





INSTRUMENTATION AND CONTROL DEPARTMENT

ISSUE - II





DR. SHWETA P. DAVE
PRINCIPAL,
G.E.C. GANDHINAGAR.

It gives me immense pleasure to present my views through the MindSpark newsletter of the Instrumentation & Control Department.

Today's high demanding world needs innovation and that comes from unconventional thinking. Entering into this institution after facing intense competition, you should pursue your academic work with great dedication.

As the Principal of this institution, I would like to take this opportunity to sincerely thank the entire staff for building a solid foundation of this institute. Faculties of GEC-Gandhinagar, have always given their best in nurturing students for their holistic growth. Students who are at the end of this B.E. journey and are going to serve the community, I wish them all a glittering future ahead.

Once again, I wish hearty congratulations to the IC Department for publishing MindSpark, the bi-yearly Newsletter. I hope and wish that this Newsletter gives a unique platform to students and faculties to share their ideas and achievements.



PROF. & HEAD, I & C, G.E.C. GANDHINAGAR.

It gives me great pleasure to congratulate the students, faculties and all the stake holders of the Instrumentation & Control Department for the publication of the second issue of the Departmental Newsletter, MindSpark. The major strength of the department is a team of well qualified and dedicated faculties who are continuously supporting and encouraging the students for their academic excellence.

During the course of study in the department, the students are encouraged to get hands-on experience in various subjects like Programmable Logic Controllers, Microcontroller & Interfacing, Distributed Control System & SCADA, Industrial Measurement, Process Control System etc. Various industrial visits and expert lectures are arranged frequently to cover all aspects of the curriculum.

Our students are not only academically sound and disciplined but they also organize and participate in various co-curricular events at institute and university level. This Newsletter has provided a platform to share all the activities done in the department for the said tenure. It also gives an opportunity for faculties and students to share their ideas and thoughts among others.

Once again, I congratulate all the IC family members for the Newsletter and wish all the bright future ahead.



ABOUT
INSTRUMENTATION
& CONTROL
ENGINEERING

ature of work of an instrumentation engineer ranges from designing, developing, installing & calibrating equipments that are used to monitor and control machinery. Instruments at home and elsewhere is only because of the science of instrumentation.

IC engineers typically work for industries with automated processes, such as manufacturing or chemical plants, with an aim of improving system productivity, reliability, safety, optimization and stability. The role of an instrumentation engineer is multi disciplinary as one needs a thorough understanding of the operational processes of an organization.

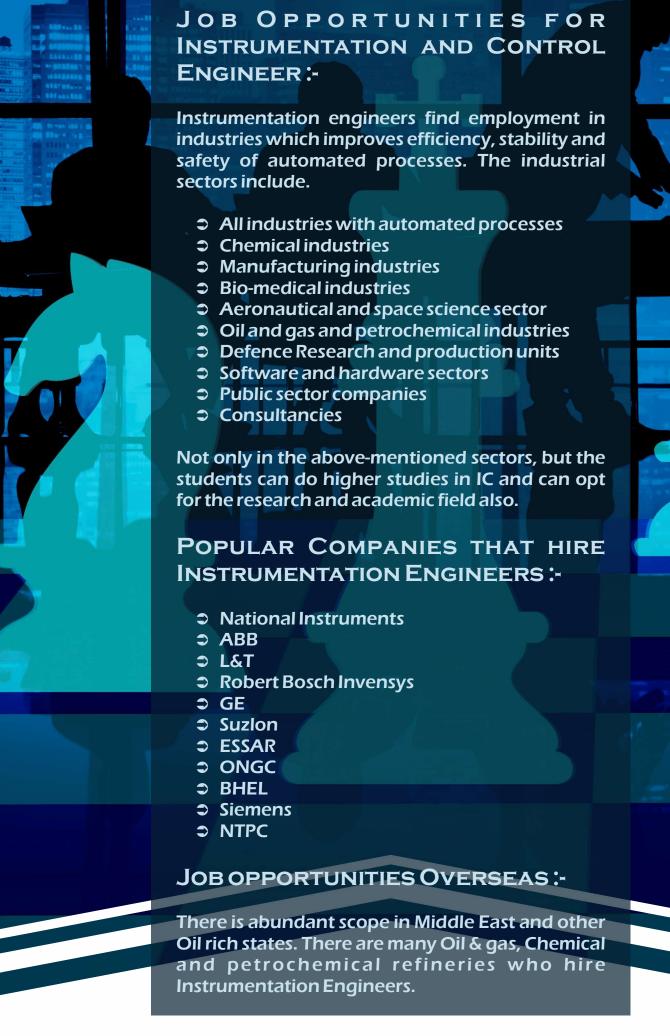
Instrumentation engineering is the science of the measurement that include study of sensors and transducers to measure crucial process variables like pressure, temperature, humidity, flow, Ph, force, vibration, speed etc. and another is control engineering or system engineering that includes the fundamental and designing aspects of any automation systems. Automation controllers as PLC, DCS and advance embedded controller are also the part of study to implement control algorithm for automation application.

Machine learning and Internet of Things (IOT) are highly demanding area in present digital life and physical implementation of these in real environments are almost impossible without IC engineering.

- Design & develop control systems to monitor and control the industrial processes.
- Installation and calibration of control systems in manufacturing industries, power plants, chemical plants & oil refineries etc.
- Monitoring and controlling the variables in manufacturing and process industries through sensors and controllers.
- Design and develop devices or systems that are used to measure or control physical quantities such as temperature, pressure etc.
- Calibrate devices such as electrical sensors and electrical circuits to ensure accuracy in measurement.
- Design the required hardware for Internet of things (IOT) and cloud based applications.



