

St. JOSEPH'S COLLEGE OF ENGINEERING

(An Autonomous Institution)

St. Joseph's Group of Institutions Jeppiaar Educational Trust

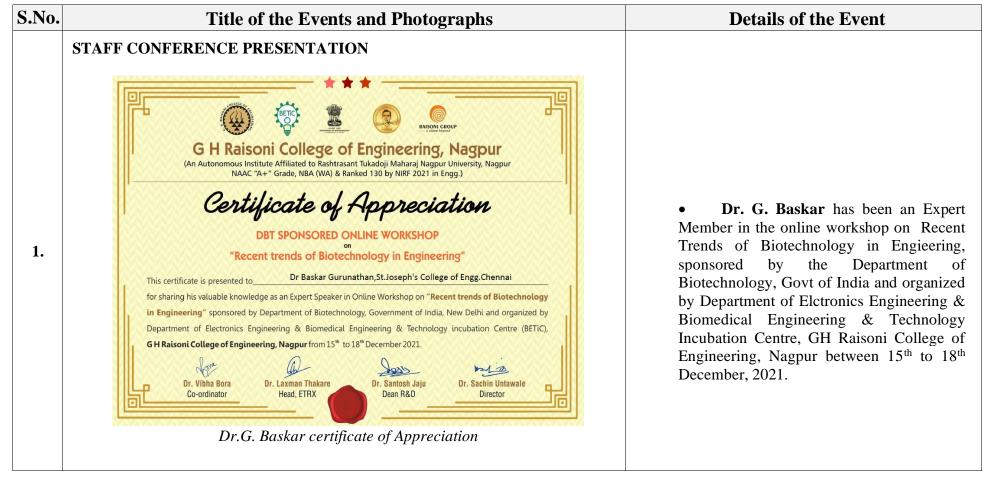
OMR, Chennai - 119.







JANUARY 2022 DEPARTMENT OF BIOTECHNOLOGY





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Ms Caroline copy of certificate

 Ms. Caroline has participated in the International e-lecture workshop on Innovoation in Biotechnology & Inauguration by School of Life Sciences, B.S. Abdur Rahman Crescent Institute ofo Science and Technology, between 19-20th January 2022.



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Dr Anandraj copy of certificate

• **Dr.** Anandraj has participated in the Faculty Development Program on Hydrogels for Multiple Heavy Metal Adsorption organized by Mariana Star Centre, Department of Chemistry, St. Mary's College, Thoothukudi and sponsored by Department of Biotechnology, Ministry of Sciene and Technology, Govt of India on 1st February 2022.



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DEPARTMENT OF COMPUTER SCIENCE AND ENGINEERING

Sl. No.	Event with Photo	Description
1	International Conference on Advances in Computing, Communication and Applied Informatices St. JOSEPH SCHLEGE OF ENGINEERING St. June 1997 (St. June 1997) (St	-



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DEPARTMENT OF ELECTRICAL AND ELECTRONICS ENGINEERING

S.No	Events		Remarks
1.	FACULTY DEVELOPMENT PROGRAM	Mr.T.Sriananda Ganesh	Criteria 6 1. Attended a One Week Online Faculty Development Program on "AI Applications to Power Systems" organized by Siddaganga Institute of Technology, Tumakuru from 17/01/2022 to 22/01/2022. 2. Attended a Five Days Online Faculty Development Program on "Recent Innovations and Developments in Energy Technologies (RIDET)" organized by Velammal Engineering College, Chennai from 24/01/2022 to 29/01/2022.
2.	Student Activity for the month Jan 2022	Name	Online Course
		KARTHIKEYAN S	web design for beginners: real world coding in HTML and CSS, udemy online courses, DEC 18,2021.
		KARTHIKEYAN M	Learn to code in Python 3: Programming beginner to advanced, Udemy online courses, Nov 1 2021
		KATHIRAVAN M	Learn to code in Python 3: Programming beginner to advanced, Udemy online courses, Jan 7 2022
		ISWARIYA B	Learn to code in Python 3: Programming beginner to advanced, Udemy online courses, Jan 7 2022
		LINDA JOICE R.P	Learn to code in Python 3: Programming beginner to advanced, Udemy online courses, Jan25 2022



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to Dr.S.Brindha by Ms.Christel Peeris R to honor her presence in SHE LEADS'.

