EC GECR NEWSLETTER

Volume III Issue II

Electronics & Communication Department, Government Engineering College, Rajkot.

Vision

To bring out technically competent, responsible, ethical and environment friendly Electronics & Communication engineers for the society and industries.

Mission

- Developing technical competency in the students of electronics & communication engineering through hands on practice.
- Imparting quality technical education to the students through advanced teaching learning process.
- Creating vibrant atmosphere in the department to imbibe discipline, ethics and social responsibilities in students.
- Facilitating students to work on innovative projects related to electronics & communication engineering.

It's a pleasant opportunity for me to write from the principal's desk of GEC, Rajkot. In these few days of my joining here I received warm welcome and good cooperation from the entire GEC, Rajkot family. They made me feel at home and part of the family.

Its matter of pride for all of us that two departments- Civil and Mechanical Engineering got NBA accreditation. Together we all will continue this journey to attain the same status for other departments. I feel with the cooperation of all the head of the departments and faculty members we will be able to achieve the academic excellence of our esteemed institute.

All the days of the calendar are significant but certain days are marked by some rare and interesting events that bring to us many new messages and vows, so I appreciate GECR's effort of celebrating all the significant days of the year with due respect to the significance attached to it. To this I would definitely like to mention the celebration of Yoga Day on 21st June 22 in which I participated, I appreciate the true spirit of yoga displayed in the celebration.
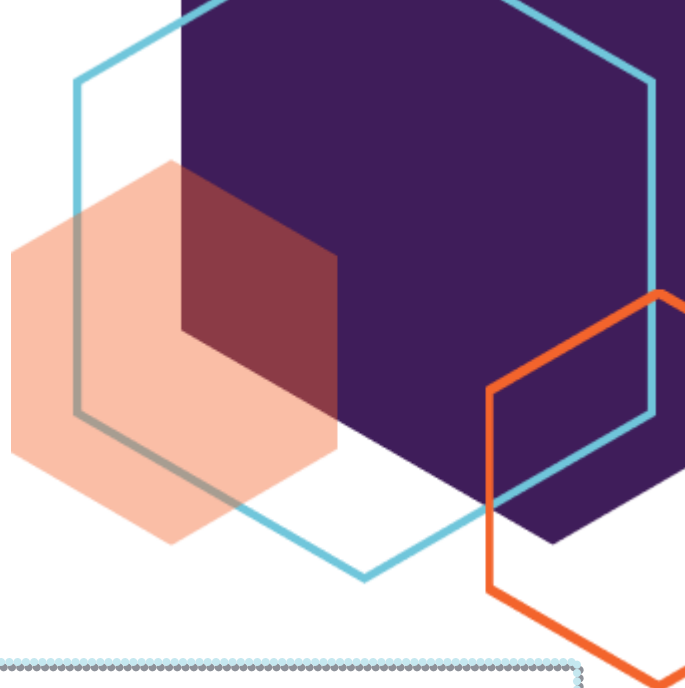
I would like to acknowledge and congratulate the team EC and the team AICTE of GEC, Rajkot for their Endeavour in the approval of Minor Degree Course of IoT by GTU and AICTE approved courses – Robotics & Automation, Artificial Intelligence. This definitely shows the spirit of the faculty members to offer courses in the emerging areas of technology to cope with NEP2020.

I believe this is the apt platform to congratulate the achievers of GEC, Rajkot -GTU toppers, GATE scorers and placed students, I wish them all round success in life.

The new semester is about to begin, I welcome you all to this new beginning with the hope that all faculty members and students will work for the overall development of our institute. I appeal all the faculty members to become student centric and to offer their expertise for the holistic development of our students.

Dr. K. G. Maradia

Date: 01-07-2022

It gives me immense pride and pleasure to release the July-2022 issue of Newsletter - Electronics & Communication Department, Government Engineering College – Rajkot (**EC-GECR Newsletter**).

Electronics & Communication Engineering has major role to play in the high tech society which we are witnessing today. The people across the world are able to connect in no time because of fast growth in this field of communication. Electronics is base on which Information Technology and Computer Engineering has grown. All high speed internet networks and computers work on the hardware designed by electronics engineers.

I am really very happy to tell that the department is having experienced and well qualified faculty who are very dedicated to teaching and also involved in up-gradation of knowledge. We have all necessary infrastructure and facilities. Department flourish with all basic and advance laboratories in the field of analog and digital communication, embedded systems, AI & ML, VLSI technology, DSP and Image processing and of course a center of excellence for all IoT and automation related subjects.

