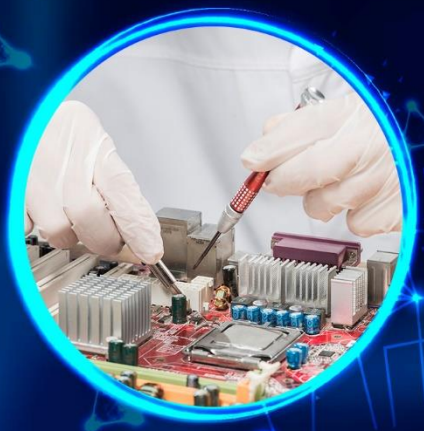
L.D. COLLEGE OF ENGINEERING
AHMEDABAD

5th Edition

October,2021



# ELECTRI.CT

Where Ideas Flow Without Resistance

**An organized current flow can enlighten the correct path.**

## VISION

**To Foster Learning Environment for Electrical Engineering Education having High Technical Skills, Ethical Values and Overall Global Competence**


## MISSION

**To provide high quality graduate program in Electrical Engineering so that it prepares students for**

1. Better Employability, Start-ups and Entrepreneurship.
2. A professional career with essential technical and managerial skills.
3. Collaboration with industries through research and innovation.
4. Other avenues for higher education.

# INDEX




# PRINCIPAL'S TALK

Dr. R. K. Gajjar

Let me begin by giving you a glimpse of our college in this beautiful season. LDCE looks absolutely mesmerizing in the mist. Amidst the busy schedule of the semester, with exams, tests, all those assignments and other activities compounded by the pandemic situation - we are so caught up with the hustle bustle that we tend to lose track of other simple things we are capable of - things that bring us joy and satisfaction.

Back on campus, we have had our hands full since we last spoke in the 4th issue. LDCE has progressed by leaps and bounds in the last 74 years and we are gearing up to celebrate the platinum jubilee from 2022 to 2023. Our alumni have been a marvelous support in all our initiatives. Now they are equally charged about making the platinum jubilee celebrations a success.

I am delighted to share that 3 of our UG programs – Electrical, Mechanical and Civil were accredited in 2019 by the National Board of Accreditation (NBA). Two more UG programs – Chemical and Instrumentation & Control have recently undergone the process and are awaiting the results. I am sure they will come through with flying colours. LDCE was ranked 1st in the state in the Gujarat State Institution Ranking Framework (GSIRF). We are the only engineering college to receive 5 star rating. We have received very good rankings in the TIMES NOW, EDUFUTURE EXCELLENCE and INDIA TODAY rankings as well.

The college is getting a facelift as new labs worth Rs10cr have been sanctioned in the area of AIML, ARVR, IoT, Robotics and Blockchain; not to forget the landscaping supported by alumni is also coming up. The campus is once again vibrant and buzzing with activity after a brief lull. Our industry outreach cell has gone above and beyond their call of duty and brought on board many opportunities for student internships, trainings, placements, etc.

My entire team of faculty, staff and students are forever committed to upholding the legacy of LDCE and are leaving no stone unturned as we approach our platinum jubilee year. At the same time, platforms such as this departmental magazine - 'ELECTRI.CT - where ideas flow without resistance', give the students an opportunity to exhibit their talent, teamwork, exchange knowledge and information and of course interact with the illustrious alumni of the department. It is a beautiful blend of technology, department legacy and institute vision.

I extend my warm wishes to the department and hope they keep marching forward tirelessly towards excellence.
Dr. R. K. Gajjar

# FROM HOD's DESK

Prof. Jyoti Iyer

Greetings!
I welcome you all through the beautiful technological journey in Electrical Engineering Department , L.D. College of Engineering.
It gives me immense pleasure to put forth the fifth issue of our department newsletter "ELECTRI.CT-where ideas flow without resistance" . This newsletter is a reflection of the academic, co-curricular, extra-curricular and research and development activities having taken place in the department, even during these trying times of the pandemic.

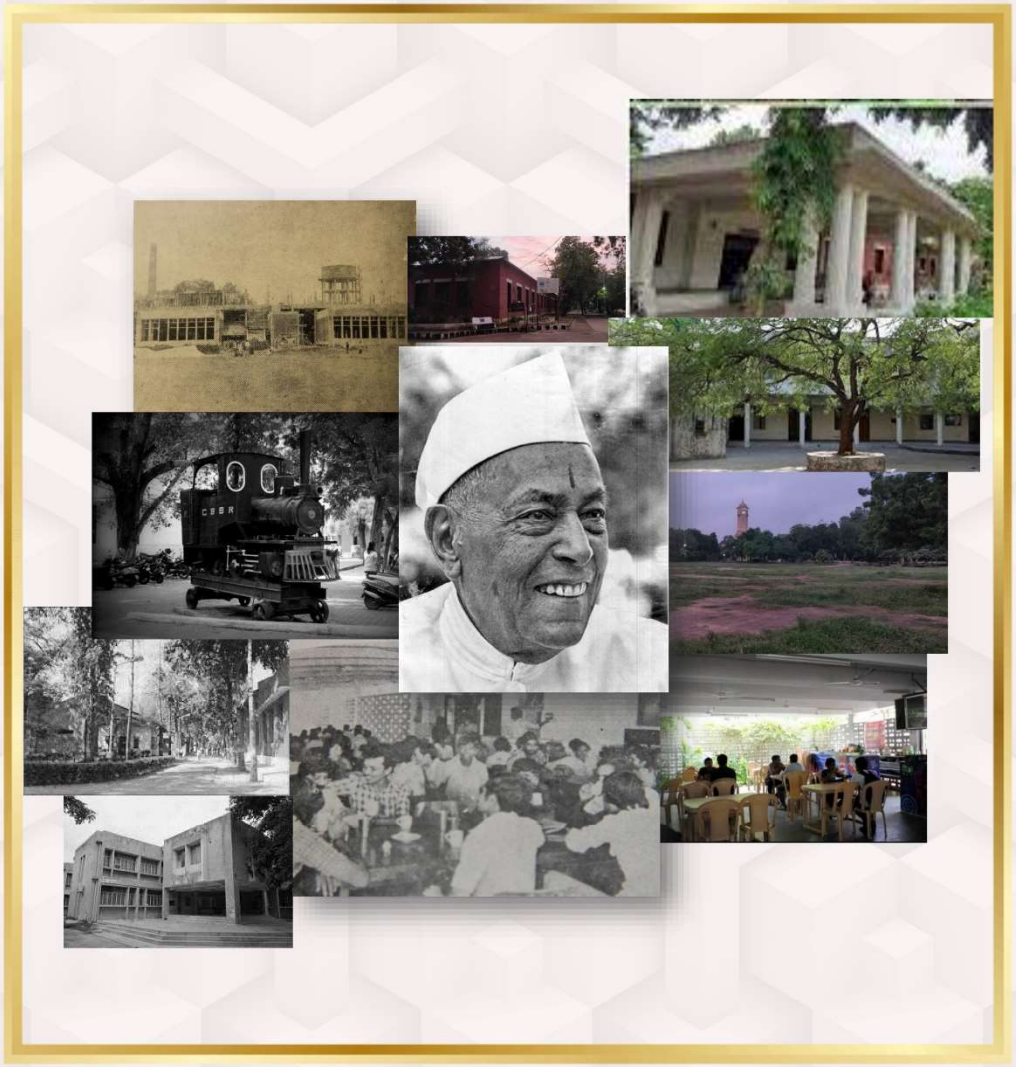
All this would not have been possible without the unconditional support of the department faculty and its students. The department provides a conducive atmosphere, where outcome based teaching and learning process is the first priority. This is tactfully supplemented with practical exposure for improving the critical thinking and problem solving skills of the students. The department faculty thrive to organize and enhance various activities and work in a direction to harness the potential of students to take them to new heights in all spheres of activity.