Completed online course titled "Crash Course on Python" conducted by Coursera on Jan 22 2022 MUGUNDHAN B 3. As a part of the initiative, Empower Women Together titled "SHE LEADS" FIEEE St. June 1/2 Course of Energy Course has been organized, the first webinar on 27/01/2022 was made vibrant with an St. Toseph's College of Engineering enthralling speaker's presence Dr.S.Brindha, is an active IEEE volunteer and the 9EEE Women in Engineering Ayinity Group Student Branch Counsellor of Sri Sairam College of Engineering, Chennai. The session was to enlighten us on "MY IEEE JOURNEY", the speaker drew our SHE LEADS attention to whether we needed confidence rather than competence in which she explained about experience, skills, knowledge, behavior, performance, and our goals. "MY IEEE JOURNEY" About 95 participants from various countries around the world registered and Speaker benefited through "SHE LEADS". Dr.S.Brindha The event was hosted by Ms. Abinayaa Sri T and the Q and A session was Professor(ECE) | SB Counsellor. handled by Ms. Christel Peeris R. By the end of the session, a memento was presented Sri Sairam Engineering College.

6 6 6 IEEE SJCE SBC PIC: IEEE event poster

Q Google Meet

□

27/01/2022 (; 06.30 p.m IST

Moderators

Abinayaa Sri T Christel Peeris R



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4.



PIC: IEEE event poster

5.



PIC: IEEE event poster

As a part of the initiative, Empower Women Together titled "SHE LEADS" has been organized, the webinar on 28/01/2022 was made vibrant with an enthralling speaker's presence Ms.Jenifer Castillo Rodriguez, who is an active IEEE volunteer and the IEEE Women in Engineering Committee Chair (2021-2022) and IEEE Region 9 Director-Elect (2022-2023).

"MY IEEE JOURNEY" was the topic of the speaker's presentation. She discussed the significance of goal-setting in one's life. She talked about her personal life as well as her professional experiences. She emphasized the necessity of women's empowerment in all sectors. On an overview, the session was very motivating and made us think about what changes we can make in our lives to become leader. About 105 participants from various countries around the world registered and benefited through "SHE LEADS".

The event was hosted by Ms. Jamuna U and the Q and A session was handled by Ms. Abinayaa Sri T. By the end of the session, a memento was presented to Ms. Jenifer Castillo Rodriguez by Ms. Abinayaa Sri to honor her presence in SHE LEADS'

As a part of the initiative, Empower Women Together titled "SHE LEADS'" has been organized, the webinar on 29/01/2022 was made vibrant with an enthralling speaker's presence Ms.Uduak Akpanedet, who is currently working as a graduate consultant within the technology team.

The session was to enlighten us on "DEVELOPING CAREER SKILLS", the speaker drew our attention. Networking is an important skill that everyone needs to acquire. She insisted every participant interact and made it an interactive session. The participants enjoyed the networking webinar through which they gained the skill to ask questions and interact with everyone. About 110 participants from various countries around the world registered and benefited through "SHE LEADS'

The event was hosted by Ms. Ramya R and the Q and A session was handled by Ms. Christel Peeris By the end of the session, a memento was presented to Ms. Uduak Akpanedet by Ms. Abinayaa Sri to honor her presence in SHE LEADS'.



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St. Joseph & College of Engineering

St. Joseph & College of Engineering

St. Joseph & College of Engineering

SHE LEADS'

Empowering Women Together - Webinor Series

"Why Women in IEEE SS Technical Committee

Professor at The University of Kansas

Moderators

Scool/2002 (: 00.00 am 15T

Deepika U

Deepika U

Dharant V

Deepika U

Dharant V

PIC: IEEE event poster

7.

6.



As a part of the initiative, Empower Women Together titled "SHE LEADS" has been organized, the webinar on 30/01/2022 was made vibrant with an enthralling speaker's presence Ms.Bozenna Pasik-Duncan, who is a professor of mathematics, a courtesy professor of both EECS and AE and an ITTC investigator at the University of Kansas.

The session was to enlighten us on "WHY WOMEN IN IEEE?", the speaker drew our attention to her own life experience in IEEE and also about the importance of women in IEEE. About 75 participants from various countries around the world registered and benefited through "SHE LEADS".