ROLE OF
INSTRUMENTATION &
CONTROL ENGINEER
IN INDUSTRY



JOB OPPORTUNITIES

Instrument Of Instrumentation And Control



- **→ ABOUT** THE INSTITUTION
- **⇒ ABOUT** THE DEPARTMENT
- **→ ABOUT** THE FACULTY
- **⇒ ABOUT** THE RESOURCES
- **⇒ ABOUT** THE PLACEMENT

- **→ ABOUT** FACULTY MANEUVER
- **→ ABOUT** STUDENT SECTION
- **→ ABOUT** CREATIVE CORNER
- **→ ABOUT** student's disquisition
- **→ ABOUT** AUTOMATION TRENDS



Scan This Qr Code To Know More.



ABOUT THE INSTITUTION

Established in 2004, Government Engineering College, Gandhinagar (GEC-Gn) takes pride in its highly motivated students. Our students are life-long assets that help this institute to continuously evolve and work towards its Vision. Approved by AICTE. The College is administrated by Directorate of Technical Education, Gujarat State, Gandhinagar. GEC Gn is affiliated to Gujarat Technological University. GEC-Gn offers its students a wide range of courses to choose from. This helps them to become multiskilled personalities who can handle the challenges that industry and society will pose before them as future engineers. Committed, to deliver excellence in everything that it does, our institute works towards reducing the gap between industry and education. GEC-Gn endeavours to educate students in a manner that offers them an opportunity not only to excel in academics but to be completely future ready to bring solutions to industrial problems relevant to society and environment.

Vision

To be a premier engineering institution, imparting quality education for innovative solutions relevant to society and environment.

Mission

- To develop human potential to its fullest extent so that intellectual and innovative engineers can emerge in a wide range of professions.
 To advance knowledge and educate students in engineering and other areas of scholarship that will best serve the nation and the world in future.
 - To produce quality engineers, entrepreneurs and leaders to meet the present and future needs of society as well as environment.

ABOUT THE DEPARTMENT

Department of Instrumentation & Control Engineering is well posed to cater the needs of the course. It is equipped with well-developed laboratories to satisfy the course curriculum of various subjects related especially to the Measurement & Automation. Instrumentation & Control Engineering Department started with inception of the college in 2004.

Presently department offers undergraduate course B.E.(Instrumentation & Control). The under graduate course is recognized by AICTE (All India Council for Technical Education).

Vision

To impart quality education in Instrumentation & Control engineering through innovation to meet technological challenges of industries and society with environmental consideration.

MISSION

- To impart knowledge about present trends in the field of Instrumentation & Control engineering.
- To train competent Instrumentation& Control engineers who can design, operate process instrumentation and also manufacturing an automation systems in industries.
 - To encourage students to work on innovative research projects related to Instrumentation & Control engineering considering environmental aspect.

A wide range of opportunities are available in both commercial and industrial sectors covering processing, manufacturing, energy supply, mining, electronics, communications, IT, computer systems, defense-related industries, etc.

To impart quality education in Instrumentation & Control engineering through innovation to meet technological challenges of industries and society with environmental consideration.

We aim to produce talented instrumentation and control specialists who cater to meet technological challenges of industries and society with environmental consideration.

Program Education Objective statements (PEO)

PEO-I To operate and maintain industrial Instrumentation & Control system.

PEO-II To design Industrial Instrumentation & Control system by innovative approach.

PEO-III To inculcate professional and ethical attitude, effective communication skills, multidisciplinary approach and an ability to relate Engineering issues in social and environmental context.

PEO-IV To acquire the ability for life-long learning needed for a successful Professional career.

Program Specific Outcome (PSO)

PSO1 Design and develop solutions for process control and automation industries and able to pursue career in research, industry, higher studies and adapt to changing technology.

PSO2 Able to understand professional and ethical responsibility with effective communication skills and life-long learning.

ABOUT THE FACULTY



TEACHING STAFF DETAILS



DR. S. A. RANKAWAT

Designation Qualification Experience Associate Professor (Head Of The Department)

PhD 25 Years

DR. D. H. SHAH

Associate Professor PhD 21 Years Designation Qualification Experience





PROF. A. D. RATHOD

Designation Qualification Experience Associate Professor ME (IC)

20 Years

PROF. M.B. HINGU

Assistant Professor M.TECH., SYSCON-IITB 23 Years of Teaching, O1 Year Industry Designation Qualification Experience





PROF. I. U. AJMERI

Designation
Qualification
Experience

Assistant Professor

ME (IC) 22 Years

PROF. K. C. DAVE

Assistant Professor M.Tech (E And TC) 11 Years Designation Qualification Experience



ABOUT THE FACULTY



PROF. K. K. ACHARYA

Designation Qualification Assistant Professor

ME (IC)

Experience 20 Years of Teaching, 02 Years Industry



Assistant Professor PhD 16 Years Designation Qualification Experience





PROF. K. S. VASHISHTHA

Designation Qualification Experience Assistant Professor

ME (IC) 10 Years

PROF. N. V. PATEL

Assistant Professor ME (IC)

09 Years of Teaching, 05 Years Industry

Designation Qualification Experience





PROF. P. N. PATEL

Designation Qualification Experience Assistant Professor

ME (IC)