Newsletter is a very important tool to make all stack holders aware about various activities done in the department. I am very happy to see that lots of technical, curricular and extracurricular activities are being carried out in the department. I congratulate all faculty members for arranging various activities and also students who have participated in various events held at institute as well as outside institute. All this expert talk and competition helps students to enhance not only their technical knowledge but to develop various qualities like communication skill creativity, leadership, team spirit etc. Both of them in turn increase the employability of the student.

As I mention in one of the earlier newsletters, to start anything is easy but to continuously maintain it, is equally difficult. As the newsletter team of the department have achieved it again, I heartily congratulate and proud for their efforts in collecting, designing and publishing the newsletter to large number of stack holders.

Prof. S.B. Parmar

Date: 01-07-2022

SEMINAR ON "GATE AWARENESS" FOR EC ENGINEERING DEPARTMENT

Student Clubs – Government Engineering College, Rajkot organized a seminar on "GATE Awareness" for 4th Semester students on 30th March, 2022. The motive of the seminar was to guide the students regarding the GATE exam. Student Clubs Committee organized this seminar. Expert **Mr. Mrunal Shah** shared information about the structure of GATE, approximate weightage analysis of different subjects in GATE, and cutoff GATE score analysis to get admissions in NITs, IITs and other reputed engineering institutes. The expert also discussed about the companies/ organizations which consider the GATE score for recruitment process. In the discussion, the expert shared his expertise and explained fundamentals of "Signals and Systems"
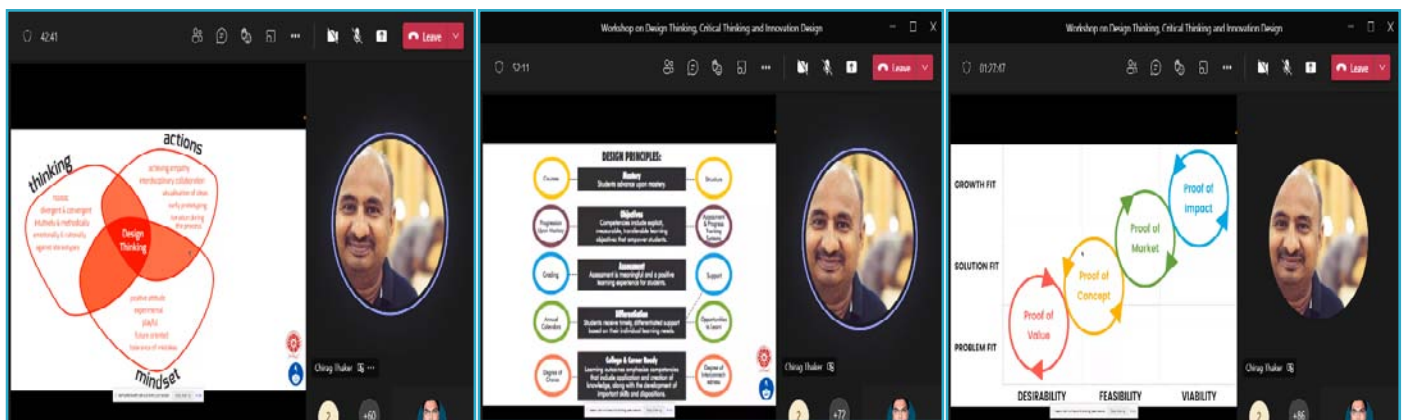
More than 70 students participated in the event. **Prof. Punit Lathiya** and **Prof. Jay Pandya** coordinated the event.

IIC COMMITTEE, EC- GECR ORGANIZED WORKSHOP ON "DESIGN THINKING, CRITICAL THINKING AND INNOVATION DESIGN"

IIC Committee, Electronics and Communication Engineering Department, Government Engineering College, Rajkot organized a workshop on "**Design Thinking, Critical Thinking and Innovation Design" on 31st** January, 2022**.** The objectives of the program were to encourage students for Innovation and to spread knowledge regarding the concept of design thinking and innovation. Also to motivate students to go for mind to market implementation of their concept. The workshop was held online through Microsoft Teams platform.

