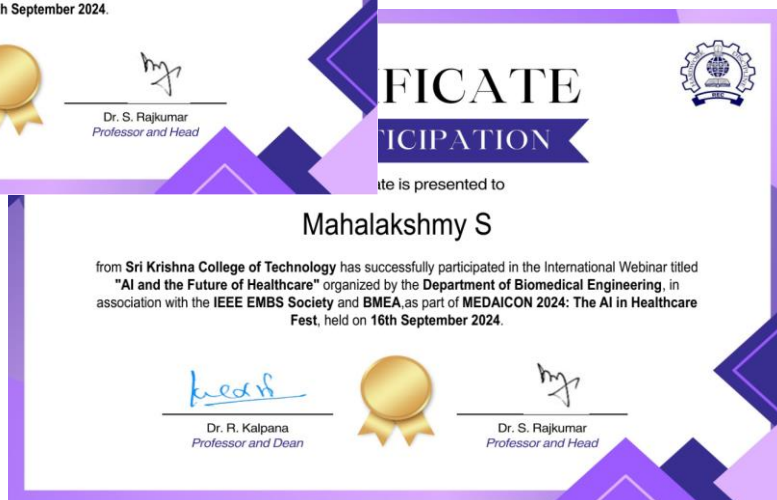


SKCT DIGEST
VOL 24 - ISSUE 14
09 - 21 SEP 2024

ELECTRICAL AND ELECTRONICS ENGINEERING

Students' Participation

Ms Haripriya N and Ms Mahalakshmy S, Students of First B.E. EEE attended a webinar on **“AI and the Future of Healthcare”** conducted by REC, Chennai on 16 September 2024.



ELECTRICAL AND ELECTRONICS ENGINEERING

Students' Certification

Mr Bharath R, Ms Haripriya, Ms Deepika S J and Ms Mahalakshmy S, Students of First B.E. EEE, attended a webinar on “Personal Development and IEEE Membership” organised by IEEE AP-S, Student Chapter Society of CEG, Anna University on 14 September 2024.

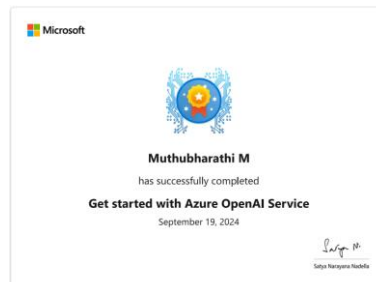


ELECTRICAL AND ELECTRONICS ENGINEERING

Student Certification

Ms Muthubharathi M, Student of Second B.E. EEE, completed various online courses through Microsoft learnathon platform. The following are the courses:

- Fundamentals of Responsible Generative AI
- Get started with Azure OpenAI Services
- Fundamentals of Generative AI
- Explore generative AI with Copilot in Bing
- Implement Retrieval Augmented Generation(RAG) with Azure OpenAI Service



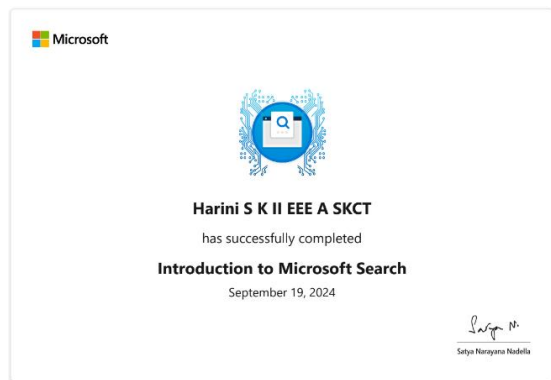
ELECTRICAL AND ELECTRONICS ENGINEERING

Students' Certification

The Students of Second and Third B.E. EEE completed various online courses through Microsoft learnathon platform.

The following are the courses:

- Fundamental of Generative AI
- Explore generative AI with Copilot in Bing
- Get Started with Azure OpenAI service
- Fundamental of Responsible Generative AI
- Build Natural solutions with Azure OpenAI Service
- Apply Prompt Engineering with Azure OpenAI Service
- Fundamental of Azure AI Services
- Introduction to Azure Cloud Shell.