Students from the department have shown all round progress be in academics, Research & Development or being part of various technical events. They have been part of the start-up activities. Patents have been filed and published. Our students have been absorbed by multinational companies.

I deeply appreciate and acknowledge the eagerness and enthusiasm of the students who have worked towards the making of this newsletter . Not to forget mentioning the faculty mentors, who have stood like a pillar behind these students. My heartfelt gratitude to them. Best wishes for all future endeavors.

# PLATINUM JUBILEE

**Date : June 2022 to June 2023**
**“Promoting Excellence in Engineering since 1948 ”**
**75 years tell a story,**
**One Goal which Became A Glory.....**
**We invite you to share the joy of our jurney of 75 years as we gear up to celebrate the past and look forward to the future.....**



# FACULTY'S VISION

It is not the strongest of the species that survive, nor the most intelligent, but the one most responsive to change. - Charles Darwin

The world is now thankfully coming out of a difficult time and things are definitely looking brighter. The odd semester of the current academic year brought our students back on campus. The department actively participated in the NBA process of IC and Chemical Departments. Two patents were awarded to the faculty and student teams. After a huge gap of about one and a half years we celebrated Teacher’s Day with the students in the classroom and it was simply awesome.

Our students have worked very hard to bring out the fifth issue of the magazine within the given time. We always strive to make our newsletters a platform to showcase the multifaceted talent of our students and faculty. Having said that, we are open to any ideas that will help us improve our newsletter. We would like to thank all the students and faculty who have contributed to the newsletter. We appreciate the student editorial team who have done a commendable job. We hope that you will enjoy reading this issue. Once again, Team Electri.CT values your contribution and looks forward to your continuous support in the coming issues.

Happy Reading!

# BUILDERS OF ELECTRI.CT

Pal Manish
Editor in Chief

Gautam Reshamwala
Associate Editor

Anu Agarwal
Assistant Editor

Raj Borade
Content Editor

Jay Joshi
Graphic Designer

Kartik Bhandare
Managing director

Kodiyatar Jesa
Art Director

Parth Mashru
Fact Checker

# ACKNOWLEDGEMENT

Well ,after successfully completing 4 years at LD ,I can say this aloud and I can say it a zillion times that being an LDite is indeed something one should and is always proud off. Yes, the Electrical dept of LDCE is not just the oldest and the most respected but it is also the one which adapts and upgrades every now and then.

I have been lucky enough to witness to be a part of a number of amazing milestones the dept has achieved in the recent years, say it beginning of construction of well equipped labs to the venture of the first ever departmental magazine of LD -ELECTRI.CT,to NBAs accreditation process ,to organization of Iste events and not to forget the one to actively adapt to the detour from all offline to all online teaching.

The Electrical dept has come out with flying colours in whatever it has once started ,and the due credit of this goes to our most humble and respected HoD -Dr MC Chudasama sir and his team of amazing intellectuals-Our faculties. The faculties have always be one of the strongest supporters to the students ,they have helped us grow and groom ourselves, they have always encouraged all the students to try out new ventures ,take up responsibilities and above all they have always in-stilled a sense of mental peace in all these times of changes and adaptations.

Thank you our Gurus for being the amazing superheros you are we are thankful to the entire dept for making us who we are today.

Muskan Biala (2021 Batch)

Currently- GET at MG Motor India

To,

Respected HOD Sir,

On behalf of our entire batch' 21, Thank you for being the most supporting Head of Department, we could have ever got. Our creative things got placed in appropriate boxes and out of the box ideas were always appreciated and en couraged by you. Your Scoldings for better and Your lectures of Machines will always be missed. Every problem had a solution in your cabin and every student had a place in your consideration.Your only presence in cabin was so relieving (Haan Sir Cabin main hai!!) Electrical department marked it's achievements from filling number of patents to launching first departmental magazine of LDCE, under your guidance. Sir, we learned wisdom from you, and your teachings will always stay with us. After few years, when we will be again in alma mater, walking through that corridor will always have this in our talk, "Yaha humare Chudasama Sir bethte the." As it is well said that 'With great knowledge comes great responsibility', we all wish you good luck for your future endeavours!!

Shivani Pandey(2021 Batch)

Currently : Torrent Power

I just wanted to say thank you so much to all the faculties of electrical department for everything you've done for us as both a teacher and advisor. My first semester at LDCE was really hard, and not at all due to the actual course work. Between college life, goals, work schedules, I don't know how I would have carried on. Professor 's patience, encouragement and support mean everything to us. Whatever resources we needed, they pointed us in the right direction. All the faculties are so creative and passionate about his/her teaching and subject. They also helped us during all the projects and co-curricular activities, Even though it was not relevant to their subject/knowledge they guided us well in the right direction. We have the professors who all are not only masters at their own field but has broad spectrum of knowledge in other fields also which was extra benefit to us. Also during COVID times they made virtual settings not only for learning but also for examinations so that easily engaging to the students. They all are truly the reason why we can say ourselves "ENGINEER".