06 Years

PROF. R. S. RANA

Assistant Professor M.TECH (IC) 04 Years Designation Qualification Experience





PROF. R. L. ZADFIYA

Designation Qualification Experience Assistant Professor M.TECH (IC) 10 Years

ABOUT THE FACULTY





PROF. A. N. BOKADE

Designation
Qualification
Experience

Assistant Professor ME (IC) 15 Years

PROF. J. J. SHAH

Assistant Professor ME (IC) O4 Years Designation Qualification Experience





PROF. C. B. PANCHAL

Designation Qualification Experience Assistant Professor (Contractual)

ME (IC)

04 Years of Teaching, 05 Years Industry



Assistant Professor

07 Years of Teaching, 05 Years Industry

Designation Qualification Experience





PROF. R. B. GADHIYA

Designation Qualification Experience

Assistant Professor

ME (IC)

11 Years

NON-TEACHING STAFF DETAILS



MISS N. J. MAKWANA

Designation Qualification Experience Lab Assistant BE (IC) O5 Years

ABOUT THE RESOURCES

6

The department has spacious and ventilated classrooms and state of the art laboratories with research lab facility, all that makes an excellent infrastructure.



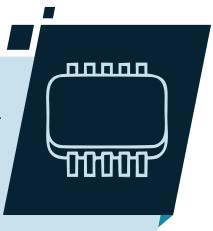
Process Control Laboratory - II
Lab is equipped with process control trainers which helps to perform control of different variables like pressure, flow, level and temperature using different classical control strategies.





Embedded System Laboratory

Lab is equipped with Microprocessor and Controller kits and Data acquisition kits which helps students in implementation of different control strategies and logic for automation applications.





Computer Centre 1 & 2

Lab is equipped with PCs having latest specifications and various simulation open source software, which helps students for simulation of various control strategies and electronics circuits.

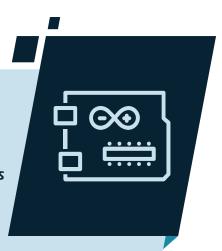


ABOUT THE RESOURCES



Analog Electronics Laboratory

Lab is equipped with electronics workbench and power electronics trainer which helps in performing characteristics of different electronics and power electronics devices. It also helps in developing and testing of different electronics applications like filter circuits, drives etc..





Communication Laboratory

This laboratory is equipped with communication kits which help students in various subjects like Analog and Digital Communication, Analog Signal Processing etc..





Measurement & Process Control Laboratory

Department is having 06 PLC Trainer kits, useful in subjects related to automation & control. As a part of Industrial Measurement lab, the department is having Dynalog kits which help in deriving major sensor characteristics.



ABOUT THE PLACEMENT



TRAINING & PLACEMENT CELL, IC DEPARTMENT, GECGN

The Training and Placement cell continuously explores different areas of opportunities for placement. The Department's T&P team maintains liaison with industries for various training programs for students as per the need of industries as well as for final placement of students. Due to strong liaisoning with industries, our students are placed at many well-known companies.

Some of the major recruiters are:

- Adaptive Engineering Private Ltd., Ahmedabad, Gujarat
- ☑ Tatvasoft, Ahmedabad, Gujarat
- ☑ Eurotech Power Controls
- ☑ Vodafone India Ltd
- Axis Solutions Pvt. Ltd., Kathwada, Ahmedabad
- ☑ Gujarat Alkalies And Chemical Limited, Dahej, Bharuch
- ☑ Zydus Cadilla, Bharuch
- ☑ Multispan Control Instruments Pvt. Ltd., Ahmedabad
- ☑ Biolitec India Pvt. Ltd., Baroda
- ☑ Zydus Healthcare Ltd., Ahmedabad
- ☑ Cadila Healthcare Ltd
- Atul Ltd., Ahmedabad



















ABOUT FACULTY MANEUVER



PROF. M. B. HINGU

Participated in 'An online STTP on MATLAB based teaching-learning in Mathematics, Science and Engineering' organised by Department of Electronics Engineering, Ramrao Adik Institute of Technology, Nerul, Navi Mumbai, during 18th May to 22nd May 2020.

PROF. M. B. HINGU

Participated in 5 Days STTP on "Internet of Things (IoT) & It's Applications in Industry" organised by Department of Instrumentation Engineering, Ramrao Adik Institute of Technology, Nerul, Navi Mumbai, during 8th June to 12th June 2020.

PROF. M. B. HINGU

Participated in a Short Term Online Course on "OUTCOME BASED EDUCATION AND NBA ACCREDITATION PROCESS" Organized by Internal Quality Assurance Cell (IQAC) held at P. R. Pote (Patil) College of Engineering & Management, Amravati, during 8th June to 12th June 2020.

Prof. M. B. Hingu

Participated in a webinar on "NBA Accreditation" on 11th June 2020, delivered by Dr. NJ Rao and organized by Internal Quality Assurance Cell, GTU and Inpods India Private Limited.

PROF. M. B. HINGU

Participated in STTP on "Course Design in Context of NBA" conducted by GMCA College, MANINAGAR during 20th Jan 2020 to 24th Jan 2020, AT GMCA-MANINAGAR.

PROF. P. N. PATEL

Participated in 5 Days STTP on "Internet of Things (IoT) & It's Applications in Industry" organised by Department of Instrumentation Engineering, Ramrao Adik Institute of Technology, Nerul, Navi Mumbai, during 8th June to 12th June 2020.





Departmental Activities

AUTOMATION IN RENEWABLE ENERGY, WEBINAR

The International Society of Automation is a non-profit professional association founded in 1945 to create a better world through automation. ISA advances technical competence by connecting the automation community to achieve operational excellence.

