

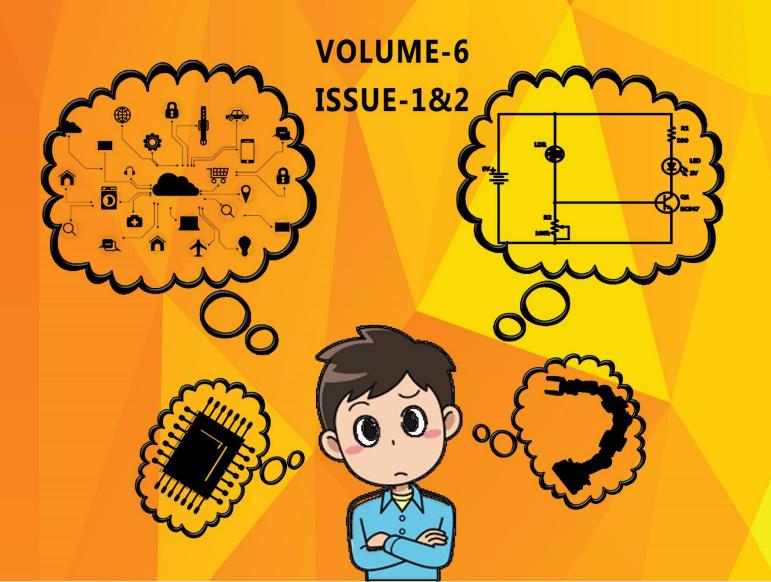
## Raj Kumar Hoel Institute Of Technology

5th K.M. STONE, Delhi-Meerut Road, Ghaziabad (U.P.)-201003

# UDGHOSH

THE VOICE OF ECE DEPARTMENT

DECEMBER 2019 - MARCH 2020



## PATRONS



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Chief Patron



MR.AKSHAT GOEL

Patron



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Patron



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Patron



DR.R.K YADAY

Patron



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Patron





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KINJAL SINHA

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ADITYA SHARMA

Member



SHRAYANSH GUPTA *Member* 



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#### INDUSTRIAL VISIT TO CENTRAL ELECTRONICS LIMITED GHAZIABAD

An industrial visit to "Central Electronics Limited", Sahibabad, Ghaziabad, was organized by Electronics and Communication Department of RKGIT on Wednesday, 19<sup>th</sup> February 2020. 40 students along with Mr. Rajneesh Patel and Ms. Renu Rani visited CEL. Central Electronics Limited is a Govt. of India Enterprise under the Department of Scientific & Industrial Research (DSIR), Ministry of Science & Technology. It was established in 1974 to commercially exploit the indigenous technologies developed by National Laboratories and R&D Institutions in the country. CEL has developed several products for the first time in the country through its R&D efforts and in close association with the premier National & International Laboratories including Defense Laboratories.



At 10:00 am the students reached Central Electronics Limited. There the representatives gave the presentation on what CEL helps out in and what all are their main objectives. They also told about their achievements and accomplishments. During the presentation, they provided light tea to the students. After the presentation, they also encouraged the students to join their monthly professional courses.



After the presentation, they divided our students into batches of 20 students per batch for the visit and interaction with the industry person. The industry representatives of Central Electronics Limited conducted informative sessions for the students. They told the students about the various components involved in the making of solar panels and the involvement of different engineering branches in the creation of a single by-product.



During the session, many students asked different questions to the company representative on the working of various machines, current demanding technology, market scenario, etc.. The visit came to an end at 01:00pm.

Finally, the team left the premises at 01:30 pm and reached the college by 2:15 pm. It was an informative, interesting and successful visit. The students were able to understand the live solar- electronics applications and the importance of solar technology etc.

#### INDUSTRIAL VISIT TO VOLTRANS ENERGY, SAHIBABAD.

The industrial visit was organized for 57 students of 2nd year on 3rd March 2020. The students learnt how PV system converts sunlight into electrical current with the help of solar cells. They also assembled the modules and learnt the function of electrical & electronic equipment used in a plant on the site. Students participated enthusiastically in theoretical and practical activities taken by the trainers on site. Then electrical checking of PV modules, SMB/SCB, inverters, transformer, LT/HT panel, cable and connector was demonstrated.

PV System consists of solar cells, inverters and a substructure with which solar cells are mounted on the roof surface. As soon as sunlight hits the solar cells, a direct current is created in the silicon wafers of the cell. The dc flows to an inverter that converts to ac with a voltage of 230V. The potential in the solar industry and job opportunities in the coming years was also discussed. Installation of plant mounting structure was first explained and then it was done practically on the site by the students.

The students found the visit very beneficial.