Thank you.

Smit Solanki

Electrical Engineer (2021 Batch)

Currently - Accenture

It was a happy accident to be part of Electrical Engineering and spend most precious years of my Life in LD. Friends made the my canvas colorful and faculties made it shiny. I would like to express my gratitude to every faculty who helped us fundamentally change our dreams into reality, passion into performance and theories into practical. It's been a year (but it feels like college is still not ended) since we went to college but to attend HOD Sir's lecture will always be missed. From making notes in Sajid Sir's lecture to exploring every screw in Mitul Sir's Lab, concepts found place in our minds and we found place in top notch companies.

We were encouraged and prepared not only at academic stands but also for 'out of the box' platforms. Our 'Ideas flowed always without resistance' in our department whether it's Raval Sir's approval for creative parts in magazine or Vasavada Sir's guidance for SSIP support. Every corner of department tells a story and writing this note made me nostalgic about the same.

To be part of our magazine as Alumni of Electrical Department will always be special part of college life.

Thank you professors for beautiful support and we heartily apologize for every mistakes.

Yash Chauhan

Electrical Engineer (2021 Batch)

Currently - Accenture

# FACULTY ACTIVITY

• It is our privilege that AICTE has been nominate Prof. Dr Munjal as our Distinguished Chair Professor (DCP) under AICTE-DCP scheme 2021. A DCP is a highly qualified and experienced superannuated Professionals who have made an unparalleled, exceptional professional contribution to society in their respective field/discipline.

• Dr Mahipalsinh Chudasama has delivered Expert session on Program level preparation and team visit for NBA on 22.03.2021 at AICTE-ISTE Sponsored STTP titled "Outcome Based Pedagogic Principles For Effective Teaching In Engineering" organised by GMB polytechnic, Rajula.

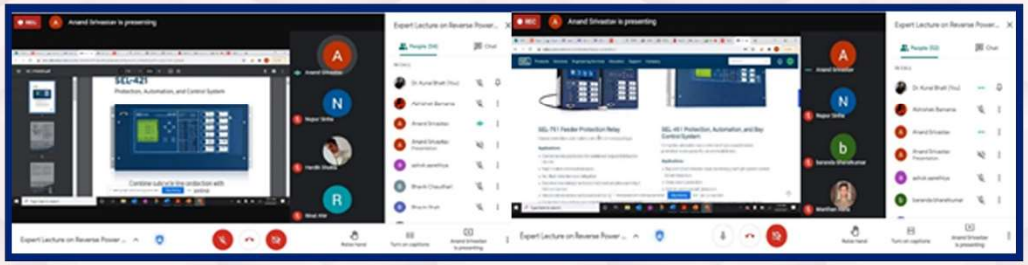
• Prof Mihir Vasavada has delivered Expert session on Basics of Patent on 12/05/2021 at AICTE-ISTE Sponsored STTP titled "Outcome Based Pedagogic Principles For Effective Teaching In Engineering" organised by GMB polytechnic, Rajula.

• Prof.Dr. M. C. Chudasma (Head Electrical Departmental) had delivered expert talk in FDP ' Role of Renewable Energy Sources in Power Systems arranged at GEC PATAN during 05/07/2021 to 09/07/2021.

• NBA visits were done for Instrumentation & Control and Chemical departments in Aug. 2021 and they are likely to get accredited in the near future. Faculty members from Electrical Dept. showed active contribution and support to the Accreditation of these two departments to showcase the strength of the institute.

# WEBINAR

The webinar was held on "Reverse power protection in power system" where almost 50 students and 07 faculty members have joined. In this webinar Sr. Protection & Control Engineer, CDG Engineers at ST Louis. MO. USA Sh. Anand Srivastav has discussed need and fundamentals about reverse power protection.energy sources. Due to inclusion of renewable in the power system, the complexity of the power system has been also increased by large. Which is challenging for power system protection engineer to design proper protection system for modern power system network. Also suggested few standard procedures to design the protection system for power system network. He has taken attention of attendees towards full automatic substation using Internet of Things (IOTs) that can lead demand in future.



The webinar was held on "Relay coordination in an Interconnected Power System Network" where almost 70 students and faculty members have joined. In this webinar Dr.Bhavesh Bhalja, Professor, EED, I.I.T. Roorkee has discussed Link-Net structure and its application to identify the primary and back-up relay (relay co- ordination system) to design the protection scheme. As inclusion of renewable energy sources and their time bounded availability. the complexity of the transmission network has been increased. Subsequently, it is difficult to design relay co-ordination system for primary and secondary relays which provides economical and efficient solution. He has also shared recent trades in Power system protection.

# FACULTY ACHIEVEMENT

Electrical department is proud of Prof. Fedrick Mackwan, who has been selected in Gujarat Secretarial Chess team for his contribution toward chess community. He has played incredible game and won third rank at state level and will go for national level.

A patent was published for 'Indirectly Heated Power Filled Cathode for Electron Gun' on 3/9/2021 by Dr.Mahipalsinh Chudasama(Prof. and Head), Shivam Gothi(Student), and Prof. Mitul G Patel(Asst Prof.). The patent number is 202021035225.

A patent was published for 'Universal Power Circuit' on 6/11/2020 by Dr.Mahipalsinh Chudasama (Prof. & Head), Prince(Student), Vishal Senta(Student), Mitul G Patel (Asst Prof.). The patent number is 201921048479.

# APPROVAL OF RESEARCH PROPOSAL

On March 8 th , 2021, CTE has sanctioned Rs. 2 lakhs for research proposal titled " Improvement of life cycle of transformer and induction motor using Point On Wave (POW) switching at low voltage level. (Vide their letter no- DTE-Research promotion-STEM/LA-2021/2976) under their scheme Research Promotion Under Technical Education-STEM.

**Principal Investigator** : Name and Affiliation

(1) Dr.Kunal A.Bhatt
Assistant Professor
Electrical Engineering Department
L.D.C.E. Ahmedabad.

**Principal Collaborator:** Name and Affiliation

(1) Prof. (Dr.) Bhavesh Bhalja
Associate Professor,
Department of Electrical Engineering,
Indian Institute of Technology Roorkee

**Co- Investigator :**

(1) Dr.C. H. Vithalani
Professor and Head of Department
(I/C Principal)
Electronics and Communication Department
G.E.C. Rajkot.