The event was hosted by Ms. Deepika and the Q and A session was handled by Ms.Dharani. By the end of the session, a memento was presented to Ms.Bozenna Pasik-Duncan by Ms. Kaviya to honor her presence in SHE LEADS'.

IEEE Women in Engineering under St Joseph's College of Engineering Student Branch Chapter organized WIE OFFICE BEARERS meet on January 12, 2022, at 8: 45 PM. The event was conducted in G-meet. There were a total of 15 participants. The event was organized by Mr. Sreekanth with the SB team. The notable participants were Abinayaa Sri T(Chairperson of WIE-2022), Jamuna U (Vice-Chairperson), Christel Peeris R (Secretary), Kaviya P (Joint-Secretary), Ramya R (Treasurer), Committee members Deepika U and Dharani V. Akshaya S, the Ex-Chairperson of IEEE SJCE WIE-2021, also joined with us and shared her experiences. Through this meeting, We discussed the basic criteria about WIE and our plans and the betterment we could make inside our SB to meet out the vision and mission of IEEE WIE



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The IEEE SJCE SB பாணவர்மன்றம் of St Joseph's College of Engineering in association with IEEE Madras Section conducted an online webinar series "Vithagam 2021". The first session was presented by Mrs. F Helen Vandana B.T Asst. who is teacher in Rosary Mat. Hr. Sec. School on the topic தமிழின் இனிமையும் வளமையும். Over 50 participants attended the event and all of them were provided with a participation E-Certificate. The student coordinators for this event were Mani Sha. N, Jayashruthi R.V, AkshayaKrishnen, Amirtha Varshini. M and Godson S V Noble.



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The IEEE SJCE SB பாணிவர்மன்றம் of St Joseph's College of Engineering in association with the IEEE Madras Section conducted an online webinar series "Vithagam 2021". The third session was presented by M. Selvaston Prabhu M.A., M.Phil., M.Ed. who is Post Graduate Tamil teacher in Zion Higher Secondary School on the topic தரணி போற்றும் தமிழர் பண்பிடு. Over 50 participants attended the event and all of them were provided with a participation E-Certificate. The student coordinators for this event were Mani Sha. N, Jayashruthi R.V, AkshayaKrishnen, Amirtha Varshini. M and Godson S V Noble.



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The IEEE SJCE SB பாணவர்பர்பன்றம் of St Joseph's College of Engineering in association with the IEEE Madras Section conducted an online webinar series "Vithagam 2021". The fourth session was presented by Ms. MALARKODI. P (Msc) a Tamil enthusiast working as PCO at HPPWS CSC VIHAAN on the topic மன்தில் உறதி வேண்டும். Over 40 participants attended the event and all of them were provided with a participation E-Certificate. The student coordinators for this event were Mani Sha. N, Jayashruthi R.V, AkshayaKrishnen., Amirtha Varshini. M and Godson S V Noble.



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The IEEE SJCE SB பாணவர்பன்றம் of St Joseph's College of Engineering in association with the IEEE Madras Section conducted an online webinar series "Vithagam 2021". The fifth and final session was presented by Thai. Rasi. Jegatheeswaran, Founder of Thai charity center on the topic தற்கால புது கவிதைகள். Over 50 participants attended the event and all of them were provided with a participation E-Certificate. The student coordinators for this event were Mani Sha. N, Jayashruthi R.V, AkshayaKrishnen., Amirtha Varshini. M and Godson S V Noble.



13.

You Choose, We Do It

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IEEE SJCE SB conducted an orientation for the Website Team of IEEE SJCE SBC on 13 January 2022 at 2.00 PM. The meeting was held in coordination with the Publicity and Special Day teams, and it focused on discussing the year's plans as well as adopting new ideas proposed by our SB. Various ideas were gathered and noted, with the intention of implementing them in the future.



14.

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The IEEE Power Electronics Society of St Joseph's College of Engineering conducted Math-O- tactics, a mathematical quiz contest. This event was conducted on 23rd January 2022, an online event for college students, to improve the knowledge of students with mathematical brain teaser questions. Nearly 30 participants have participated and all were given E-certificates. The best answers were given winner's certificate. The student coordinators for this event were Elanchezhiyan R J, Karthikeyan M, Jesse S, Alwyn Samuel M, Divya Lakshmi G, Poojasree K, Hemaa K.