## SCOPE FOR STUDEN S

#### PRIVATE SECTOR

- · TATA POWER SOLAR SYSTEMS PVT LTD
- STERLING & WILSON
- · LARSEN & TOUBRO
- · AMPLUS
- · AMP ENERGY
- · AZURE POWER
- · TITAN ENERGY SYSTEMS
- KOTAK URJA PVT. LTD.
- ADANI
- VIKRAM SOLAR LTD.
- IAKSON
- GANGES INTERNATIONAL PVT LTD

#### GOVERNMENT SECTOR

- BHEL (Recently bagged 565Cr order for Solar Power Plant in Telangana)
- NTPC (Investment approval for 160MW, Solar Power Project in UP)
- · ONGC
- GAIL (Seeks foray in Solar Power Plants & Battery charging station)
- · MNRE
- SECI )
- STATE CENTRED ORG. (UPNEDA, HREDA, PEDA etc.)

And many more..



2020/03/03 13:04



#### INDUSTRIAL VISIT TO SUKRITI VIDYUT UDYOG PVT LTD.

An Industrial visit to Sukriti Vidyut Udyog Pvt. Ltd. was organized for the students of the department on 4th March 2020. 40 students were accompanied by two faculty members Mr. Sachin Tyagi and Ms. Richa Gupta. The company was established in 1972. It has made a name for itself in the list of top suppliers of Steel and Stainless-Steel Products and components in India. Sukriti Vidyut Udyog is listed in Trade India's List of verified sellers.



Company's authorized capital stands at Rs 15.0 lakhs and has 60.000004% paid-up capital which is Rs 9.0 lakhs. Sukriti Vidyut Udyog Private Limited last annual general meet (AGM) happened on 12 Sep, 2017.

Sukriti Vidyut Udyog Private Limited is majorly in Manufacturing (Machinery & Equipments) business from last 48 years and currently, company operations are active. Current board members & directors are SUDHIR MOHAN MITTAL, DEEPTI MITTAL and SUNAND MITTAL.

The students were divided into batches of 20 students each. The visited started with the introductive sessions followed by very informative sessions by the company professionals. They told the students about the various components involved in the making of wire and the involvement of different engineering branches in the creation of a single by-product. The representative also motivated the students to select their domain and area of interest and guided them to select the areas which have more importance in the electronics market.



During the session, many students asked different questions to the company representative on the working of various machines, current demanding technology, market scenario, etc. and he cleared the doubts and myths which were in the students about the technologies and the electronics sector.



#### EXPERT TALK ON CONTROL SYSTEM

An expert talk on control systems was organized for the students of 3rd year on 27th Jan 2020. The resource person for the talk was Mr. Manoj Yadav. Mr. Manoj is M.Tech (Communications) from IIT Kanpur. He secured 121st rank in GATE examination in 2013.

Control engineering is the engineering discipline that focuses on the modeling of a diverse range of dynamic systems (e.g. mechanical systems) and the design of controllers that will cause these systems to behave in the desired manner. Although such controllers need not be electrical, many are and hence control engineering is often viewed as a subfield of electrical engineering. However, the falling price of microprocessors is making the actual implementation of a control system essentially trivia. As a result, focus is shifting back to the mechanical and process engineering discipline, as intimate knowledge of the physical system being controlled is often desired.

Control System (CS) is used to control position, velocity, and acceleration is very common in industrial and military applications.

There are many applications of control system.

In robotics.

Traffic system.

Modelling of system (to check whether it is economical and reliable).

For radar tracking system.

The students found the session very useful and informative.



### SHINING STARS OF THE DEPARTMENT (ODD SEM 2019-20)

#### 4th Year

| S.No. | Roll No.   | Name               | Percentage |
|-------|------------|--------------------|------------|
| 1     | 1603331037 | Arpit Awasthi      | 87.9       |
| 2     | 1603331099 | Priya Gupta        | 87.2       |
| 3     | 1603331119 | Sakshi Khugshal    | 86.3       |
| 4     | 1603331123 | Sandeep Yadav      | 89.9       |
| 5     | 1603331144 | Soumya Gupta       | 87.0       |
| 6     | 1603331012 | Aditya Tripathi    | 90.9       |
| 7     | 1603331026 | Ankit Kumar Maurya | 89.9       |
| 8     | 1603331062 | Kanupriya          | 87.6       |
| 9     | 1603331064 | Khushi Saxena      | 85.0       |