Prof. (Dr.) Chirag S. Thaker , Professor & Head Computer Engineering Department shared his expertise with the participants. Total **225** students participated the workshop. The expert session inspired the students to work in the area of design thinking, critical thinking and innovation design. Pathway for various processes from concept to prototype to market and scalability of the product is understood by students. **Prof. Ravi G. Mehta** coordinated the event.
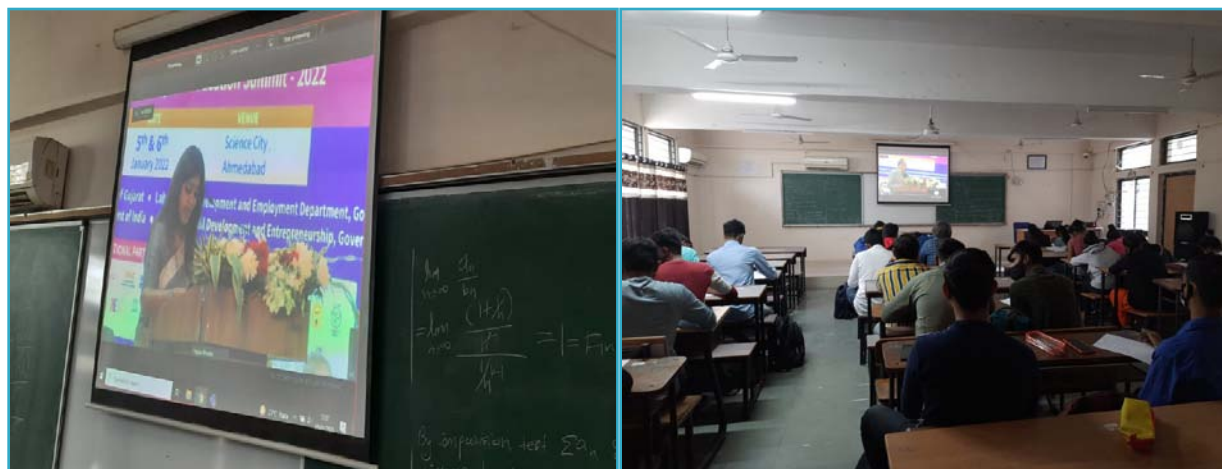
LIVE TELECAST OF INTERNATIONAL CONFERENCE ON ACADEMIC INSTITUTIONS – ICAI-2022

Details :

- Venue: B001
- No of Students Attended: 39
- No of Faculty Members Attended: 12
- Duration: 11am to 2.20pm, 3.30pm to 4.30pm
- The faculties involved: **Prof. S. B Parmar (Head, EC dept.), Prof. Bharat Nagpara (Event Coordinator), Prof. Jigisha Sureja (Co-Cordinator)**

On 5th January 2022, the live telecast session of International Conference on Academic Institution by Education Department, Government of Gujarat is held at EC department of GEC, Rajkot for EC students and faculty members.

The purpose of the session was to witness the panel discussion held during conference which enlightened academicians and students for future education requirements like multidisciplinary education, holistic approach in technical education, skill empowerment for youth, quality assurance in accreditation process, impact of covid-19 on education etc.

Two panel discussions on Multidisciplinary and Holistic Education and Skill Enhancement, entrepreneurship and Employability – Necessary skills for 21st century telecast were shown to around 40 EC students.

Two panel discussion on Quality Assurance in Assessment & Accreditation by National Board of Accreditation to faculty members of EC department.

LIVE TELECAST OF INAUGURATION CEREMONY OF 25TH NATIONAL YOUTH FESTIVAL -2022

Details :

- Venue: B001
- No of Offline Student Attended: 14
- No of Faculty Members Attended: 12
- Duration: 11am onwards.
- The faculties involved: **Prof. S. B Parmar (Head, EC dept.), Prof. Bharat Nagpara (Event Coordinator), Prof. Jigisha Sureja (Co-Cordinator)**

On 12thJanuary 2022, the live telecast session of Virtual Inauguration Ceremony of 25th National Youth Festival by PM NarendraModijiis held at EC department of GEC, Rajkot for EC students and faculty members. Due to covid-19 guidelines majority students were instructed to attend the session from their premises. The offline arrangements were done for faculty members and few offline students available in department by following social distancing and safety precautions.

The purpose of thesession was to witness the live telecast of inauguration session of a technology centre, which will function under the Union ministry of Micro, Small and Medium Enterprises (MSME), and an auditorium with open air theatre known as the 'Perunthalaivar Kamarajar Manimandapam' and address to nation by PM Narendra Modiji on 25th National Youth Festival Celebration at Puducherry at 11am.