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The Department of Electrical and Electronics Engineering in association with IEEE Student Branch Chapter held an online event called "Mindfest" on 19th January 2022. The participants were supplied with 15 technical questions and asked to solve them within the given time. There was a total of 20 participants in the event. Ms. P.Kavinaya took first place, followed by Mr.K. Nandeeswaran for second place, Mr. Anish T for third place.



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A puzzle contest had been conducted in December 30th 2021exclusively for higher secondary school students. Students from various schools had participated actively in the contest. The contest had been conducted in online mode. Google form had been shared and the students those who got maximum marks had been awarded with ecertificate. Puzzle contest really enlighten the knowledge of the students.



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Department of EEE organized an online paper craft competition for the students of class X,XI,XII and diploma students on 29th December 2021. The theme of online paper craft competition is "New Year Decoration". Around 21 students from different schools and Polytechnic Colleges participated in this event. E-Certificates are distributed to the winners

Winners of the Event

First Prize	Ms.Sreenidhy S.S	Zion Matriculation Higher Secondary
THSCITIZE	ivis. 3ree marry 3.3	School ,Selaiyur.
Second Prize	Ms .C .S .Girthana	Velammal Vidhyashram



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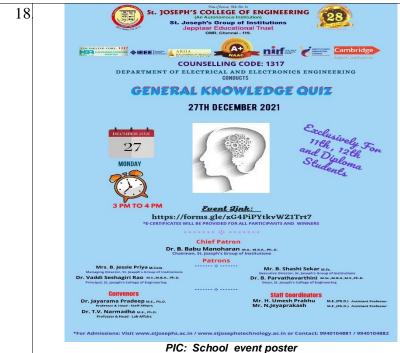
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An event in the name "General Knowledge Quiz" was organized exclusively for 11th, 12th and diploma students. The event was conducted through online by the means of Google form. Total four students have participated in the event and the winner was awarded the certificate of merit.



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Department of EEE organized an Online drawing competition to celebrate the Pongal festival on the theme "Jallikattu" exclusively for the students of class IX, X, XI, XII and diploma students on January 17, 2022. The contest facilitated active participation of students from various schools of the state. Around 30 students from 20 different schools participated in this event. E-Certificates are distributed to the winners.



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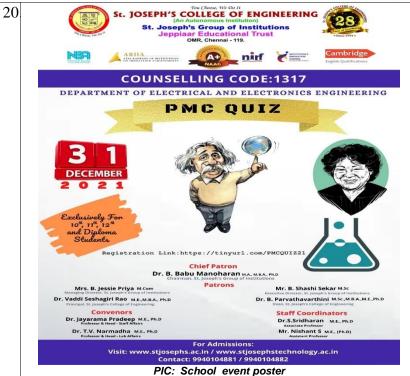
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The PMC QUIZ –ONLINE QUIZ EVENT was organized by Department of Electrical and Electronics Engineering on 31ST December 2021". 10th,11th,12th Standard students and Diploma Students from various schools & Colleges took part in this event.

The main objective of the PMC quiz is Refresh basics of Physics, Chemistry and Mathematics subjects.

The quiz included 15 questions about basics of Physics, Chemistry and Mathematics. All the quiz questions are multiple choice questions. Events like this help people to relax their mind and engage in useful activities that help people to get away from the negativity of pandemic situation. There is no registration fee. The Registration link has been circulated through mail and social networks. Participation certificates has been given to all participants. Merit certificate is provided to the students who has scored above 80% score in the quiz. All E-Certificates has been sent to their respected Email ID



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Technology has revolutionized our daily lives by giving us access to amazing tools and resources. Our department organized School event under the title "Tech Snap" competition from 26/12/2021-31/12/2021. Around 25 participants had participated in this event and sent new technology snapshots. This competition creates awareness about new technology paves way to choose successful career. All the students are provided with the participation certificate.