#### 3rd Year

| S.No | Roll No    | Name                    | Percentage |
|------|------------|-------------------------|------------|
| 1    | 1703331020 | Anmol Kukreja           | 89.7       |
| 2    | 1703331110 | Shreya Soni             | 87.0       |
| 3    | 1703331066 | Namami Patairiya        | 86.9       |
| 4    | 1703331075 | Prakhar Varshney        | 86.9       |
| 5    | 1703331121 | Vipul Kumar<br>Upadhyay | 87.1       |
| 6    | 1703331123 | Vishal                  | 86.6       |
| 7    | 1703331012 | Akshat Mitra            | 86.4       |
| 8    | 1703331037 | Disha Srivastava        | 89.3       |
| 9    | 1703331055 | Krati Gupta             | 89.4       |

#### 2nd Year

| S.No | Roll No    | Name         | Percentage |
|------|------------|--------------|------------|
| 1    | 1803331033 | Ayush Pandey | 82.8       |
| 2    | 1803331048 | Isha Saxena  | 81.6       |

#### VARCHASVA' 2020



The VARCHASVA'2020, the National Annual Sports meet of RKGIT was held on 15th - 16th February 2020 under the leadership of Dr. Pavan Kumar Shukla, Chairperson SAC. Teams from more than 50 engineering colleges and 15 universities participated in various sports like football, basketball, volleyball, badminton, kabaddi etc.



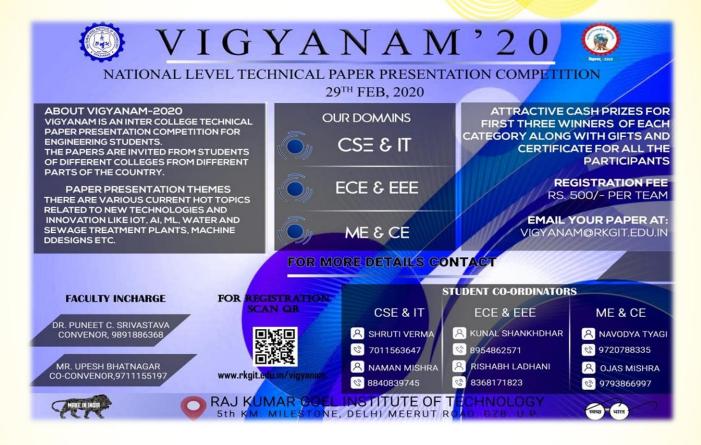
In this mega annual meet, a huge number of students participated in different competitive sports events, under the Sports Council of RKGIT from various institutes & universities of Delhi & NCR region. For every sportsman, sports are the epitome of hard work and dedication. To get the pinnacle of their sport, even the most naturally gifted sportsman have to give it their all. Sports are about those incredible moments where sheer human will and desire overcomes the odds. These are the moments we remember. Being in the technical field requires skills like hard work, dedication, and target for achieving the only single goal.

While the modern era is focusing on making professionals, who are busy in focusing and altering their skills to get a good career, it is our duty as a few of the most promising institutes to ensure an all-round development to our budding professionals. The VARCHASVA-2020 was a huge success.



#### VIGYANAM-2020

"Vigyanam" – The National Level Technical Paper Presentation Competition, was held on 29th of February, 2019. It was an event open for all branches. More than 125 research papers were published and presented in the event. The Convener of VIGYANAM-2020 was Dr. Puneet Chandra Srivastava.



This National level event witnessed students from a large number of colleges. Students from various reputed colleges of Delhi-NCR circuit like AKG, Galgotia, ABES, and KIET also participated to show their talents in the event.



A time slot of 7 minutes was given to each team to complete the presentation. There were in total 6 jury members, from different colleges and industries and final judgment was based on the presentation delivered by each team. There was a great enthusiasm in the participants. The event was a great success altogether.

### STUDENT PUBLICATIONS

| S.No. | Name of Student   | Title   | Date                     | Details of Publication |
|-------|---|---|--------------------------|------------------------|
| 1.    | Arpita Gupta  | Digital Smart pen   | 7th -<br>8th Feb<br>2020 | MAAE-2020<br>AKGEC     |
| 2.    | Piyush Mishra, Ashay<br>Srivastava, Pankaj Gahlot       | Electronic Waste (E-<br>Waste)                            | 29th<br>Feb<br>2020      | VIGYANAM -<br>2020     |
| 3.    | Rishabh<br>Rishabh<br>Kumari  Ladhani,<br>Pal, Pratibha | Solid Waste Management<br>through ICT                     | 29th<br>Feb<br>2020      | VIGYANAM -<br>2020     |
| 4.    | Namami Pataria, Richa<br>Singh, Varun Mishra            | Solar Passive Building<br>Technology                      | 29th<br>Feb<br>2020      | VIGYANAM -<br>2020     |
| 5.    | MS Kirtana, Akshat<br>Gaur, Anushka Mishra              | Aircraft GPS tracking                                     | 29th<br>Feb<br>2020      | VIGYANAM -<br>2020     |
| 6.    | Shiv Pratap Singh, Riya<br>Bajpai, Ritesh Mishra        | Flexible Display  | 29th<br>Feb<br>2020      | VIGYANAM -<br>2020     |
| 7.    | Bhupendra Singh, Krati<br>Gupta, Madhuram Dixit         | StarLink- Making the<br>World a little more<br>Accessible | 29th<br>Feb<br>2020      | VIGYANAM -<br>2020     |
| 8.    | Aman Jaiswal, Abhishek<br>Gupta, Ayush Kumar<br>Verma   | Plant Leaf Disease<br>Detection using MATLAB              | 29th<br>Feb<br>2020      | VIGYANAM -<br>2020     |
| 9.    | Arpita Gupta, Shashwat,<br>Srishti Srivastava           | Digital Smart PEN: How it<br>Can Help in Hospitals        | 29th<br>Feb<br>2020      | VIGYANAM -<br>2020     |