INFORMATION TECHNOLOGY

Faculty Participation

Ms Dhivya P, Asst. Professor, completed 5-day Faculty Development Programme on **“Building Web Development Solutions with Cloud Computing under the Next Gen Employability Programme”** during 27-31 August 2024.





SRI KRISHNA INSTITUTIONS COMBINED

SKCT supports the Sustainable Development Goals



SUSTAINABLE DEVELOPMENT GOALS



NAAC ACCREDITED



NBA NATIONAL BOARD OF ACCREDITATION CSE | CIVIL | EEE | ECE MECH | IT



nirf Band 151-200 Engineering 2024



INSTITUTION'S INNOVATION COUNCIL (University of Education Institute) ★ ★ ★ ★ ★

SKCT DIGEST VOL 24 - ISSUE 14 09 - 21 SEP 2024

INFORMATION TECHNOLOGY

Placement

The Students of Final B.Tech. IT are placed in **“Musigma.”**



Ms Kathyayini

Ms M Sabarirupa



Mu Sigma



SKCT supports the Sustainable Development Goals



SUSTAINABLE DEVELOPMENT GOALS



SKCT DIGEST
VOL 24 - ISSUE 14
09 - 21 SEP 2024

INFORMATION TECHNOLOGY

Placement

The Students of Final B.Tech. IT are placed in
“Mindsprint.”



Ms Hemalathaa K



Mr Harish kumar A V



Mr Gowtham S



Mindsprint



SRI KRISHNA
INSTITUTIONS
COMBINED

SKCT supports the Sustainable Development Goals



SUSTAINABLE
DEVELOPMENT
GOALS



NAAC
ACCREDITED



NBA
NATIONAL BOARD
OF ACCREDITATION
CSE | CIVIL | EEE | ECE
MECH | IT



nirf
Band 151-200
Engineering 2024



INSTITUTION'S
INNOVATION
COUNCIL
University of Education Initiatives
★★★★★

SKCT DIGEST
VOL 24 - ISSUE 14
09 - 21 SEP 2024

INFORMATION TECHNOLOGY

Students' Participation

The Students of Second and Third B.Tech. IT participated in a competition on “**Dr Kalam Young Achiever Award**” conducted at Akshaya Engineering College and Technology on 20 September 2024.