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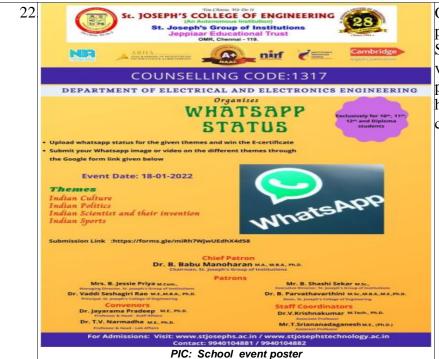
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Our department organized a "Whatsapp Status" specially for school and polytechnic students on "Themes-Indian Culture, Indian Politics, Indian Sports, Indian Scientist and their invention" 18.01.2022. The event was really very challenging and useful to the students. On the day the event link has been posted in the registered E-mail/ Mobile number, test link remain open for 2 hours. E-certificates are distributed to those submitted the quick response with correct solution.



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Department of EEE organised event on Poster presentation on Smart Irrigation, exclusively for 10th, 11th, 12th and diploma students. It was held on Dec 24, 2021. About 5 participants from various schools



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On behalf of EEE dept. of St. Joseph's college of Engineering we have conducted student development programme in the title of "SERVICING AND MAINTENANCE OF HOME APPLIANCES" On 23rd December 2021. Number of participants of about 15 students participated from various schools and polytechnic colleges of tamilnadu.

Participants are highly benefited by learning hands on experience of home appliances servicing and maintenance such as ceiling fan, pedestal fan, table fan, mixie, wet ginder, refrigerator, air conditioner etc.,



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Department of EEE organized an Online connections exclusively for the students of class IX, X, XI, XII and diploma students on 28th Dec, 2021. The contest facilitated active participation of students from various schools of the state. Around 26 students from 10 different schools participated in this event. E-Certificates are distributed to the winners.

Placement Details for month Jan 2022

- 1. 312318105142- SURENDHARAN REVATURE
- 2. 312318105066 KAARTHIKEYAN S -American Mega Trends
- 3. 312318105125 ROSHAN K Ospider
- 4. 312318105135 -SIVA SANKAR V -AVASOFT
- 5. 312318105113 RAMKUMAR S AVASOFT, CTS, L&T, KPIT
- 6. 312318105027 ARVIND G K Mitsogo, Mu-Sigma, CTS & Wipro
- 7. 312318105153 VELAN M Ashok Leyland and Indigo Airlines, CTS

Total no of students placed = 131 UG & 3 PG Total no of offers = 207 offers



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DEPARTMENT OF ELECTRONICS AND INSTRUMENTATION ENGINEERING

Sl.	Title		Detail				
No.							
1	Webinar/						
	FDP Attended By Faculty	S.No	Faculty Name	Date	Webinar /Fdp attended/ workshop	Conducting agency	No. of days
	J	1.	Mrs.C.Rama Devi	17/1/22 to 21/1/22	FDP ON "Post COVID green and sustainable development in Manufacturing Industries".	CVR College of Engineering, Hyderabad	5 days



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2	Publication					
	S	S.No	Faculty	Title of the paper	Date	Journal
		1	V. Rajinikanth and K. Palani Thanaraj	Detecting epilepsy in EEG signals using synchro-extracting-transform (SET) supported classification technique	04.01.2022	Journal of Ambient Intelligence and Humanized Computing (IF:7.104)
		2	V. Rajinikanth	Semi/Fully-Automated Segmentation of Gastric-Polyp Using Aquila-Optimization- Algorithm Enhanced Images	01.01.2022	Cmc-Computers Materials & Continua (IF:3.772)
		3	V. Rajinikanth	EEG Channel Selection Using Multiobjective Cuckoo Search for Person Identification as Protection System in Healthcare Applications	12.01.2022	Computational Intelligence and Neuroscience (IF:3.633)
			V. Rajinikanth	Application of Local Configuration Pattern for Automated Detection of Schizophrenia with EEG Signals,	January 2022	DOI: 10.1111/exsy.12957), Expert Systems - Wiley (IF.2.587)
		4	D Dinesh Kumar	Performance Enhancement of the Parkinson Disease Classification Using Deep Learning Model	accepted	ECS Transactions
		5	C.Rama Devi	An IOT & Machine learning basis method of communicating digital message with an information signal using cloud computing	28/1/22	Application No.202241002257 A (Patent).