| 1 | 10. | Zeeshant Akhter, Pankaj<br>Yadav, Ankit Kumar                       | Solar Powered Speakers   | 29th<br>Feb<br>2020 | VIGYANAM -<br>2020 |
|---|-----|---|--|---------------------|--------------------|
| 1 | 11. | Rishabh Umrao, Vivek<br>Kumar Srivatava, Shreya<br>Sharma           | Biometric Authentication   | 29th<br>Feb<br>2020 | VIGYANAM -<br>2020 |
| 1 | 12. | Harshit Kapil, Satyansh<br>Rai, Mayank                              | Solar Tree   | 29th<br>Feb<br>2020 | VIGYANAM -<br>2020 |
| ] | 13. | Shrayansh Gupta Vishal<br>Tiwari, Jay Vardhan<br>Pandey             | Life Saver Drone Support<br>System                                 | 29th<br>Feb<br>2020 | VIGYANAM -<br>2020 |
| ] | 14. | Nishant Srivastava, Mansi<br>Singh,Disha Srivastava                 | <b>Box Pushing Technology</b>                                      | 29th<br>Feb<br>2020 | VIGYANAM -<br>2020 |
| ] | 15. | Abhishek Kumar<br>Srivastava, Deepanshu<br>Nigam, Atulya Srivastava | Hybrid Electric Vehicle  | 29th<br>Feb<br>2020 | VIGYANAM -<br>2020 |
| ] | 16. | Kinjal Sinha, Himanshu<br>Chaudhary, Mohd. Imran<br>Khan            | Smart Automobiles  | 29th<br>Feb<br>2020 | VIGYANAM -<br>2020 |
| 1 | 17. | Pranjal Sharma ,<br>Prashant Kumar,<br>Ravindra                     | Offgrid Solar System   | 29th<br>Feb<br>2020 | VIGYANAM -<br>2020 |
| 1 | 18. | Disha Srivastava, Mansi<br>Singh, Suraj Singh                       | Accident Detection and<br>Immediate Assistance                     | 29th<br>Feb<br>2020 | VIGYANAM -<br>2020 |
| 1 | 19. | Atul Pundir, Arpit<br>Awasthi, Aditya Chawla                        | Li-Fi :The Latest<br>Technology in Wireless                        | 29th<br>Feb<br>2020 | VIGYANAM -<br>2020 |
| 2 | 20. | Sonali Singh, Apoorv<br>Tyagi, Ankit Gupta                          | Artificial Intelligence  | 29th<br>Feb<br>2020 | VIGYANAM -<br>2020 |
| 2 | 21. | Akash Chandel, Pankaj<br>Kumar Singh, Shobit<br>Rana Bhatt          | Broadband Access using<br>Wireless over Multi Mode<br>Fiber System | 29th<br>Feb<br>2020 | VIGYANAM -<br>2020 |

| 22. | Mriga Khanna, Anmol<br>Kukreja, Prakhar                | RFID Tag               | 29th<br>Feb<br>2020 | VIGYANAM -<br>2020 |
|-----|--|------------------------|---------------------|--------------------|
| 23. | Adarsh Tiwari, Vikrant<br>Tiwari, Sparsh Mathur        | String Theory          | 29th<br>Feb<br>2020 | VIGYANAM -<br>2020 |
| 24. | Adarsh Singh, Amrish<br>Yadav, Dheeraj Sharma          | Into the Quantum Realm | 29th<br>Feb<br>2020 | VIGYANAM -<br>2020 |
| 25. | Nishant Srivastava,<br>Anushka Agarwal, Shreya<br>Soni | OLED                   | 29th<br>Feb<br>2020 | VIGYANAM -<br>2020 |
| 26. | Prakhar Srivastava, Md.<br>Shariq, Prashant Phulera    | Blue Eye Technology    | 29th<br>Feb<br>2020 | VIGYANAM -<br>2020 |
| 27. | Pranjal Jaiswal  | DNA of Things          | 29th<br>Feb<br>2020 | VIGYANAM -<br>2020 |