(2) Dr.U.L.Makwana
Associate Professor,
Electrical Engineering Department,
L.D.C.E.

Nowadays, in the era of micro grid and smart grid, switching transients at low voltage level has gained its importance a lot. In this regard, random switching of the power equipment generates high switching transients. Subsequently, it may decrease the life of the power system equipment and switching device. Further, it deteriorates power quality of the supply. Hence, it is required to pay attention about the switching transients at low voltage level.

**Objectives of the research :**

- To develop a novel POW technique to minimize the level of switching transients.
- Developed novel technique will be able to co-ordinate using Internet of Things (IoT).
- Designed prototype will help to improve the life cycle of electrical equipment.

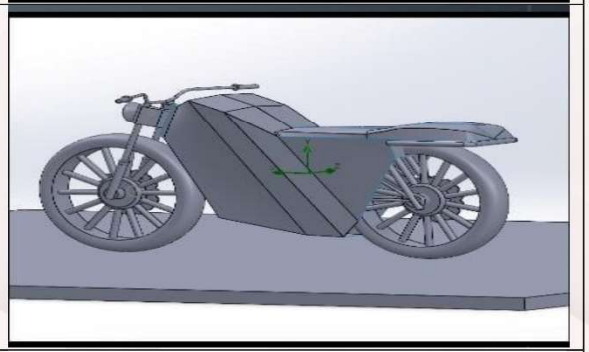
Hardware setup of this project work will be fully carried out at host institute (i.e. L.D.C.E. Ahmedabad, Gujarat). However, active support to identify different closing targets for energization of transformer and induction motor and simulation support will be provided by collaborated institute.

**Departmental Faculty members :**

1. Prof. Mitul G.Patel Assistant Professor, EED
2. Prof. Fedrik A. Macwan Assistant Professor, EED

# SSIP – INDRASHIL INNOVATIVE FOUNDATION

- Total 17 PoC Granted under SSIP till date
- 16 active today
- 2 Teams Patent Granted
- 1 Team has won first prize in Gujarat Industrial Hackathon 2019 & presented paper at IEEE conference

| Sr. No. | Project title | Team leader | Name of mentor | Description | Image |
|---|---|---|---|---|---|
| 1 | Acanthis (drone startup) | Het Shah | Prof Vihang Dholakia | Acanthis stands to develop drones to save and enrich lives majorly in different sectors. It can easily utilize in protecting and combating activities which may include surveillance, assist works and many other laws enforced activities. In medical sector also the major uses were in the organ transportation, relief works in affected areas etc. The most important needs of such drones were realized in the current pandemic and were developed in various perception based on their utilities. |   |
| 2 | Celer (EV startup) | Jay Shah | Prof Mihir Vasavada | Celer means 'fast' that aim's to achieve India's quick transition towards sustainable energy by solving some major problems of electric vehicles by majorly reducing the charging time, using effective control circuit to increase effective range and with an approach of using more safer and long life battery that assures people's satisfaction along with safety. |  |
| 3 | D-gravity (wheel balancing start up) | Dhruval Nai | Prof Fredrik Macwan | The startup aims at fulfilling the needs for safe transportation. The kit will be able to self-balance the vehicle it is mounted on and hence ensure safety of the rider. The team plans on making the bicycle autonomous in near future |  |

# ELECTRICAL VEHICLE : A NEW ERA

## Purpose of New Technology


The transition to electric mobility is a promising global strategy for decarbonizing the transport sector. India is among a handful of countries that support the global EV30@30 campaign, which targets to have at least 30% new vehicle sales be electric by 2030.

## An Overview of EV Charging Infrastructure

Electric vehicles (EV) can be charged in a variety of ways, depending on location and requirement. Accordingly, charging infrastructure for EVs is of different types and designed for different applications. Specifications and standards for EV chargers, also known as electric vehicle supply equipment (EVSE), vary from one country to another, based on available EV models in the market and the characteristics of the electricity grid. Electric vehicle supply equipment (EVSE) is the basic unit of EV charging infrastructure.

## Battery Specifications of Different EV Segments

In India, transport electrification over the next decade is expected to be driven by light electric vehicles (LEVs), comprising two-wheelers, three-wheelers and light commercial vehicles(LCVs). The first generation of e-cars is also powered by low voltage batteries. The second generation of e-cars, as seen in the upcoming e-car models, is powered by high-voltage batteries. Electric LCVs will comprise of both low-voltage and high-voltage vehicles, depending on their load-carrying capacity.

## Charging Methods

EV charging involves supply of direct current (DC) to the battery pack. As electricity distribution systems supply alternate current (AC) power, a converter is required to provide DC power to the battery or Battery Swapping method.

## Indian Standard for EV Charging

IS 17017 is the key EV charging standard in India comprising three parts and six sections. IS-17017- Part-1 provides the basic features of all EV charging systems.

IS-17017-Part-23 describes the requirements for DC charging stations, with power output of 50kW to 200kW. Beyond this, high power charging standards are required to cater to buses and other heavy vehicles.

## Gujarat Electric Vehicle Policy

(i) The Demand Incentive from the State shall be over and above any subsidies that are available from the Central Government through its promotional schemes and policies. The subsidy shall be disbursed directly to the customer via DBT mode from the State Transport Department on authenticating the document for the purchase of the vehicle.

(ii) The incentives for all types of electric vehicles shall be based on the electric vehicle battery capacity (i.e energy content measured in kWh). The threshold price to avail the subsidy for each vehicle segment shall be as per Government of India's FAME II scheme dated 8th March 2019,

| Sr No. | Vehicle Segment | Battery Capacity (kWh) | State Subsidy Amount (in Rs.) | Maximum ex-factory price to avail incentive (in Rs.) |
|---|---|---|---|---|
| 1) | 2 wheeler | 2 | Rs. 10,000/- per kWh | Rs. 1.5 lakhs |
| 2) | 3 wheeler | 5 | Rs. 10,000/- per kWh | Rs. 5 lakhs |
| 3) | 4 wheeler | 15 | Rs. 10,000/- per kWh | Rs. 15 lakhs |

(iii) The beneficiary can opt to get one time subsidy under any one scheme of the state government runs by the different departments. the beneficiary

**By Prof. H. N. Raval**

# ALUMINIUM FUEL CELL

From Stone age to Modern age human's are curious to invent something new to make life more easier. One such great invention is energy generation with the help of fossil fuels which present in our earth crust from last two decades we used enormous amount of natural resources and it is a limited source.