Batch 1

Ms Aalisha
Ms Dharshini
Ms DonaJaprin
Ms Harini sri

Batch2

Ms Aiswarya V
Mr Hemanth LE
Ms Dharshana C
Ms Akshaya R

Batch3

Ms Iniya sree B
Mr Arun T
Ms Janani S
Mr Akash V

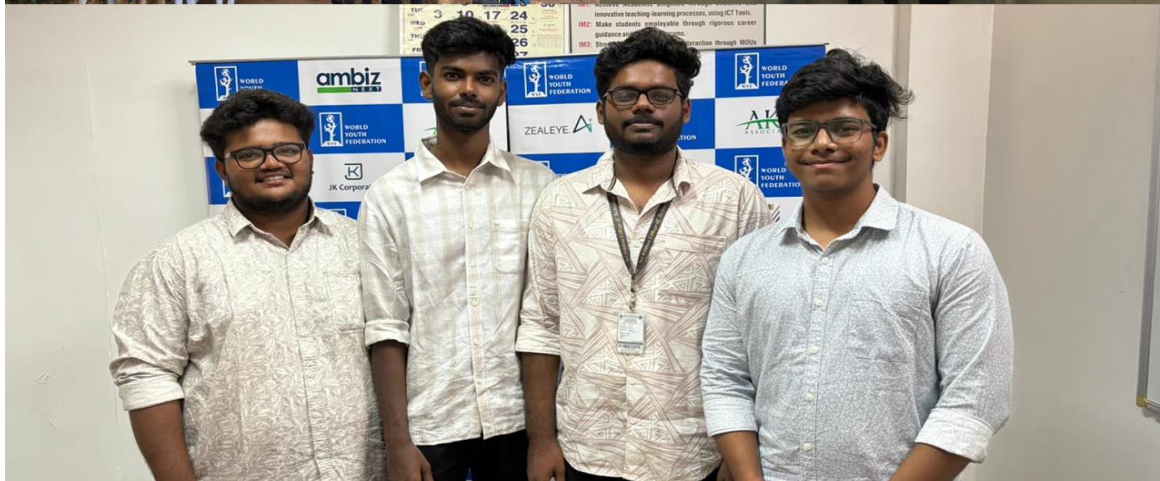
Batch4

Mr Dhanin A
Mr Harikanth SS
Mr Sasikiran M
Mr Naveen Raj

INFORMATION TECHNOLOGY

Students' Participation

The Students of Second and Third B.Tech. IT participated in a competition on “**Dr Kalam Young Achiever Award**” conducted at Akshaya Engineering College and Technology on 20 September 2024.



INFORMATION TECHNOLOGY

Students' Participation

Ms Sridharshika S and Ms K Sukitha, Students of Second B.Tech. IT participated in a 2-day workshop on **“Advanced Techno Workshop Series 24”** organised in association with IIT Madras during 14-15 September 2024.





SKCT supports the Sustainable Development Goals



SUSTAINABLE DEVELOPMENT GOALS



SKCT DIGEST
VOL 24 - ISSUE 14
09 - 21 SEP 2024

INFORMATION TECHNOLOGY

Faculty Publication

Dr K Suresh Kumar, Asst. Professor, published a **Scopus Indexed** Book chapter on **"Quantifying the Performance of Quantum Machine Learning Algorithms for Heart Valve Detection using H-Bert Classifier."**

digital-library.theiet.org/content/books/10.1049/pbhe060e_ch14;jsessionid=1cefbrqp3b9o3.x-iet-live-01

Journals & magazines

Conferences

eBooks

Reference

Subjects

Home > eBooks > Exploring Intelligent Healthcare with Quantum Com... > Chapter

Quantifying the performance of quantum machine learning algorithms for heart valve detection using H-Bert classifier

Author(s): K. Suresh Kumar ¹; T. Ananth Kumar ²; Yu-Chen Hu ³; R. Nishanth ⁴

[View affiliations](#) >

Source: Exploring Intelligent Healthcare with Quantum Computing, 2024

Publication date September 2024

[Access Full Text](#)

[Recommend Title](#)
[Publication to library](#)

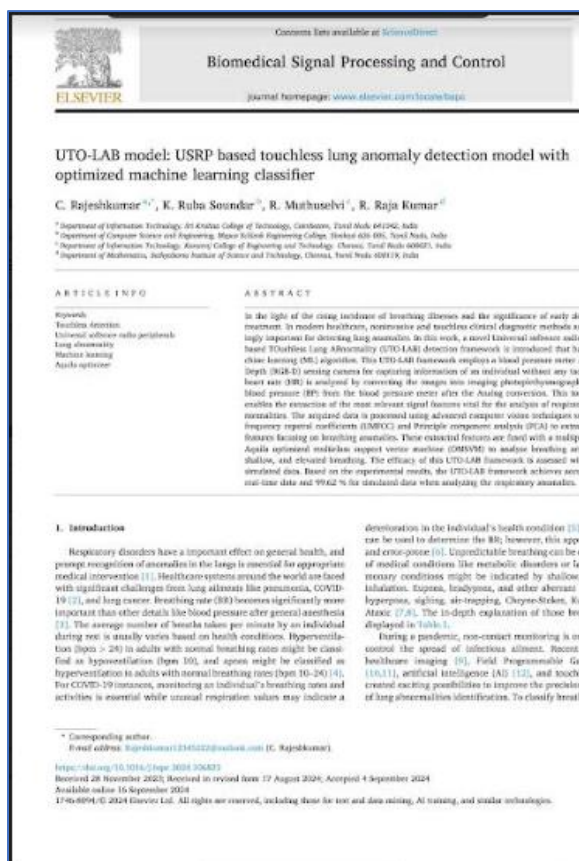
INFORMATION TECHNOLOGY

Faculty Publication

Mr C Rajesh Kumar, Asst. Professor, published in a SCI Journal on "**Biomedical Signal Processing and Control**" in the journal of Q1 journal published

UTO-LAB model:

USRP based touchless lung anomaly detection model with optimized machine learning classifier.