The organization develops widely-used global standards; certifies industry professionals; provides education and training; publishes books and technical articles; hosts conferences and exhibits; and provides networking and career development programs for its 40,000 members and 400,000 customers around the world. Keeping in view the significance of the aims set by the organization, ISA Student's Chapter GEC-Gandhinagar founded in May-2019, organized a webinar to fulfill the need of technical knowledge of the students.

The Chapter organized a webinar on 'Future trends and Automation in Renewable Energy' on 30th May, 2020 where Devang Vaghela from Bhavmish Solutions gave an acquainted presentation on the topic.More than 250+ students got registered in this event.

Dr. S A Rankawat, Head of the Department (IC) and faculty Advisor to ISA students Chapter, also addressed students and encouraged them to be a part of the ISA club. She elucidated how this section offers an opportunity to participate in a variety of useful programs and activities and to develop leadership skills. The membership benefits were also explained which include discounts on ISA products and services, and access to additional online tools and resources. The event was a grand success and many students participated from ISA student's Chapter of various colleges of the Gujarat state.



INDUSTRIAL AUTOMATION USING EMBEDDED SYSTEM, WEBINAR

A webinar on 'Industrial Automation using Embedded System' was organized by IC department, which was conducted by Mr. Vishal Vadher, Embedded System Engineer, SOFCON India Pvt. Ltd., Ahmedabad, on 16th June 2020

ABOUT STUDENT SECTION

EXPERT TALK BY MR. MAYANK TRIVEDI

An Expert talk on "Career Opportunities after Engineering and How to face the interviews" was organised on 21st January 2020, by IC department and was conducted by Mr. Mayank Trivedi, Training Manager, GATE Forum, Ahmedabad.





For this issue of mind spark we have prepared a really challenging quiz. The questions are mostly from 1st and 2nd year of syllabus but will require your special attentions. In the next issue of mind spark we will put the name of top 3 to 5 scorers along with new quiz. Hope you enjoy using your brain to it's limits.





INDUSTRIAL VISIT VGEC COLLEGE OF ENGINEERING

Students of semester 6 visited the Chemical Department of Vishwakarma Government Engineering College, Chandkheda, for conduction of various experiments related to Environmental Instruments subject. Visit was organised on 27th and 28th of February 2020, where students performed many experiments in the lab as well as got practical exposure of many analytical instruments.





INDUSTRIAL VISIT LD COLLEGE OF ENGINEERING

Students of 8th semester visited the Automobile Lab of Automobile Department, LD College of Engineering as a part of curriculum, on 13th March 2020. Prof. Suley Patel and Prof. Shyam Dabhi were the resource persons. The students were given practical exposure to various sensors related to automobile instruments. Prototype working model of ECU was also explained with other fundamental practicals of Automobile engineering.







INDUSTRIAL VISIT GMERS HOSPITAL, GANDHINAGAR

Students of 6th semester visited the GMERS Hospital, Gandhinagar as a part of the curriculum of Biomedical Instrumentation subject. Mr. Priyakant Parmar and Mr. Jignesh Patel, Biomedical Engineer, Central Medical Store, GMERS, Gandhinagar demonstrated various instruments to students on date 25th February 2020. Students were given exposure to bio-medical instruments like, CT Scan machine, ECG machine, Sphygometer, AUTOCLAVE, X-Ray machine, Anaesthesia Machine, Sterilizer Machine etc.

Due to special permission, the students also visited ICU and could also see its special instrumentation too.









INDUSTRIAL VISIT IOT, CENTRE OF EXCELLENCE

An industrial visit was organised at Novatrice Technologies IOT, Centre of Excellence, ITI Chandkheda, Ahmedabad on IOT and it's applications on 30th and 31st of January, 2020. Novatrice is a very well known start-up and handles many projects related to IoT. Students got real time exposure to current technology related to Street Light automation and visited the PCB designing lab. Since Building Automation is an elective subject offered in the Department, this visit was very helpful to get a real time exposure.





ABOUT STUDENT SECTION



OPEN HOUSE PROJECT FAIR

Open House Project fair was organised by the department on 7th March 2020. All final year students displayed and demonstrated their projects with charts and models. Two Industry Experts, Mr. Parag Shukla, Managing Director, Micon Automation Pvt. Ltd. And Mr. Shrenik Waweker, Director, Novatrice Technologies pvt. Ltd., evaluated the projects and guided students for further project work.



















Extra-curricular Activity

To inculcate the ethical values, the department organizes many events where students actively participate and perform various extra-curricular activities.

GANDHI NIRVAN DIVAS

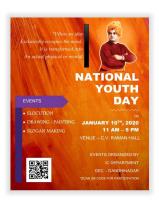
30th January, our department of instrumentation and control engineering, along with National Service Scheme held a function to mourn on Gandhi nirvan Divas.





NATIONAL YOUTH DAY CELEBRATION

Student's of IC department along with the support of department faculties had successfully organised a celebration on the national youth day in respect of Swami Vivekananda on 10th January. Various Events like Elocution, Drawing / Painting and Slogan Making Were Organized in the department on this day.



SSIP FUNDED PROJECTS IN THE DEPARTMENT

Government of Gujarat has developed a policy for providing assistance to Startups/ Innovation. Under this scheme, any individual/ group of individuals having innovative idea/ Concept will be eligible and/ or Universities/ education institutions.