Mainly we use fuel in transportation system which is essential part of our life day without transportation system is difficult so that's why our scientist invented alternative of energy generation which we used in our electric vehicles called Lithium ion(LI-ION) batteries but it has own limitations like sometimes get discharged quickly, after certain period of time it gets damaged so these are some limitations of Lithium ion battery.

Log 9 material is a start up by the two IItians working to develop Aluminum fuel cell which provides 100% clean and green energy.

Aluminum fuel cell includes, Aluminum water and Graphene which is allotrope of carbon all the above things are easily available in our country but in case of Lithium ion we have to import it from other countries.

## Working of Aluminum fuel cell

In aluminum fuel cell aluminum cassette in the middle and two graphene membrane on both sides. The graphene membrane keeps carbon dioxide out while letting oxygen in.

For generation of energy water flows in and it mixes with oxygen the chemical reaction converts aluminum into aluminum hydroxide generation energy which power up a vehicles or home.

Chemical equation:

$O_2 + Al + H_2O$ = Energy generation + Oxidization


## Advantages

This is a completely circular and recyclable energy source, by product of the reactant is aluminum hydroxide ($Al(OH)_3$ ) can be remelted back into aluminum using clean energy.

100% Sustainable, aluminum is completely recyclable.

No emission, No toxicity.

Car Run 1000km without charging, after aluminum cassette is dispose it replaced with another one it just process of 2 minutes and our vehicle ready to go next 1000km.

**"The path to 100% Clean energy mobility can be much simpler and more economical with aluminum fuel cell than it is with an other technology like lithium ion" says Akshay Singhal Founder Log 9 material.**

# EKARSHI

L.D. College Of Engg., Electrical Engg. Dept. has signed an MOU with Ekarshi Ltd. for internship of students of Electrical Engineering .

Ekarshi Ltd. develops open source software/ libraries and software designs, hardware, hardware designs for the Indian Industry .For internship, 3rd sem. Students have been targeted. The motto behind this is that they can continue their work upto 8th Sem. This work is to be done beyond college hours.

The scope of internship will include development of hardware designs, software, software libraries and anything derived from the same. This will include systems and sub-systems, components, modules which the interns would deliver. These items can be used independently or can be put together to create an operational system.

Ekarshi would provide all the development tools, boards& licenses, for the interns to deliver the prototypes and final modules. They will provide access to simulation and prototyping software when required. Provide all the Chips, Software, components that will be required in the Internship Project.

Ekarshi will provide all the training material.This training material will cover the tools and domain knowledge of the module allocated to the Intern. It will provide technical experts who will guide the student.Ekarshi will allocate mentors who will track and report the Intern's progress.

Modules will be used to develop Autonomous Aerial/Marine/Land Vehicles, develop modules for control units and sensors, Support systems like Power Systemsto be used by Multi-Axis Mobility Controller.

The following students of B.E. Sem. 3 have started internship work with Ekarshi Ltd.


Shyara Shwetal


Abhay Gosai


Soni Vedant


Shlok Mandaliya


Sathwara Dishaben


Pranvi Patel


Mitra Om

# STUDENT ACHIEVEMENT

Despite the pandemic, LDites have shown an enthusiastic performance and many students from our department were placed in prominent industries like Adani, Torrent Power etc.

Many students qualified for higher studies and gained admission in renowned Universities such as University of Windsor, University of Ottawa.

Industrial training is an important part of grooming budding engineers. It provides hands on experience which goes a long way in imparting skills to students. Our students right from the 3rd sem to the final year enrolled in various internship programmes and undertook 2 -3 weeks ot training in private and semi-government sectors. 7 Students of 3rd sem were a part of internship with Ekarshi Ltd.

# SEM TOPPER

**3rd Sem**
**Shah Ratnam**

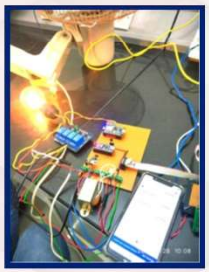
**5th Sem**
**Patli Vishal**

**7th Sem**
**Kothari Sneh**

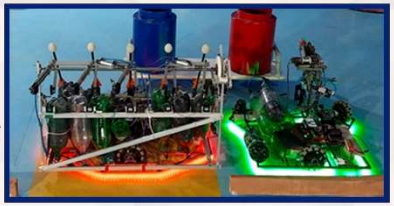
This is Mitra Om Umesh who stood first in college level singing competition where participants performed songs, poems and lokgeet of Shri Zaverchand Meghani.

# GROUP ACTIVITY

For the solution of solar panel cleaning on regular interval, the hackathon team was lead by Shiva Gothi and Ravi Hirani under mentorship of Prof. Mihir Vasavada. We know that efficiency of solar system drastically drops with dust accumulation on solar PV system. Solar panel cleaning problem at regular interval therefore generation are decreasing due to dust on the solar panel output is decreasing. So our student make some arrangement to clean the solar panel with more efficiency, so people can use commercially and resedential for households needs. The regional round was held at IITRAM in January 2020 & Jury round was held at LJIT in August 2021.