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ATAL RANKING OF INSTITUTIONS

ON INNOVATION ACHIEVEMENTS





3.	Webinar/W orkshop/sch ool event	S.NO	Date	Name of the Event	Targeted Participants	Faculty Coordinator	
	Conducted	1.	29-01-2022	SNAP IT	School Event	N.Hariprasad D.Dinesh Kumar	



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St. Joseph's Group of Institutions **Jeppiaar Educational Trust**

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DEPARTMENT OF INSTRUMENTATION AND CONTROL ENGINEERING

Sl. No.	Photographs Captured During Events	Corresponding remarks
1.	Conference	Date: 27 December,2021 to 28 December,2021
	INTERNATIONAL CONFERENCE ON COMPUTATIONAL INTELLIGENCE - ICCI 2021 INDEAN INSTITUTE OF INFORMATION TECHNOLOGY PUNE & SOFT COMPUTING RESEARCH SOCIETY CERTIFICATE This is to certify that <u>T Abimala of St. Joseph's College of Engineering.</u> Chennai has presented the paper titled "A comprehensive study on Automatic Emotion detection system using EEG signals and Deep learning algorithms" in the "International Conference on Computational Intelligence - ICCI 2021" held virtually on 27th - 28th December 2021. Prof. Anupam Shukla Director IIIT Pune Prof. A Computing Boverard Society	TOPIC: International Conference on Computational Intelligence - ICCI 2021 Organizer: Indian Institute of Information Technology, Pune No. of Participant:01
2.	ALL INDIA COUNCIL FOR TECHNICAL EDUCATION Nebon Mandeis Marg. Vasuat Konj. New Delhi - 110 070 AICTE Training and Learning (ATAL) Academy Certificate This is control the All Indian T. Andrew Printeer of at payods ordinary of conjugated a compliand accounting MATT Training and Learning (1970) and the conference of the payods ordinary of conjugated and the conference of the payods of the conference of the payods of the conference of the payods of the conference of the payods. Africat I. ATAL Academy Marias Entit Agreesia	Date: 17 January,2022 to 21 January,2022 TOPIC: Signal Processing for Cognitive Neuroscience Applications Organizer: National Institute of Technology, Meghalaya No. of Participant:01



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DEPARTMENT OF MECHANICAL ENGINEERING

Sl	Name of the Activity	Remarks
No		
1	Staff Publications:	 N Prasanna Iyer, Arunkumar N(2022), Investigation of Abrasive water jet machining parameters of Bismaleimide composites, Materials and Manufacturing Processes, https://doi.org/10.1080/10426914.2022.2032145 Ganesh M, Arunkumar N (2022), Effect of cryogenic cooling in deep hole drilling
	MATERIALS AND MANUFACTURING PROCESSES	process – a stride in the direction of green manufacturing, <i>Materials and Manufacturing Processes</i> , https://doi.org/10.1080/10426914.2022.2030878 ➤ M. Ganesh, Arunkumar N , K. Elavarasan and R. Sathish. (2022). Experimental Investigation of Friction and Wear Behavior of AL7075-TiO2-B4C using RSM, ANN and Desirability Function, Int. J. Vehicle Structures & Systems, 14(1), 41-46. doi: 10.4273/ijvss.14.1.10.
	Production in the particulation Students of English & Francis	



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Mr.K.Pravinkumar Attended an Online webinar on "Friction welding and allied processes" organized by Department of Mechanical Engineering, , Arasu Engineering College, Kumbakonam, through online pedagogy on 27.01.2022.



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DEPARTMENT OF CIVIL ENGINEERING

Sl. No.	Photographs Captured During Events (Briefs About the Photographs)	Corresponding remarks (Minimum 300 words) in regarding the status of activity execution stating
	Guest Lecture / Webinar Organized	
1.		 Mr.S.P.Senthil Kumar, Ms.R.Adlin Rose, Mr. S.Thangaperumal, Ms.P.Padmapriya have Conducted the school event titled 'Festivals of India-A Poster Competition' during 25.1.2022 to 28.1.2022.
		• S.Banupriya.R.Ruthra and P.Sri Balaji have Conducted the school event titled 'Online Art & Craft Competition' during 19.1.2022 to 25.1.2022.
2.	Other activities (if any)	Ms.R.Adlin Rose had completed NITTTR Module 3,4,5,6 Examinations



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DEPARTMENT OF INFORMATION TECHNOLOGY