The Student Startup & Innovation Policy of Government of Gujarat aims to create an integrated, state-wide, university-based innovation ecosystem to support innovations and ideas of young students and provide an environment for optimum harnessing of their creative pursuit.

Many student's projects of the Department are selected under SSIP scheme and are taking benefit of SSIP funded project under the guidance of faculties of the department.



Student Achievements

TEJAS PRAJAPATI, 2019 PASS OUT

Tejas Prajapati, a pass out student from 2019 year received an award for 'Best NSS Volunteer" on 29th February, 2020 for is extraordinary service in the year 2018-'19.

સરકારી ઈજનેરી કોલેજના તેજસ પ્રજાપતિને યુનિવર્સિટી કક્ષાનો 'બેસ્ટ એનએનએસ વોલિયન્ટર' એવોર્ડ

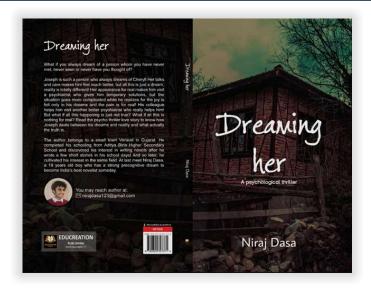
ગાંધીનગર, તા. ર ગાંધીનગરની સરકારી ઈજનેરી કોલેજના તેજસ જયંતિભાઈ પ્રજાપતિને ગુજરાત ટેકનોલોજીકલ યુનિવર્સિટીના યુનિવર્સિટી કક્ષાના એનએસએસ એવોર્ડ વિતરણ સમારંભમા<u>ં</u> 'બેસ્ટ એનએસએસ સ્વયંસેવક' તરીકે સન્માનવામાં આવ્યા છે. તાજેતરમાં યોજાયેલા આ સમારંભમાં અમદાવાદ પૂર્વ વિધાનસભા બેઠકના સાંસદ હસમુખભાઈ પટેલ, એનએસએસના નવી દિલ્હી ખાતેના આસીસ્ટન્ટ પ્રોગ્રામ એડવાઈઝર ડૉ. કમલકુમારકર, યુનિવર્સિટીના વાઈસ ચાન્સેલર ડોં. નવીન શેઠ, રજીસ્ટ્રાર ડૉ. કે.એન. ખેર, એનએસએસ



પ્રોગ્રામ કો ઓર્ડિનેટર એ.એચ. દાફડા સહિતના મહાનુભાવો ઉપસ્થિત રહ્યા હતા. તેજસ પ્રજાપતિને બેસ્ટ એનએસએસ સ્વયંસેવક તરીકેનો એવોર્ડ વર્ષ ૨૦૧૭-૧૮ માટે તેમની શ્રેષ્ઠ કામગીરીને ધ્યાનમાં લઈને એનાયત કરાયો છે. આ એવોર્ડ તેમને કોલેજના એનએસએસના પ્રોગ્રામ ઓફિસર પ્રો. એન.ડી. પટેલના માર્ગદર્શન તથા અન્ય સાથી સ્વયંસવકોના સહકારને પગલે પ્રાપ્ત થયો હોવાનું તેમણે જણાવ્યું હતું.

NIRAJ DASA, 5TH SEM

Niraj dasa, a student of 5th semester of our department has successfully published his second novel 'Dreaming her' through educreation publishing house.





PRANAY PANDEY, 5TH SEM

Pranay Pandey, another student of 5th sem has also successfully published His novel "Wizardry of Words" from Rooh Se Publication.



About the Author/Compiler

Pranay Pandey



Pranay Pandey, a student pursuing Bachelors of Engineering from Gujarat Technological University. He's a fitness enthusiast, capital market investor, speaker, sports enthusiast, stage performer (Dance) and a writer. Walking down the stretch of his life, he has always tried to enhance himself in every possible field, adding feathers of different skills in his personality. Right now he's working for a Pvt. Corporation as Digital and Social Media Marketer. His pen name is Mockingjay. He is a published writer and his love for literature took him to this level where he now chooses to express his houghts, ideas and expressions through his writings which has allowed him to be the part of many books and increase his reach among people. Other than his family, friends and dog he loves his dumbbells and life

Reach Out at: pranayofficial03@gmail.com

Instagram: @ft.mockingjay

VEDANT PANCHAL, 3RD SEM

Vedant Panchal, currently in 3rd sem, was Certified & Selected for 2nd Round In International Astronomy and Astrophysics Competition (IAAC), an International Level Quiz Competition.

DEVAM TRIVEDI, 7TH SEM

Devam Trivedi, of 7th semester was selected by the Forest Department of Gujarat for the Wild Ass Census 2020 held at Wild Ass Sanctuary, Little Runn of Kutch. The census was conducted on 13-14 March, 2020.

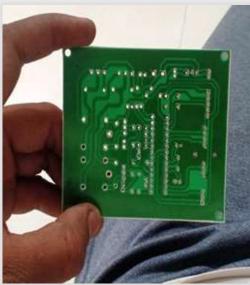


Almost every person is affected by the corona virus directly or indirectly, lockdown has stopped the routine of almost everyone. But some of our students didn't stop and continue their learning process and has had attained various workshop and webinars. Below are some of those students.

JYOTIK SIMARIA, 5TH SEM

Jyotik Simaria currently in 5th sem made this PCB designed for Sanitization Machine .It contains
Atmega328p as a microcontroller unit, Ultrasonic and IR sensors for sensing the proximity near it .And it
contains Relay Section for Controlling motor of Sanitization Machine.