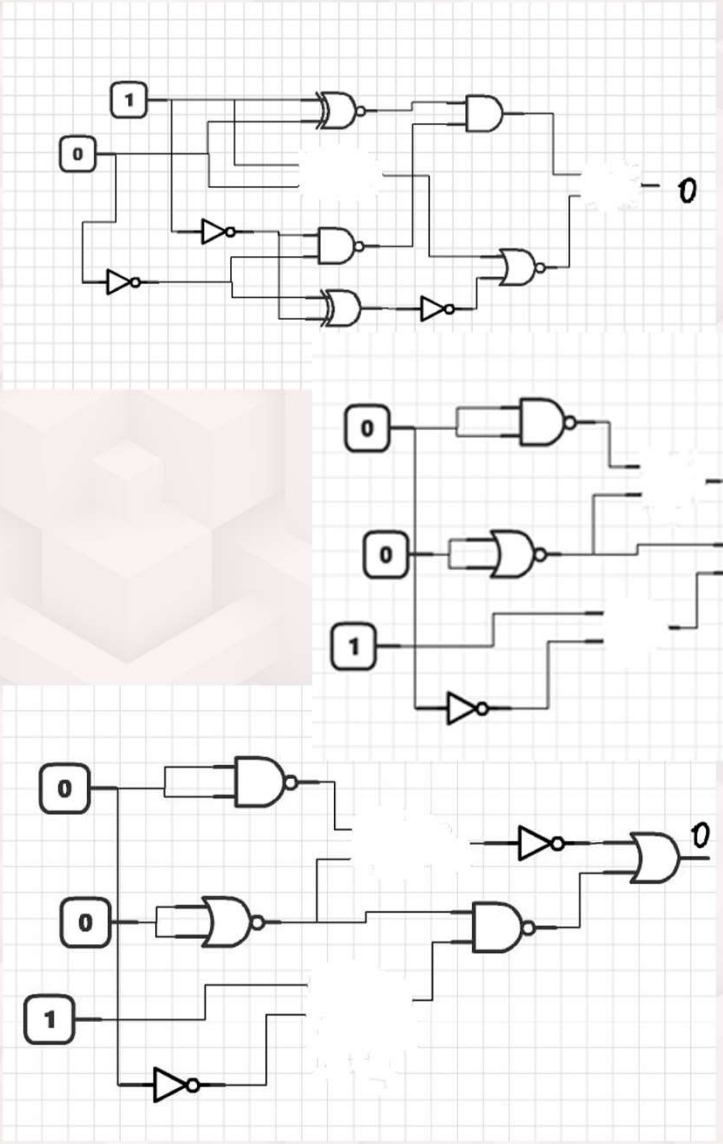
For the solution of temperature based fan control, the Hackathon team was lead by Parth Raste and Keval Patel under mentorship of Prof Mitul Patel. Actually it is not necessary to operate fan when air condition is in working mode, this project gives idea to control fan in co-ordination with air condition with Air Conditioner by using temperature control system, which will save valuable electrical energy which helps to save electricity bill . The first round was held at IITRAM in January 2020 & second round was held at LJIT in August 2021.



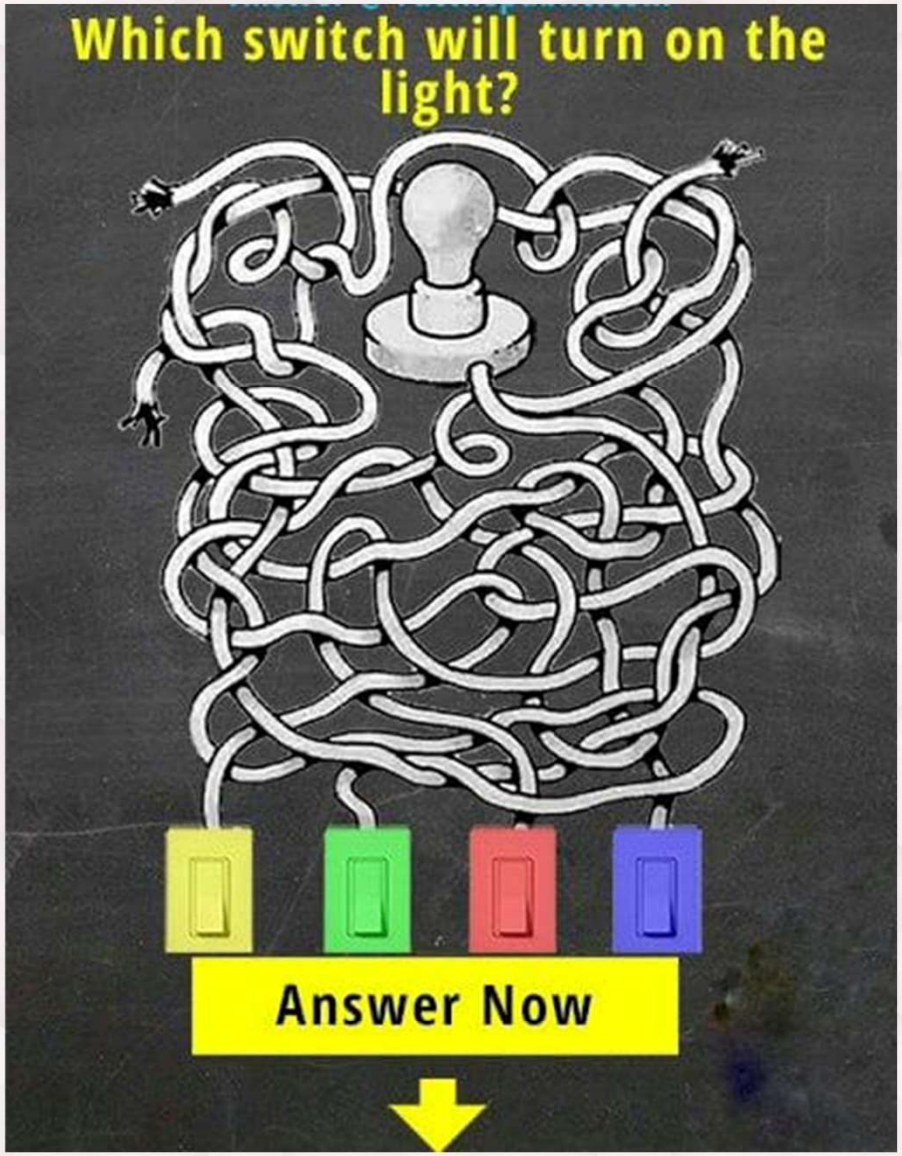
As per tradition, the technical team of Robocon club of LDCE has taken part successfully in DD robocon national competition and make mainly two robot TR and AR according to this year theme. They worked hard throughout the year for finding proper mechanism to compete and did many tests to find proper calculation for throwing arrow with the pressurized air and hollow shaft. This technical team includes students of our department Raghuvir Gondaliya, Jay Shah, Ratnam Shah, Gautam Reshamwala and other fellowmates from various department like Electronics and communication, Computer science, Mechanical, Bio medical etc.

MechUAL is a machine Startup with a mechanised structure cleaning sludge and severe blockages of sewer, septic tank, and manholes without physical contact of human with waste. Our aim is to completely eradicate an inhuman practice of Manual Scavenging being unsafe, unsanitary, and undignified.