	Photographs Captured During	Corresponding remarks in regarding the status of activity execution
No. I	Event	
1	A Hybrid Framework for Intrusion Detection in Healthcare Systems Using Deep Learning M. Makey Vinner', Dorstmorped selegacy? If M. Dara Rip Vincent', Anthrews Gerbaser', Chause to Change' and Healthcare Control of Change' and Healthcare Change of Change o	(Student and Staff Journal Publication) M. Akshay Kumaar, S. Duraimurugan, P. M. Durai Raj Vincent, S. Kathiravan, Chuan-Yu Chang and G. Harish, "Hybrid Framework for Intrusion Detection in Healthcare Systems Using Deep Learning", Frontiers in Public Health, Vol. 9, https://doi.org/10.3389/fpubh.2021.824898, Publisher: Frontiers Media SA, E ISSN: 2296-2565, Jan 2022. (Impact Factor: 3.709, WOS Indexed Journal) Abstract: This paper proposes a hybrid framework using Deep Learning named "ImmuneNet" to recognize the latest intrusion attacks and defend healthcare data. The proposed framework uses multiple feature engineering processes, oversampling methods to improve class balance, and hyper-parameter optimization techniques to achieve high accuracy and performance. The architecture contains <1 million parameters, making it lightweight, fast, and IoT-friendly, suitable for deploying the IDS on medical devices and healthcare systems. The performance of ImmuneNet was benchmarked against several other machine learning algorithms on the Canadian Institute for Cybersecurity's Intrusion Detection System 2017, 2018, and Bell DNS 2021 datasets which contain extensive real-time and latest cyber attack data. Out of all the experiments, ImmuneNet performed the best on the CIC Bell DNS 2021 dataset with about 99.19% accuracy, 99.22% precision, 99.19% recall, and 99.2% ROC-AUC scores, which are comparatively better and up-to-date than other existing approaches in classifying between requests that are normal, intrusion, and
	S. Duraimurugan published paper in WOS Indexed	datasets which contain extensive real-time and latest cyber attack data. Out of all the experiments, performed the best on the CIC Bell DNS 2021 dataset with about 99.19% accuracy, 99.22% precise recall, and 99.2% ROC-AUC scores, which are comparatively better and up-to-date than other comparatively better and up-to-date than other comparatively.



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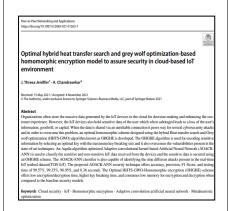
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2



J. Thresa Jeniffer published paper in WOS Indexed Journal

(Staff Journal Publication)

J. Thresa Jeniffer and A. Chandrasekar, "Optimal Hybrid Heat Transfer Search and Grey Wolf Optimization-based Homomorphic Encryption Model to Assure Security in Cloud-based IoT Environment", Peer-to-Peer Networking and Applications, doi:https://doi.org/10.1007/s12083-021-01263-7, Vol. 15, pp. 703–723, (Publisher: Springer, E ISSN: 1936-6450, Print ISSN: 1936-6442), Jan 2022. (**WOS Indexed Journal, Impact Factor: 3.307**)

Abstract: When the data is shared via an unreliable connection it paves way for several cyber security attacks and in order to overcome this problem, an optimal homomorphic scheme designed using the hybrid Heat transfer search and Grey wolf optimization (HHTS-GWO) algorithm known as OHGHE is developed. The OHGHE algorithm is used for encoding sensitive information by selecting an optimal key with the maximum key breaking size and it also overcomes the vulnerabilities present in the state-of-art techniques. An Aquila algorithm optimized Adaptive convolutional kernel-based Artificial Neural Network (AOACK-ANN) is used to classify the sensitive and non-sensitive IoT data received from the devices and the sensitive data is secured using an OHGHE scheme. The proposed AOACK-ANN security technique offers accuracy, precision, F1-Score, and testing time of 99.57%, 99.35%, 98.95%, and 8.36 seconds. The Optimal HHTS- GWO-Homomorphic encryption (OHGHE) scheme offers low encryption/decryption time, higher key breaking time, and consumes low memory for encryption and decryption when compared to the baseline