#### **FACULTY ACHIEVEMENTS**

- 1. Dr. Puneet Chandra Srivastava attended a 5-day ITU CoE Training Program on "IoT Applications and IoT Security Aspects from 9th December 2019 to 13th December 2019 organized by BSNL and ALT-TC at ALT-TC Ghaziabad.
- 2. Mr. Vaibhav Sharma attended a 5-day ITU CoE Training Program on "IoT Applications and IoT Security Aspects from 9th December 2019 to 13th December 2019 organized by BSNL and ALT-TC at ALT-TC Ghaziabad.
- 3. Mr. Anil Verma attended a 5-day ITU CoE Training Program on "IoT Applications and IoT Security Aspects from 9th December 2019 to 13th December 2019 organized by BSNL and ALT-TC at ALT-TC Ghaziabad.



4. Dr. Himani Mittal presented a paper titled "Implementation and Analysis of High Performance Low Power Dual Edge Triggered Flip Flop DETFF using Retention Technique" in 3rd International Conference on "Soft Computing and Mathematical Modelling" organized by KIET on 22nd December 2019 to 23rd December 2019.

5. Dr. Himani Mittal attended 8 day Faculty Development Program (Refresher Workshop) on "Universal Human Values and Professional Ethics" organized by TEQIP-III and conducted by Value Education Cell, AKTU, Lucknow at ABES Engineering College, Ghaziabad from 12th to 19th Jan 2020.



6. Mr. Anil Verma participated in Two days' workshop on "NBA Accreditation & Outcome-Based Education" on 29th & 30th January 2020 jointly organized by the State Project Implementation Unit-UP & AKTU, Lucknow.



- 7. Mr.Abhinav Bansal, Shirsh Gupta, published the paper titled "Smart Restaurant and Humanoid Robot" in National Conference on "Mechanical and Automation Engineering (MAAE-2020)" held on 7-8 February, 2020 at Ajay Kumar Garg Engineering College, Ghaziabad, (U.P.), India.
- 8. Mr.Abhinav Bansal, Arpita Gupta, published the paper titled "Digital Smart Pen-How it can help in Hospital" in National Conference on "Mechanical and Automation Engineering (MAAE-2020)" held on 7-8 February, 2020 at Ajay Kumar Garg Engineering College, Ghaziabad, (U.P.), India
- 9. Rahul tiwari, Dr. Neha Goel, Dr. Puneet C. Srivastava, published a paper titled "Face detection" in National conference on "Computing, Communication, Control, Informatics and Pharmaceuticals Sciences", organized by Kanpur Institutes of Technology, Kanpur on 6th -7th March'2020.

### STUDENT ACHIEVEMENTS

AKTU organized its annual state art & cultural fest "Pravah 2019-20" held at IET Lucknow on dated 28 & 29 Feb. The gold medalist from 12 zones of the U.P. took part in the event. RKGIT is proud to announce it's a major role in making Ghaziabad zone- "Champions - PRAVAH 2019-20" by securing 4 out of 5 Gold medals in events:

**DuetDance** 

**Mimicry** 

**FacePainting** 

StreetPlay(NukkadNatak)

RKGIT also secured the highest no. of Gold Medals among all the AKTU affiliated colleges.

| S.No. | Name of Student | Year | Date of<br>Event    | Event Name   | Venue                | Status |
|-------|-----------------|------|---------------------|--|----------------------|--------|
| 1     | Priyamvada Rai  | 2nd  | 7th-8th Feb<br>2020 | Dr. Abdul<br>Kalam Arts<br>and Cultural<br>Fest-Zonal<br>(Street Play) | ABESEC,<br>Ghaziabad | Winner |
| 2     | Chhavi Rathore  | 2nd  | 7th-8th Feb<br>2020 | Dr. Abdul<br>Kalam Arts<br>and Cultural<br>Fest-Zonal<br>(Street Play) | ABESEC,<br>Ghaziabad | Winner |
| 3     | Shivansh        | 3rd  | 7th-8th Feb<br>2020 | Dr. Abdul<br>Kalam Arts<br>and Cultural<br>Fest-Zonal<br>(Street Play) | ABESEC,<br>Ghaziabad | Winner |
| 4     | Nikita Upadhyay | 3rd  | 7th-8th Feb<br>2020 | Dr. Abdul<br>Kalam Arts<br>and Cultural<br>Fest-Zonal<br>(Duet Dance)  | ABESEC,<br>Ghaziabad | Winner |