## GUMNAM HAI KOI




## BHOOL BHULAIYAA



मृगजल

भरी दोपहरी मे पानी सा नज़रआता है ,
उसे देख प्यासा दौड़ा चला जाता है।
निकट पहुँचते ही गायब सा होजाताहै ,
और आखिर मे प्यासा , प्यासा ही रह जाता है।।

जीवन की कठिन राह पर सुख भी है मृगजल की भाँती,
दिखाकर खुद को सभी जगह पर , छल जाता है राही को।
राही भी चला जाता है पीछे-पीछे उसे पाने की आश मे ,
किन्तु ' मृगजल सी फितरत है सुख की भी ' वह हाथ कहाँ आता है।।

अंत मे थक-हार कर निराश राही जब दर्पण के सन्मुख आता है ,
खुद को एवं सुख को जब वह दर्पण के भीतर पाता है।
आशंकित भाव से जब राही उसे पाने को हाथ बढ़ाता है ,
मृगजल सा सुख वहाँ से भी गायब हो जाता है।।

आग-बबूला हुआ राही ज़ोर-ज़ोर से चिल्लाता है ,
" मैने गँवा दिया पूरा जीवन फिर भी तू मेरे पास क्यो नही आता है "
तब सुख भीतर ही भीतर मंदमंद मुस्काता है ,
और राही को अपनी बात बताता है।।

"मै हर पल तेरे पास रहा , पर तु ना मुजे जान पाया ,
तेरे भीतर ही था मै तो , पर तु ना मुजे पहचान पाया।
अरे नादान मै कोई भैतिक चीज नही जो तु मुजे पाले ,
मै तो केवल तेरे मन का भाव हु जो हर क्षण तेरे साथ चलता रहा "

जिसे पाने की चाह मे पूरी जिदगी बिता दी वो तो मेरे पास ही था ,
यह जानकर राही खूब पछताया और बोला।
"काश कुछ पल खुद के पास बैठकर खुद ही मे तुजे खोजा होता ,
तो आज निराशा और दुख की जगह तू मेरे पास बैठा होता "
By: Prahar Jadav
7th sem , Electrical dpt.

सपनो के साथ उड़ते हुए परिदे को भी,
घूमते हुए मानो यू अरसा लग जाए।
लिखने जो जाओ उसके बारे मै तो,
हमारे सारे जज्बात भी तो कम पड़ जाए।
कुछ ऐसी है हमारी L.D.
जिदगी की हसीन यादो के सफर मे,
एक सुनहरा सपना और जुड़ जाए।
बिना कोई मंजलि, बिना सफर के भी,
ख्वाबो की एक बड़ी सी किताब खूल जाए।
कुछ ऐसी है हमारी L.D.
Mechanical circle से canteen और,
Canteen से annexe जाने का सही रास्ता।
उसी बीच होने वाली छोटी मोटी तकरार,
और दोस्तो के दिलो की वो हसीन दास्ता।
कुछ ऐसी है हमारी L.D.
Nescafe मे चाय की प्याली और,
दोस्तो के साथ बैठे हुए खूब गप्पे लड़ाना।
अंतमे फिर वो आपस की नोकझोक मे,
Lecture के सारे notes को दोहराना।
कुछ ऐसी है हमारी L.D.
Civil lawn से Department की ओर,
जाते वो दोस्तो संग की आंख मिचौली।
और हसी मजाक के बीच की शरारते,
फिर दोस्तो के हसीन खयालो की रंगोली।
कुछ ऐसी है हमारी L.D
हारे हुए को भी जहा उम्मीद मिल जाए,
भटके हुए को एक इशारा मिल जाए।
निराशा को भी वो नई आशा दे जाए,
और गिरते हुए को भी वो सहारा दे जाए।
कुछ ऐसी है हमारी L.D.

_ गौतमीचौधरी

Ronakbhai Vinodbhai Patel
Electrical department
3rd semester

Shlok Mandaliya
Electrical department
3rd semester

Our 2020 batch student -
Dharmik has donated his books
for the department

Mohd Sibindy also donated
books for the department
library

# THE EYE MANTRA

Hello are you facing some eyes problems while using the gadgets then why are you waiting follow the seven eye exercises that may help to comforts your eyes.

## 1. The 20-20-20 rule

Digital eye strain can become a problem for people who need to focus on a computer screen all day while working.

The 20-20-20 rule helps ease digital eye strain. The rule is easy: a person needs to look at something 20 feet away for 20 seconds every 20 minutes while working on a computer.

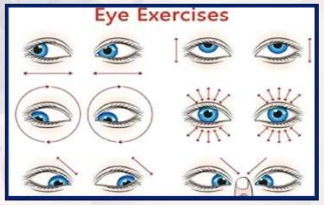
## 2. Focus change

The focus change exercise can also help with digital eye strain. People should perform this exercise while sitting.

1. Hold one finger a few inches away from one eye.
2. Focus the gaze on the finger.
3. Move the finger slowly away from the face.
4. Focus on an object farther away, and then back on the finger.
5. Bring the finger back closer to the eye
6. Focus on an object farther away and repeat it 3 times.

## 3. Eye movements

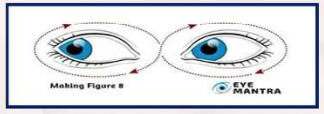
This eye movement exercise also helps with digital eye strain.




1. Close the eyes.
2. Slowly move the eyes upward, then downward.
3. Repeat three times.
4. Slowly move the eyes to the left, then to the right.
5. Repeat three times.

## 4. Figure 8

The figure 8 exercise can also help ease digital eye strain.




1. Focus on an area on the floor around 8 feet away.
2. Move the eyes in the shape of a figure 8.
3. Trace the imaginary figure 8 for 30 seconds, then switch direction.

# THE OCEAN OF MONEY

In today's life everyone heard about stocks, share market, investment but some of person don't know the meaning of this things, so let's see what this thing means.

Stock means "The capital raised by a company or corporation through the issue and subscription of shares."

The stock market refers to public markets that exist for issuing, buying, and selling stocks that trade on a stock exchange or over the counter. An efficiently functioning stock market is considered critical to economic development, as it gives companies the ability to quickly access capital from the public.

But some people don't start investment because they heard from the people who lose their money in investment that Investment is Gambling. But it's not true if you have knowledge about the investment that it is known as prediction. If you want to invest money but you don't have any knowledge than there are other options like mutual funds and other private companies who invest your money.