Also he is a part of GTU ROBOTICS CLUB in which they prepare for International events i.e Robocon by making different robots according to themes and represent GTU at international and national level

RAJKUMAR SINGH, 3RD SEM

Raj Kumar Singh from 3rd semester has attained a national webinar on Advance design of turbo charger, a webinar on Entrepreneur mind-set organised by Design innovation centre, GTU and 2 day workshop on 3D EM simulation involving CST software and R&S Van instruments conducted by CIC3 in association with Jyoti electronics Ahmedabad.



KISHAN PARMAR, 3RD SEM

3rd semester, Kishan Parmar has created a YouTube tutorial for making a sanitizing pen for helping people in this phase of Corona. You can scan QR code to see his video



RAJESH LAD, 3RD SEM

Rajesh Lad from 3rd semester has positively used his time and made relay-based switch control via AC power working by Arduino.







NEHA SHAW, 5TH SEM

Neha Shaw from 5th semester has attained Online workshop on 3D designing and printing for covid-19 gear.

DARSHAN PANCHAL, 3RD SEM

Panchal Darshan of 3rd semester had completed courses on SIMATIC TIA PORTAL Structured Programming and Basics of drive-Converters from SITRAIN Digital Industry Academy.

ABHI SHAH, 5TH SEM

Abhi Shah from 5th semester has completed a course on useful excel for beginners and a Online workshop on 3D designing and printing for covid-19 gear.

HARSH SHARMA, 3RD SEM

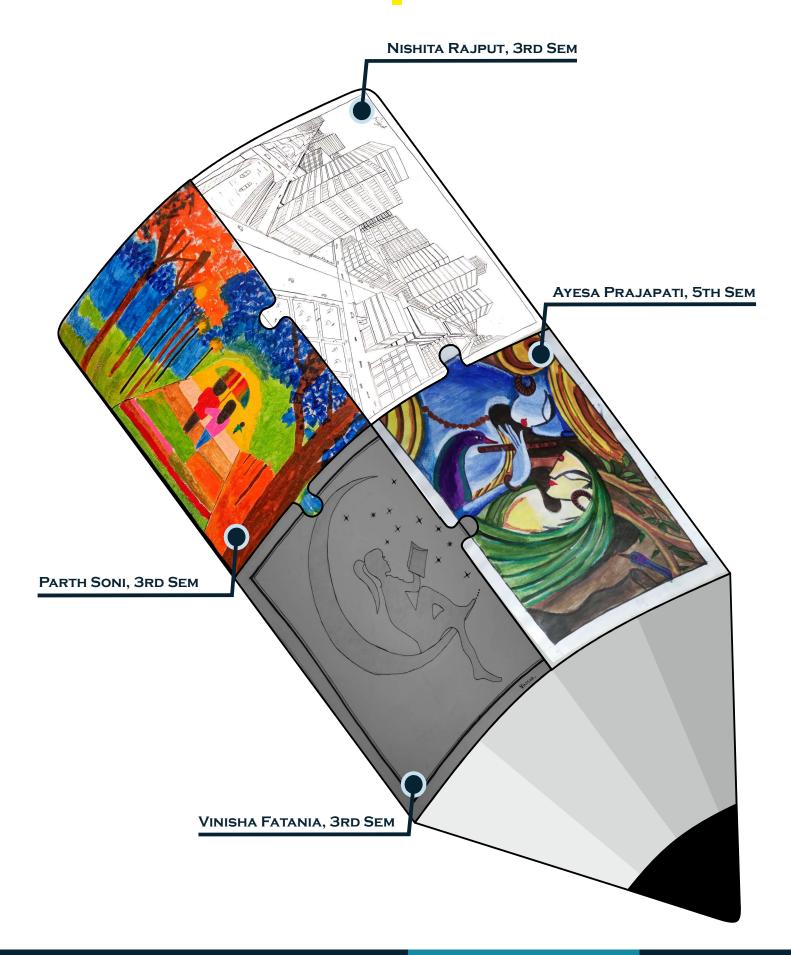
Harsh Sharma from 3rd semester has successfully completed the python 3 Tutorial course, Introduction to Cybersecurity Tools & Cyber Attacks, an online non-credit course authorized by IBM and offered through Coursera and completed the online course of ISRO (photogrammetry) and I secure 32 marks out of 50 in online exam.

NILAY LAMBADE, 5TH SEM

Lambade Nilay from 5th semester attended webinar on "specialized services of satellite -Modern navigation system" conduct by design innovation Centre (DIC) & Community innovation &Co-Creation centre, Gujarat technological University, Ahmedabad.

ABOUT CREATIVE CORNER





ABOUT

STUDENT'S DISQUISITION



During this pandemic time, it is very difficult for the organizations as well as the government to cope-up with the ongoing studies of the student and plan in a manner that full utilization of online resources is done. In such a scenario, Microsoft organization has come up with remarkable software for the future. So here we put "TEAMS" in lime light.

From the student's perspective, TEAMS is a very useful application that helps them manage online lectures, provides different segments for different subjects and can submit and schedule an assignment. During an ongoing lecture, Students can ask questions by a feature called "Raise your hand".

Despite being such comfortable application, one feature that might be overlooked is that there is no feature of notification when a meeting is scheduled in short period. Students may have to mark it themselves which sometimes is missed by many.

Another thing that is quite interesting is that the Whiteboard feature. With this feature, students can pick the pen from mentioned tools and write answers to given questions. Such unique features from the application make it one of the most promising one's for upcoming stages.