LIVE TELECAST OF HON'BLE PM SHREE MODIJI ON PARIKSHAPECHARCHA - 2022

Details :

- Venue: B001
- No of Offline Student Attended: 127
- No of Faculty Members Attended: 2
- Duration: 11am onwards.
- The faculties involved: **Prof. S. B Parmar (Head, EC dept.), Prof. Bharat Nagpara (Event Coordinator), Prof. Jigisha Sureja (Co-Cordinator)**

On 1st April, the interaction session was organized at town hall, Delhi where PM Narendra Modiji had interacted with students and enlightened them on their issues and challenges related to exam. The live telecast of this session is also held at EC department of GEC, Rajkot for EC students.

The session was intended to interact with school and college students and to guide them on challenges and issues related to their study like exam stress management, exam preparation and effective focus management during online/offline study. He also motivated students for overcoming hurdles they face during their academic journey.

The purpose of the session was to witness the live telecast of interaction session with students on Pariksha Pe Charcha by PM Narendra Modiji live from Town Hall at 11am.

AN INDUSTRIAL VISIT AT RAJKOT AMUL DAIRY PLANT

Details :
- Organized by : Government Engineering Collage, Rajkot
- Venue : Dudhsagar Rd, near NEW POWER HOUSE, GEB
- PGVCL, Rajkot, Gujarat 360003
- Date : 4th June, 2022
- Faculty Coordinators : **Prof. D.R.Keraliya (Programme Officer - NSS)**

The Students of Government Engineering College visited Amul dairy (Gopal Dairy) at Rajkot. This co-operative dairy set up by farmers is one of the best in the world and it put an end to the exploitation of the farmers by helping them to earn a better income. It Pasteurizes lakhs of liters of milk each day and Produces like ghee, butter, cheese, Paneer, milk Powder, Sweets, ice creams and chocolates. The Place was neat and clean and it had the best machinery to do work. we well explained the processes and we were also treated to some Amul Mango Lassi. The collection of milk is done from far off villages and mostly the ladies are involved in this work. The visit immensely inspired all the students.
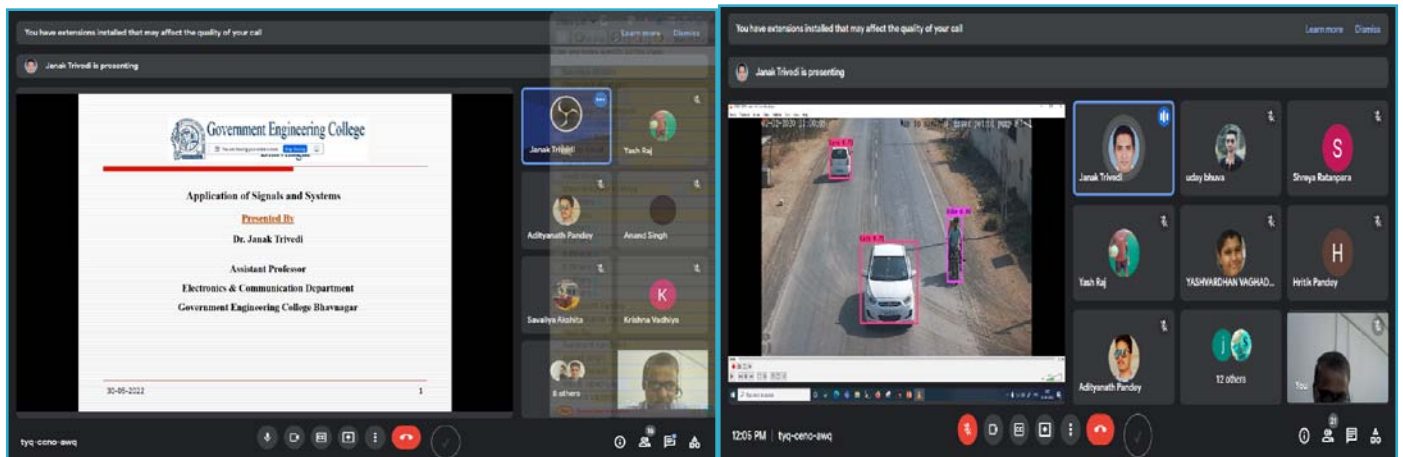
AN EXPERT TALK ON "APPLICATIONS OF SIGNALS AND SYSTEMS"