| 5  | Astha Srivastava | 4th  | 7th-8th Feb    | Dr. Abdul     | ABESEC,   | Winner    |
|----|------------------|------|----------------|---------------|-----------|-----------|
|    | Tiblia Diivabava | Tell | 2020           | Kalam Arts    | Ghaziabad | Villici   |
|    |                  |      | 2020           | and Cultural  | Giaziabaa |           |
|    |                  |      |                | Fest-Zonal    |           |           |
|    |                  |      |                | (Duet Dance)  |           |           |
|    | Dishabb          | 21   | 741. 041. E-1. | ` /           | ADECEC    | XX7:      |
| 6  | Rishabh          | 3rd  | 7th-8th Feb    | Dr. Abdul     | ABESEC,   | Winner    |
|    | Ladhani          |      | 2020           | Kalam Arts    | Ghaziabad |           |
|    |                  |      |                | and Cultural  |           |           |
|    |                  |      |                | Fest-Zonal    |           |           |
|    |                  |      |                | (Mime)        |           |           |
|    |                  |      |                |               |           |           |
|    |                  |      |                |               |           |           |
|    |                  |      |                | Dr. Abdul     |           |           |
|    |                  |      |                | Kalam Arts    |           |           |
| 7  | Namami           | 3rd  | 7th-8th Feb    | and Cultural  | ABESEC,   | Winner    |
|    | Patairiya        |      | 2020           | Fest-Zonal    | Ghaziabad |           |
|    |                  |      |                | (FacePaintin  |           |           |
|    |                  |      |                | <b>g</b> )    |           |           |
| 8  | Priyamvada Rai   | 2nd  | 28th-29th      | Pravah- Art   | IET,      | Winner    |
|    |                  |      | Feb 2020       | and Cultural  | Lucknow   |           |
|    |                  |      |                | Fest AKTU-    |           |           |
|    |                  |      |                | State Level   |           |           |
|    |                  |      |                | (Street Play) |           |           |
| 9  | Chhavi Rathore   | 2nd  | 28th-29th      | Pravah- Art   | IET,      | Winner    |
|    |                  |      | Feb 2020       | and Cultural  | Lucknow   |           |
|    |                  |      |                | Fest AKTU-    |           |           |
|    |                  |      |                | State Level   |           |           |
|    |                  |      |                | (Street Play) |           |           |
| 10 | Shivansh         | 3rd  | 28th-29th      | Pravah- Art   | IET,      | Winner    |
|    |                  |      | Feb 2020       | and Cultural  | Lucknow   |           |
|    |                  |      |                | Fest AKTU-    |           |           |
|    |                  |      |                | State Level   |           |           |
|    |                  |      |                | (Street Play) |           |           |
| 11 | Nikita Upadhyay  | 3rd  | 28th-29th      | Pravah- Art   | IET,      | Winner    |
|    | - Paulyaj        |      | Feb 2020       | and Cultural  | Lucknow   |           |
|    |                  |      |                | Fest AKTU-    |           |           |
|    |                  |      |                | State Level   |           |           |
|    |                  |      |                | (Duet Dance)  |           |           |
| 12 | Astha Srivastava | 4th  | 28th-29th      | Pravah- Art   | IET,      | Winner    |
| 12 | Asina Siivasiava | 7111 | Feb 2020       | and Cultural  | Lucknow   | VV IIIIEI |
|    |                  |      | F CD 2020      | Fest AKTU-    | Lucknow   |           |
|    |                  |      |                |               |           |           |
|    |                  |      |                |               |           |           |
| 12 | NT               | 2-1  | 2041- 2041     | (Duet Dance)  | TEC       | XX/:      |
| 13 |                  | 3rd  | 28th-29th      | Pravah- Art   | IET,      | Winner    |
|    | Patairiya        |      | Feb 2020       | and Cultural  | Lucknow   |           |
|    |                  |      |                | Fest AKTU-    |           |           |

State Level (Face Painting)











#### **FACULTY TECHNICAL CORNER**

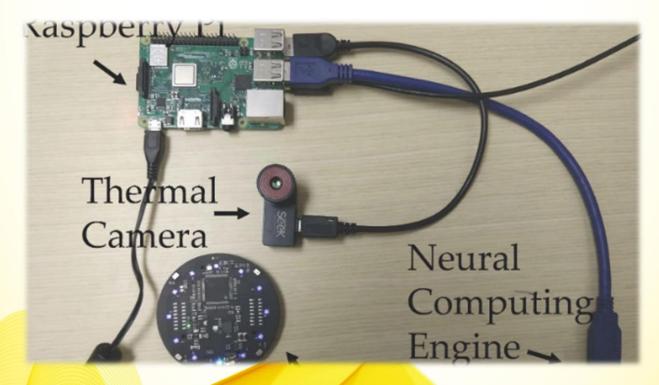
This portable AI device can use coughing sounds to monitor COVID-19 trends

Scientists have developed a portable device powered by artificial intelligence (AI) which can detect coughing and crowd size in real time, then analyse the data to directly monitor trends in flu-like illnesses such as COVID-19. The researchers from the University of Massachusetts Amherst. In the US said the device called FluSense is envisioned for use in hospitals, healthcare waiting rooms and larger public spaces.