Hence, this application is quite a boon during the tough phase the world is going through

~ Bhimani Yoqita, Sem-3rd



MICROSOFT TEAMS FOR ONLINE EDUCATION

બેઠાં બેઠાં વિચારોમાં મગ્ન થતાં કઇક યાદ આવ્યું, એ વાત હતી દિવાળીની ઝગમગતી રાત્રીની તેનું નામ લેવાની સાથેજ દરેકના મનમાં પૂરેપૂરું ચિત્રણ સામે આવી જાય છે. ફટાકડાનો અવાજ તરતજ કાનમાં ગૂંજી ઊઠે છે. પરંતુ તેની વચ્ચે અજૂગતો અવાજ પણ સાથે સંભળાયા કરે છે. જે બીજો કોઈ નહિ પરંતુ ચૂં-ચૂં કરતાં રોકેટનો જ હોય છે. બાળકોને સૌથી વધુ રસ આ અવાજમાં જ હોય છે.

આતો થઇ માત્ર દિવાળીના રોકેટની વાત, ઉપરાંત પણ ઘણી એવી બાબતો નજર સામે આવી કે જે એકબીજા સાથે સંકળાયેલી જ હતી. ઉનાળાની ઋતુ હતી. વહેલી પરોઢે ઉઠી ગયા. આકાશને નિહાળતા જોયુકે કોઇ રોકેટ જેવુ પાછળથી ધૂંધળી-ધૂંધળી ધુમાળાની રેખા બનાવતુ આગળ વધી રહ્યું છે. બધાને જણાવતા દરેક વખતે કંઇક નવું જાણવા મળતું. પરંતુ સમય જતાં સાચું તો જાણવા મળી ગયું કે હા! એ બીજું કંઇ જ નહિ પરંતુ રોકેટ જ હોય છે.

ખરી વાત તો હવે શરુ થાય છે. બાળપણથી જ ખગોળ શાસ્ત્રમાં ખૂબ જ રસ હતો. અને ખાસ કરીને સૌથી વધુ રસ તો ખરતા તારાને જોવામાં હતી. ગણી વખત એવો વિચાર આવતો,કે વૈજ્ઞાનિકો જે યંત્ર દ્વારા આ ખગોળીય ઘટનાઓ નિહાળતા હશે. તેમને કેવું સુંદર નયનરમ્ય દ્રશ્ય દેખાતું હશે! મારી પણ ઈચ્છા હતી. હવ,વાત તો એવી છે કે કોઈ વસ્તુ કે વિષયમાં જયારે રસ પડે એ જ મહત્વનું છે.

જયારે કોઈ વસ્તુ કે વિષયમાં રસ પડવા લાગે છે ત્યારે કોઈ પ્રકારે રાહ જોયા વિના તેમાં હંમેશા આગળ વધવાનો જ પ્રયત્ન કરવો જોઇએ.

એ પણ એક પળનો પણ વિલંબ કર્યા વિના. આજ પ્રકારે સ્વપ્નનું દ્વીપ પણ આગળ વધી રહ્યું હતું.

નવાઈની વાત તો એ હતી કે, આપણે જો સ્વપ્નની વાત કરીએ અને એમાં આગળ વધવું હોય તો નિંદ્રા ખૂબ જ આવશ્યક છે. પરંતુ આ અગ્ન્યસ્ત્રનાં એટલા ઊંડા વિચારોમાં નિંદ્રા ક્યાંય દૂર સુધી દેખાતી ન હતી. સ્વપ્ન એટલે કોઈ નિંદ્રાનું જ નહિ પરંતુ કંઈ કરી બતાવવાનું પણ હોય શકે અને આ વાત કશુંક નવીન કરવાનાં સ્વપ્નની જ છે.

Sǐ.એ.पी.॰ (अ॰६्द ङदाम) ॰ आपणा देशना प्रथम सेटेदाईट दोन्य वाहन (असओदाी :

|||) ના પ્રોજેક્ટ ડિરેક્ટર હતા. ૧૯૮૦ જુલાઈમાં જેણે રોહિણી સેટેલાઈટની ધરતીની ભ્રમણકક્ષામાં સફળતાપૂર્વક જમાવટ કરી હતી. જેમણે આ સ્વપ્ન વિશે ક્હયું છે, "સ્વપ્ન એ નથી કે જે તમે નિદ્રામાં જુઓ છો. સ્વપ્ન એ છે કે જે તમને નિંદ્રા જ ન આવવા દે."

~ એશા ડી. પ્રજાપતિ, ૫ મુ સેમ

સ્વપ્નને પાંખો આપતુ અગ્ન્યસ્ત્ર(રોકેટ)

ABOUT

STUDENT'S DISQUISITION



The highly infectious coronavirus disease 2019 (COVID-19) is an ongoing pandemic disease caused by family of SARS virus (Severe Acute Respiratory Syndrome). COVID-19 pandemic outbreak came into an affect in the month of January in INDIA. There is no doubt that this pandemic is playing a major role in decrement of global economic and social welfare. The COVID-19 pandemic has taken the world by a storm. In the fight against this pandemic, many warriors including Doctors, Nurses, Policemen, Sweepers and Security guards came across many 'Tough Times and Miles to go before we Sleep'.

There is a wide increment in number of cases for nCoV-19. The Govt. of India have taken significant decisions to overcome the critical situation of the nation with the help of Frontline Warriors.