Details :

- **Co-ordinatior:- R.P. Sandhani (EC), GEC Rajkot.**
- Date: 30-5-2022
- Time: 11:30Am to 1:00pm
- Audience: Sem 4 EC batch 2020-24
- Expert: **Dr. J.D. Trivedi , Asst. Professor in EC, GEC, Bhavnagar**
- Link of online session: https://meet.google.com/tyq-ceno-awq
- Students participated in expert talk: 45+

Students are benefitted by this expert talk in understanding use of signals and system subject for the application point of view. The expert also share the object recognition (vehicle) by the video to aware the students to apply their knowledge of the subject and how one can use the knowledge in various field. Students have asked many questions during the session and from that they also learn many new things.

ACHIEVEMENT

In the state level poster competition of 'Antenna: Theory to Practice", held at Sarvajanik College of Engineering and Technology (SCET), Surat, students of GECR went in two groups and represented the institute. **One group was credited the first rank and got the prize**. The topic of that group was "Case Study on L1 band Micro strip Patch antenna". The second group was credited with **extremely well performance.**

The second group's topic was, "Comparison of Micro strip Patch Antenna".

The list of students is as follows:

Kirtan Dave - 190200111018

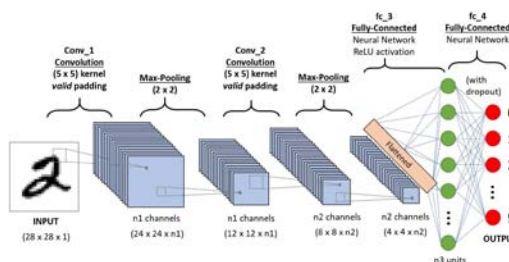**Miraj Bavishi-190200111005**

Savan Mandora-190200111066

Chirag Dave-190200111017

FACULTY PARTICIPATION IN ANNUAL RESEARCH MEET BY SUPERCOMPUTER FECILITY COMMITTEE (SCF)

Annual Research Meet was organized duding 17-18 June, 2022 by SCF – GEC<Rajkot to share the progress of research projects with Supercomputer Facility. 82 Participants all over India have attended sessions according to their interests. 09 Faculty Researchers have delivered sessions. From EC Department, Prof. M. J. Patel and Prof. P. A. Lathiya shared their research work in the meet.

- Deep Learning based Road Network Extraction System from Remote Sensing Images
  Prof. Miral Patel – Assistant Professor in EC Engineering, G.E.C. Rajkot

A CNN sequence to classify handwritten digits
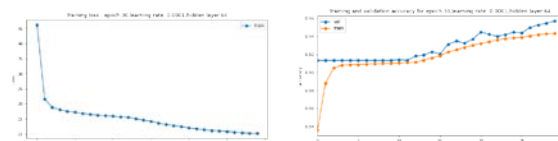
Source: https://towardsdatascience.com/

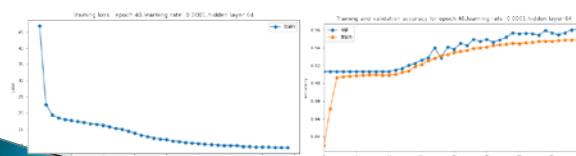Fig 4. a. Training Loss b. Training and validation accuracy when epoch :30,Lr:0.0001,HL:64

Fig 5. a. Training Loss b. Training and validation accuracy when epoch :40,Lr:0.0001,HL:64

- Automatic CMOS Analog Circuit and Layout Design - Circuit Optimization on SPICE tool
  Prof. Punit Lathiya – Assistant Professor in EC Engineering, G.E.C. Rajkot

INTERNSHIP AND PLACEMENT DETAILS – EC GECR 2022 BATCH

Internship Details	
Total number of companies which provided internships to EC-GECR 2022 batch students during their final semester	57
Total number of students who received internships during their final semester	109

Placement Details	
Total number of companies visited for placements (EC)	16
Total number of students placed	30
Maximum Package	4 LPA
Average Package	3.28 LPA

Advisors:

Dr. K. G. Maradia
Principal,
Govt. Engg. College,
Rajkot.

Prof.S.B.Parmar
Head of Department - EC
Govt. Engg. College,
Rajkot.

Newsletter Team – EC Department

Prof. Jay Pandya

Prof. Niranjan Agravat

**Electronics & Communication Department
Government Engineering College, Rajkot.**