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Learning of	Itilevel Federated Compressed Reinforcement Smart Homes Using Deep Learning Methods
Publisher: IEEE	Cite This
P. Ravichandran ; C. S	aravanakumar; J. Dafni Rose; M. Vijayakumar; V. Muthu Lakshmi All Authors
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Text Views	
Abstract	Abstract
	Internet of Things connects all real time devices using the wireless nature for collecting
Document Sections	sharing and processing of data. These data are analyzed using machine learning mod
1. Introduction	based on the structure of data. Reinforcement learning is a type of learning method wh

Co-author:

3

Dr. V Muthulakshmi published paper in IEEE Conference (Scopus

(Staff Conference Publication)

P. Ravichandran, C. Saravanakumar, J. Dafni Rose, M. Vijayakumar, V. Muthulakshmi, "Efficient Multilevel Federated Compressed Reinforcement Learning of Smart Homes Using Deep Learning Methods", 2021 International Conference on Innovative Computing, Intelligent Communication and Smart Electrical Systems (ICSES), DOI: 10.1109/ICSES52305.2021.9633785, Publisher: IEEE ISBN:978-1- 6654-3521-5, Print ISBN:978-1-6654-3522-2, pp. 1-11, Dec 2021. (Scopus Indexed) Abstract: Internet of Things connects all real time devices using the wireless nature for collecting, sharing and processing of data. These data are analyzed using machine learning models based on the structure of data. Reinforcement learning is a type of learning method which performs with past experience of data. Traditional algorithms use data with a specific environment with a learning process for prediction. Federated Learning (FL) is achieved through the integration of the various learning models for achieving accuracy. The proposed learning algorithm uses multilevel FL over the smart homes with two house data for analysis of the user behavior. Various kinds of sensors are used for analyzing the behavior, namely local and global. The data is shared with agents and servers with the use of communication networks. It suffers the bandwidth issues because of heterogeneity in the data, so this is overcome by using FL compression method. Multilevel FL compression method achieves reduced latency with efficient interaction. The proposed technique achieves better accuracy when compared to existing RL method with maximum performance and reliability.



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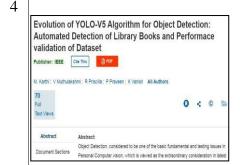
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Co-author:

Dr. V Muthulakshmi published paper in IEEE Conference (Scopus

M. Karthi, V. Muthulakshmi, R Priscilla, P Praveen, K Vanisri, "Evolution of YOLO-V5 Algorithm for Object Detection: Automated Detection of Library Books and Performance Validation of Dataset", 2021 International Conference on Innovative Computing, Intelligent Communication and Smart Electrical Systems (ICSES), DOI: 10.1109/ICSES52305.2021.9633834, Publisher: IEEE, E ISBN:978-1-6654-3521-5, Dec 2021. (Scopus Indexed)

Abstract: Object Detection, considered to be one of the basic fundamental and testing issues in Personal Computer vision, which is viewed as the extraordinary consideration in latest investigation. For the past 2 decades, it is been considered as an encapsulation of computer vision history. The objective of this paper is to look over the YOLOV5 and to evaluate the performance of YOLOV5 by various benchmarks and customized dataset. Motive of the study is to compare the performance of YOLOV5 by having the different data size, calculation speed and efficiency of detecting the objects, which are based on the dataset type. This work investigates and looks at some of measurements for evaluating the YOLOV5 algorithm of detecting objects. Also audits the most utilized measurements for object detection and their disparities, applications, and primary ideas. It additionally proposes a standard execution that can be utilized as a

benchmark among various datasets with least variation.



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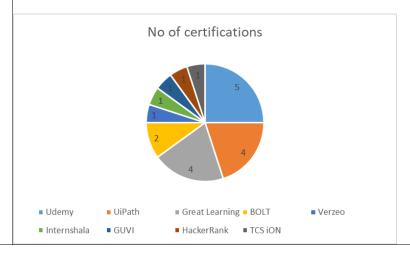
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SampleCertificate

Students Online Certification

20 online certifications have been obtained by the students of IT department from some of the reputed online course platforms.





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DEPARTMENT OF SCIENCE

Sl.	Events	Remarks
No.		
1	Awards/Prize won by students	1. Ms. A. Siromita, I year ADS, has won three gold medals in Tamilnadu State Karate and
		Kobudo Tournament, held at Captain Mahal, Tondiarpet, Chennai on 09.01.2022