Corona Warriors are the real heroes for the Nation. They are working shoulder-to-shoulder with the Govt. to overcome the pandemic and save the lives of the pupil. They are facing long duty hours and staying away from their families for the betterment of one's life.

Doctors and Nurses are true adaptive to hold the distinctive responsibility for making relief among Covid-19 infectants. Doctors and Nurses are facing a huge stressful environment, no matter what age, gender, work-place or years of experience they have due to this pandemic. They have to maintain a balance between their professional, family and social life. The Doctors, Nurses and Medical staff are trained physically and mentally to endure this long standing battle against a pandemic. Doctors and Nurses have a vast skill set that makes them extremely valuable in emergency intubation and intensive care management.

Therefore, we must acknowledge our expertise during this COVID-19 crisis and learn how to take care of ourselves and by doing this help them to overcome the pandemic soon.

In order to ensure and enforce social distancing, the Frontline Warriors have been the local police forces. Additionally, in the fight against COVID-19, more than hundreds of policemen have been tested positive for the infection while many policemen have lost their lives and the number is expected to rise. In fact, many security personnel have chosen to maintain distance from their families even while at home and confine themselves to cordoned areas. While these men in uniform selflessly choose to put their lives at risk, their families remain at home living their lives in doubt and fear.

So we must stay at home and safeguard ourselves to relief the burden for policemen and the nation.

The unseen co-workers like Security guards, Sweepers, etc., are major part of Urban Living who keep their

wheels spin amidst in Coronavirus outbreak. Security guards are expected to carry on during the lockdown and help to enforce it. In fact, many security guards are stand at froth in maintaining many societies, residences and public places to overcome the pandemic.

We must stay clean and make sure to prevent the excrement of waste in public which spreads the virus.

Frontline Warriors are making the best of them. All the members of the Nation should respect them and help them in overcome of this pandemic.





NCOV-19 WARRIORS BENEATH

ABOUT

AUTOMATION TRENDS

Applications of vision-based industrial robotic systems are rapidly expanding due to the increase in computer processing power and low prices in machine vision hardware. Visual serving over a network of synchronized cameras is an example where the significance of machine vision and distributed filtering for industrial robotic systems can be seen.

A robotic manipulator is considered and a cameras network consisting of multiple vision nodes is assumed to provide the visual information to be used in the control loop. A derivative-free implementation of the Extended Information Filter is used to produce the aggregate state vector of the robot by processing local state estimates coming from the distributed vision nodes. The performance of the considered vision-based control scheme is evaluated through simulation experiments.

Vision also is enabling advances in driverless cars, drones,

and even in shopping, with the advent of stores like

Amazon Go.



PROLIFERATED USAGE OF MACHINE VISION

Artificial Intelligence is arguably the most exciting field in robotics. Everybody agrees that a robot can work in an assembly line, but there's no agreement on whether a robot can ever be intelligent.

Like the term "robot" itself, artificial intelligence is hard to define. Ultimately Al would be a recreation of the human thought process — a man-made machine with our intellectual abilities. This would include the ability to learn just about anything, the ability

to reason, the ability to use language and the ability to formulate original ideas. Roboticists are nowhere near achieving this level of artificial intelligence, but they have made a lot of progress with more limited A1. To day's A1 machines can replicate some specific elements

of intellectual ability.

APPLICATIONS FOR ROBOTICS EMPOWER BY AI

Autonomous Mobile Robots (AMRs) are the latest innovation that have been transforming traditional robot tasks through increased flexibility and diversified applications, including their unique ability to navigate in an uncontrolled environment with a higher level of understanding.

Robots depend on V-SLAM with Deep Learning techniques for positioning and navigation. The ability to "learn on the fly" allows the big data gathered to predict velocity and direction of obstacles using Deep-Q-Learning and Asynchronous Advantage Actor-Critic technique.

This creates a more intuitive nature in these robots which drives a more collaborative and efficient local path planning. AMRs also keep the supply chain moving faster in manufacturing facilities, and are playing an increasing role in retail environments for tasks like shelf scanning and floor cleaning.



INCREMENT IN USE OF AUTOROBOT/
AUTONOMOUS ROBOT IN MANUFACTURING AND ORCHESTRATION



CHAIR PERSON

DR. SHWETA P. DAVE,
PRINCIPAL,
G.E.C. GANDHINAGAR.



DR. S. A. RANKAWAT, PROF. & HEAD, I.C G.E.C. GANDHINAGAR.





ASSOCIATE EDITOR

Prof. K.S.Vashishtha Asst. Prof. I.C. G.E.C. Gandhinagar

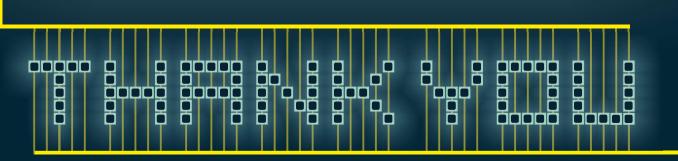
EDITORIAL TEAMS

MATERIAL SECTION

Akshaysingh Chaudhary, 5th Sem Dhruv Dudhwala, 3rd Sem Dhruvrajsinh Piludariya, 3rd Sem Dhwanit Patel, 3rd Sem Yogita Bhimani, 3rd sem

DESIGNING SECTION

Keval Dharaiya, 5th Sem Vedant Panchal, 3rd Sem Vinisha Fatania, 3rd Sem



G.E.C. GANDHINAGAR





Nr.Animal Vaccine Institute, Sector-28, Gandhinagar, Gujarat-382028





CONTACT US