MECHANICAL ENGINEERING

Faculty Publication

Dr R B Jeen Robert, Professor, published an article on “Transformative Applications of Additive Manufacturing in Biomedical Engineering: Bioprinting to Surgical Innovations” in a Journal of Medical Engineering & Technology (Q2 Journal) with an Cite Score 4.6 Taylor & Francis, Scopus indexed.

JOURNAL OF MEDICAL ENGINEERING & TECHNOLOGY
<https://doi.org/10.1080/03019622.2024.239017>

Taylor & Francis
Taylor & Francis Group

REVIEW ARTICLE

Transformative applications of additive manufacturing in biomedical engineering: bioprinting to surgical innovations

Senthil Maharaj Kennedy^a, Amudhan K^b, Jerold John Britto J^c, Ezhilmaran V^d and Jeen Robert RB^e

^aDepartment of Mechanical Engineering, AAA College of Engineering and Technology, Sivakasi, India; ^bDepartment of Mechanical Engineering, Mepco Schriek Engineering College, Sivakasi, India; ^cDepartment of Mechanical Engineering, Ramco Institute of Technology, Rappalayam, India; ^dDepartment of Manufacturing Engineering, Anna University, Chennai, India; ^eDepartment of Mechanical Engineering, Sri Krishna College of Technology, Coimbatore, India

ABSTRACT

This paper delves into the diverse applications and transformative impact of additive manufacturing (AM) in biomedical engineering. A detailed analysis of various AM technologies showcases their distinct capabilities and specific applications within the medical field. Special emphasis is placed on bioprinting of organs and tissues, a revolutionary area where AM has the potential to revolutionize organ transplantation and regenerative medicine by fabricating functional tissues and organs. The review further explores the customization of implants and prosthetics, demonstrating how tailored medical devices enhance patient comfort and performance. Additionally, the utility of AM in surgical planning is examined, highlighting how printed models contribute to increased surgical precision, reduced operating times, and minimized complications. The discussion extends to the 3D printing of surgical instruments, showcasing how these bespoke tools can improve surgical outcomes. Moreover, the integration of AM in drug delivery systems, including the development of innovative drug-loaded implants, underscores its potential to enhance therapeutic efficacy and reduce side effects. It also addresses personalized prosthetic implants, regulatory frameworks, biocompatibility concerns, and the future potential of AM in global health and sustainable practices.

ARTICLE HISTORY

Received 4 September 2023
Revised 17 August 2024
Accepted 24 August 2024

KEYWORDS
Additive manufacturing; bioprinting; surgical instruments; implants; 3D printing

1. Introduction

Additive Manufacturing, also known as 3D printing, is a revolutionary manufacturing process that builds objects layer by layer, adding material one cross-sectional slice at a time. It differs from traditional subtractive manufacturing methods in which material is removed from a solid block. The process of additive manufacturing begins with a 3D digital model of the object, which is then sliced into thin horizontal layers. The printer deposits material layer by layer, fusing or solidifying each one to create the final 3D object. Fused Deposition Modelling (FDM), Stereolithography (SLA), Selective Laser Sintering (SLS), and other technologies and techniques are included in AM [1]. Every technology has its own set of capabilities and applications. For instance, Fused Deposition Modelling (FDM), while accessible and widely used, typically employs thermoplastics like PLA, which is biocompatible but exhibits moderate

mechanical strength and is prone to anisotropy. In contrast, Stereolithography (SLA) allows for high-resolution parts with smooth finishes using photopolymers, some of which are biocompatible, though they may be brittle. Selective Laser Sintering (SLS) and Direct Metal Laser Sintering (DMLS) stand out for their use of biocompatible materials such as Nylon and titanium, respectively, offering superior mechanical properties and isotropy, making them ideal for load-bearing implants and complex medical devices. Bioprinting, while more focused on creating living tissues, uses bioinks that prioritise biocompatibility, though the mechanical properties of bioprinted structures are often less robust compared to other AM methods [2–4]. This adaptability allows it to be used in a wide range of industries, including aerospace, automotive, healthcare, and art. One of the most significant advantages of additive manufacturing is the ability to create highly customised and complex geometries. This is