The cutting edge-computing platform may expand the arsenal of health surveillance tools used to forecast seasonal flu and other viral respiratory outbreaks, such as the COVID-19 pandemic or SARS,

they said. The researchers noted that models like these can be lifesavers by directly informing the public health response during a flu epidemic.

These data sources can help determine the timing for flu vaccine campaigns, potential travel restrictions, the allocation of medical supplies and more, they explained.



"This may allow us to predict flu trends in a much more accurate manner," said Tauhidur Rahman, co-author of the study published in the journal Proceedings of the ACM on Interactive, Mobile, Wearable and Ubiquitous Technologies. The FluSense platform processes a low-cost microphone array and thermal imaging data with a Raspberry Pi and neural computing engine.

It stores no personally identifiable information, such as speech data or distinguishing images, noted PhD student and study lead author Forsad Al Hossain. The researchers first developed a lab-based cough model. They then trained the algorithm to create thermal images representing people, and then to count them.

Our main goal was to build predictive models at the population level, not the individual level," Rahman said. The researchers placed the FluSense devices, encased in a rectangular box about the size of a large dictionary, in four healthcare waiting rooms.

From December 2018 to July 2019, the FluSense platform collected and analysed more than 350,000 thermal images and 21 million non-speech audio samples from the public waiting areas. The researchers found that FluSense was able to accurately predict daily illness rates at the university clinic.

Multiple and complementary sets of FluSense signals "strongly correlated" with laboratory-based testing for flu-like illnesses and influenza itself, according to the researchers. "The early symptom-related information captured by FluSense could provide valuable additional and complementary information to current influenza prediction efforts," the researchers noted.

"I thought if we could capture coughing or sneezing sounds from public spaces where a lot of people naturally congregate, we could utilise this information as a new source of data for predicting epidemiologic trends," Rahman added.

Mr. Kunal Lala

(AP, ECE)

#### STUDENT TECHNICAL CORNER

COVID-19: This AI network could help detect cases using chest X-ray images

As the COVID-19 pandemic continues and more cases come to light globally, the use of artificial intelligence or AI-based tools to help detect the disease is being explored more extensively. The latest tool that wants to help in the early detection of potential corona virus cases is COVID-Net, which is a deep neural network that will look at chest radiography images to determine whether a patient is infected.



Researchers part of the Canadian startup DarwinAI Corp along with researchers Linda Wang and Alexander Wong at the University of Waterloo, Canada have designed this AI-system to help with the detection of COVID-19 cases, and published details in a research paper.

One difference is that the system is open source and available to the general public. In China too, researchers at Alibaba's DAMO academy have been working on AI tools which rely on the chest x-rays and CT-scans to help detect and diagnose COVID-19 positive cases.

One reason why AI tools are being proposed is the spread of the pandemic and how it is quickly overwhelming doctors and healthcare systems across the world. With time being, crucial AI could help shorten the period for detection and positive confirmation of a COVID-19 case and provide assistance to doctors.



According to the paper submitted by the Canadian researchers, "effective screening of infected patients" could help. One way is to look at radiological images for the chest as other studies have shown that COVID-19 patients do present abnormalities in chest radiography images, which are characteristic of the infection.

The researchers have used an open source chest radiography dataset for training their COVID-Net. The researchers claim the COVID-Net network had a strong 80 per cent prediction for detecting the COVID-19 cases in the data sets, though they did warn the number of positive cases in this data set was limited. The COVIDx database being used by the researchers only has "68 radiography images from 45 COVID-19 patient cases," according to the paper.

Shrayansh Gupta (ECE-3<sup>rd</sup> Year)