If you make a fixed deposit of $180 than it become only twice after 15 years but if we invest in stock, then the situation is quite different also there are different types of the stocks are there based on the investment and other parameters it is classified such as

1) Penny stocks
2) Growth stocks
3) Cyclical stocks
4) Dividend stocks
5) Defensive stocks
6) Blue chip stocks

Everyone knows the investment is risky but those take risks get the better results because **"Risk hai toh Ishq hai"**

# ABROAD STUDY

Dharmik Trivedi

Hello! Myself Dharmik Trivedi. My life at LD was 2016-Corona. Not only I missed Kaizen-2020 but also a final year project (one and only opportuni ty for technical interactions with faculties). However, I felt totally blessed observing the people who joined LD in 2020/2019 missed (and that we didn't!)

A couple of things before we start, I chose Electrical Engineering because I did not get in Mechanical, one astrologer told me and my personal dream to provide electricity in every part of India; I chose LD because friends did. Now, I got admission in Masters of Engineering in Electrical and Computer Engineering at Carleton University, Canada; I chose abroad studies to make my profile stronger.

Abroad studies? There are two paths (generally): (1) take an experience of 1-2 years after graduation and go (2) go. Whatever path you choose, you have to start the preparation (1) before 1 year for Masters (2) before 6-8 months for other courses. Note, that you will get the degree if admitted to University and a certificate, if in college. Colleges do not provide Masters or PhD programs, it has diploma, pre-masters or other courses, which are Certification courses. The entire process of admission: (1) Before admission (2) After admission. The simplest way to understand the 'Before' is 'not going to an agent'. I mean, do some background research, i.e. search universities/colleges websites-> Academics->Programs-> Graduate Programs ->Electrical and Computer Engineering->Admissions. Some terms: we call 'Masters study', they call 'Graduate study'; 'subjects': 'Courses'. Two paths are there for Master's study-(1) M-Eng(Master's of Engineering): Projects and courses, Max. 2 years, No Scholarships, Apply direct through university's website, More chances of admission (2) MASc(Master's in Applied Science): Thesis instead of a project, Scholarship available, program length depends upon the guide, You have to mail your research paper to professors, if they allow you to do research under them then only you can apply for that university, less chances of admission unless you have published at least 2-3 research papers. Generally, students go for M-Eng option because they don't have research papers and want to cover the study in the span of two years. However, peers with good research experience take MASc route to save their study expanse (20-25 lakh! perhaps more). In addition, there are three intakes: Fall(Sept), Winter(Jan) and Summer(April) in which you can start study at university/college. Fall intake is the most preferable intake as it offers all the programs and courses.

Now, what to do in 'Before admission'? Let's take an example. Consider Parth/Jay/Dhruv of your group. If Parth has finalized M-Eng in Civil Engineering program in Canada, then (1) he would make a list of all universities in Canada, offering his program (2) will read about Program Overview, Minimum Admission Requirements, Available Intakes, Application Deadlines, Required Documents for International students, Fee Structure and English Language Requirement (3) will make a table and paste the above contents for each university. For M-Eng, Parth needs overall 6.5 Bands(min 6.0 Band in each section) in IELTS exam. Generally, the application deadline for Fall intake is Jan/Feb for most universities. For application in university, Parth will need: 10th Marksheet, 12th Marksheet, All Semester Marksheets(till 6th sem if applying in 3rd year), Provisional/Final Degree Certificate(not compulsory if applying in 3rd year), Transcript, CGPA/CPI to percentage conversion certificate(backside of any semester mark sheet serves this), Letter of Recommendation-LOR(max 3), Statement of Purpose-SOP, Research and Publications(if done), Resume/CV and 150-200$. Google the terms: 'LOR' and 'SOP', if you haven't heard. He would Sign up and make the university account(just like a formal sign-up what we do when installing a new mobile app) to do an application. The most crucial criteria for Parth to get admission in M-Eng are SOP, CGPA/CPI, and Parth's publications(not compulsory, but better if having). After application, he has to wait min 1 to max 6 months for the university to respond. It really depends upon the applied university.

After admission? Parth will get a letter stating approval/rejection. If got the desired university, will do Party first but sadly, then comes the visa process which is not an interesting one! Two paths to apply for a student visa: (1) SDS(Student Direct Scheme): Pay tuition fees of 2 terms(Sept-Dec; Jan-April) (which means 1st year tuition fees in other words), less processing time, most preferred path (2)non—SDS: Pay tuition fees of 1 term(Sept-Dec) only and show liquid funds(FDs, Bonds) equivalent to 2nd term (Jan-April) fees, more processing time, less preferred. To apply for a visa in SDS process, Parth needs (1) Medical Examination(done by KD/Apollo Hospital) (2) Paid Tuition Fee Receipt(3) GIC (means open a bank account in Canada's bank, deposit 10000 CAD in it (4)Offer Letter. Let's break down these all. Canada has approved KD and Apollo hospital to conduct a medical exam to check whether Parth has any medical condition which does not satisfy their criteria. He has to pay 6400 INR for a medical exam. Tuition fees payment can be done from his university's account. GIC-Guaranteed Investment Certificate means Parth will open a bank account in Canada and deposit 10000 CAD for his living expanse. Offer Letter or Acceptance Letter states your admission and program details.

Visa fees? 250$ to apply for the student visa. See, the entire process after the IELTS examination, Parth will need a consultant to guide. Many consultancies do this without any charge not because they are social workers because they get a big amount from your applied universities/colleges for sending students to them. After visa application, Parth will book a Biometric(they will take his fingerprints and a picture) appointment on the VFS website. Now? Wait... Wait…& Wait. One lucky day, Parth will get PPR (Passport Printing Request) in the visa account, which means they will collect the passport of Parth, will print the student visa, and deliver it to him. When the courier boy will deliver Parth's passport(visa printed) after 15 days, 'Ghar me Ullas ka mahol hoga'. After all, it was a year-long process!

I haven't covered the visa process of USA which is slightly different and the entire admission process in detail but you will be having a glimpse after reading this. Of course, you will need a lot more guidance, and the best way to get that is: ask your friends/seniors/relatives who are currently at your desired place. Reach out to them. You will need genuine and constant help throughout the process. In my batch, we are 5 people in Canada and 2 in USA as of now. You may contact anyone for guidance: Kenil Doshi, Pathik Patel, Vishwa Patel and Prem Patel; USA: Hir Gandhi & Jeet Dhoriyani

"Enthusiasm is the electric current that keeps the engine of life going at top speed"

- W. Clement Stone