CONTACT Senthil Maharaj Kennedy maharaj@aaacet.ac.in Department of Mechanical Engineering, AAA College of Engineering and Technology, Sivakasi 626005, Tamil Nadu, India.
© 2024 Informa UK Limited, trading as Taylor & Francis Group

MECHANICAL ENGINEERING

Research

Dr P Prathap, Dr F Paul Gregory, Dr T Nithyanandhan and Mr K Senthil Kumar, the Members of Faculty, attended and received “Atal FDP Certificates” at an event organised by Sri Krishna College of Technology, Coimbatore.



MECHANICAL ENGINEERING

Research

Sri Krishna College of Technology celebrated “Engineers Day” with students showcasing projects, ideas and conducted Quizzes.



MECHANICAL ENGINEERING

Research

Department of Mechanical Engineering conducted Academic Review Meeting on 21.09.2024 for II, III & IV students along with their respective parents. Academic Toppers was felicitated during the meeting in the presence of their parents, tutors, year coordinators and HOD



Felicitating Mr. Lingeshwaraa M - First Rank with CGPA 9.38



Felicitating Mr. Lokeshwaran V - Second Rank with CGPA 9.21

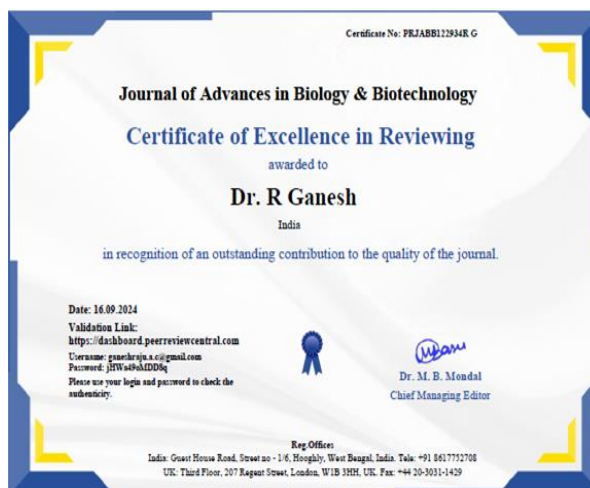


Counselling/Discussion with parents by III Year Tutor

SCIENCE AND HUMANITIES

Faculty Publication

Dr R Ganesh, Asst. Professor, published a paper in
“Journal of Advances in Biology & Biotechnology.”



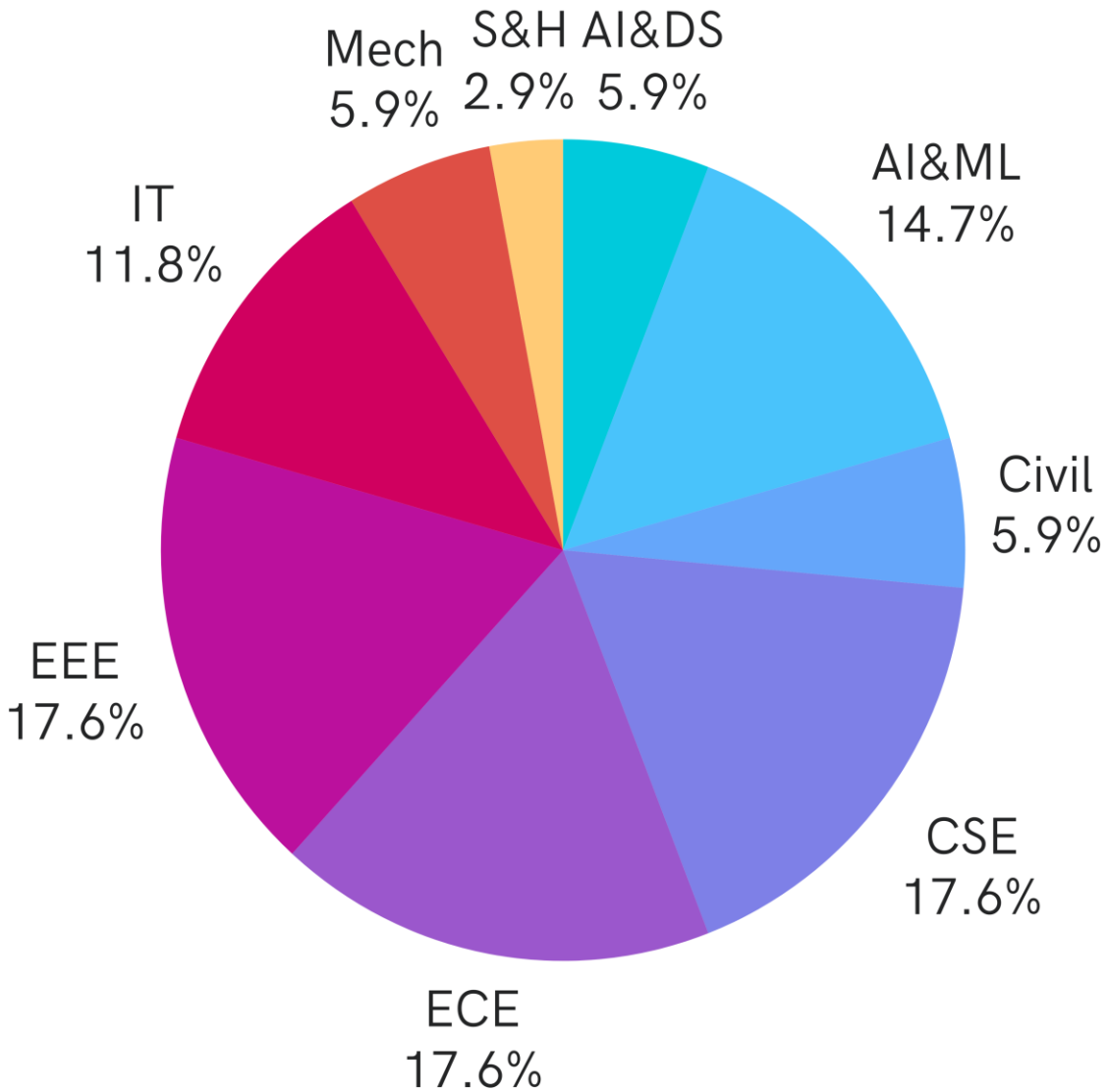
SCIENCE AND HUMANITIES

Faculty Participation

Ms S Vishnupriya, Asst. Professor, completed courses on **“What Researchers Know that You Should Know”** and **“Writing and Editing: Word Choice and Word Order”** through Coursera.



CONTENT CONTRIBUTIONS BY THE DEPARTMENTS



CHIEF EDITOR

Dr M G Sumithra
Principal

DESIGN & CONTENT EDITORS

Mr M K Prabhu
Assistant Professor
Mechanical Engineering

Ms B Pavithra
Assistant Professor
English

DEPARTMENT COORDINATORS

- Ms S Soundarya, AP/AIML
- Dr K Vimala, AP/AI&DS
- Ms A Gomathy, AP/CSE
- Ms K Mythili, AP/IT
- Mr K M Manoj, AP/Civil

- Mr G Santhakumar, AP/ECE
- Mr Ajith B Singh, AP/EEE
- Mr K Senthil Kumar, AP/Mech
- Ms S Jaya Preethi, AP/MBA
- Dr B Kogilavani, AP/English

STUDENT EDITORS

Mr T Lokesh
IV B.Tech. AI&DS

Mr R Yashwanthraja
III B.E. Mechanical Engineering

Mr S Nithin
II B.E. CSE (AIML)