## PLACEMENTS 2019-20- ECE

| S. No. | ROLL NO.   | Name Of The               | Name of company                      | Package Offered | Shift |
|--------|------------|---------------------------|--------------------------------------|-----------------|-------|
|        |            | Students                  |                                      | (Per annum)     |       |
| 1      | 1603331017 | AMAN<br>JAISWAL           | PROLIFICS                            | 3               | FIRST |
| 2      | 1603331139 | SIDDHANT<br>SRIVASTAVA    | PROLIFICS                            | 3               | FIRST |
| 3      | 1603331025 | ANKIT<br>KUMAR<br>JAISWAL | TCS                                  | 336875          | FIRST |
| 4      | 1603331067 | KAMAL<br>CHAUBEY          | TCS                                  | 336875          | FIRST |
| 5      | 1603331089 | POOJA<br>TIWARI           | TCS                                  | 336875          | FIRST |
| 6      | 1603331139 | SIDDHANT<br>SRIVASTAVA    | TCS                                  | 336875          | FIRST |
| 7      | 1603331147 | SURAJ BANI                | TCS                                  | 336875          | FIRST |
| 8      | 1603331154 | UNNATI<br>KAMAL           | TCS                                  | 336875          | FIRST |
| 9      | 1603331057 | HARSHITA<br>KHARE         | AJATH<br>INFOTECH                    | 2.4 - 4         | FIRST |
| 10     | 1603331039 | ASHISH<br>GANGWAR         | COGNIZANT<br>TECHNOLOGY<br>SOLUTIONS | 4               | FIRST |

| 11 | 1603331081 | NANCY<br>SHARMA          | COGNIZANT TECHNOLOGY SOLUTIONS INDIA PVT LTD. | 4   | FIRST      |
|----|------------|--------------------------|---|-----|------------|
| 12 | 1603331105 | RAHUL<br>KUMAR<br>TIWARI | COGNIZANT TECHNOLOGY SOLUTIONS INDIA PVT LTD. | 4   | FIRST      |
| 13 | 1603331059 | HRITIK TYAGI             | NTT DATA<br>SERVICES                          | 3.5 | FIRST      |
| 14 | 1603331065 | KINJAL SINHA             | VIVO MOBILE<br>INDIA PVT. LTD.                | 3.6 | SECON<br>D |
| 15 | 1603331171 | VIVEK<br>KUMAR<br>TIWARI | VIVO MOBILE<br>INDIA PVT. LTD.                | 3.6 | FIRST      |
| 16 | 1603331003 | ABHINAV<br>TIWARI        | VIVO MOBILE<br>INDIA PVT. LTD.                | 3.6 | FIRST      |
| 17 | 1603331123 | SANDEEP<br>YADAV         | VIVO MOBILE<br>INDIA PVT. LTD.                | 3.6 | FIRST      |
| 18 | 1603331007 | ADARSH<br>TIWARI         | VIVO MOBILE<br>INDIA PVT. LTD.                | 3.6 | SECON<br>D |
| 19 | 1603331006 | ADARSH PAL               | I3 INFOSOFT<br>PRIVATE<br>LIMITED             | 3   | FIRST      |
| 20 | 1603331099 | PRIYA GUPTA              | I3 INFOSOFT<br>PRIVATE<br>LIMITED             | 3   | FIRST      |
| 21 | 1603331104 | RAHUL SINGH              | I3 INFOSOFT<br>PRIVATE<br>LIMITED             | 3   | FIRST      |
| 22 | 1603331117 | SAKET<br>MISHRA          | I3 INFOSOFT PRIVATE LIMITED                   | 3   | FIRST      |

| 23 | 1603331119 | SAKSHI<br>KHUGSHAL    | I3 INFOSOFT PRIVATE LIMITED                     | 3       | FIRST |
|----|------------|-----------------------|---|---------|-------|
| 24 | 1603331160 | VANDANA<br>SINGH      | I3 IN <mark>FOSOFT</mark><br>PRIVATE<br>LIMITED | 3       | FIRST |
| 25 | 1603331164 | VIKRANT<br>PANDEY     | I3 INFOSOFT<br>PRIVATE<br>LIMITED               | 3       | FIRST |
| 26 | 1603331167 | VISHAL RAI            | I3 INFOSOFT<br>PRIVATE<br>LIMITED               | 3       | FIRST |
| 27 | 1603331170 | VIVEK<br>KUMAR SINGH  | I3 INFOSOFT<br>PRIVATE<br>LIMITED               | 3       | FIRST |
| 28 | 1603331124 | SATISH<br>KUMAR       | I3 INFOSOFT<br>PRIVATE<br>LIMITED               | 3       | FIRST |
| 29 | 1603331149 | SWAPNIL<br>SRIVASTAVA | EXTRAMARKS<br>EDUCATION<br>INDIA PVT LTD.       | 12      | FIRST |
| 30 | 1603331012 | ADITYA<br>TRIPATHI    | VIVO MOBILE<br>INDIA PVT. LTD.                  | 3.6     | FIRST |
| 31 | 1603331142 | SMRITI SINGH          | CONSULTADD                                      | 3 - 3.4 | FIRST |
| 32 | 1603331170 | VIVEK<br>KUMAR SINGH  | VIVO MOBILE<br>INDIA PVT. LTD.                  | 3.6     | FIRST |
| 33 | 1603331056 | HARSHIT<br>GUPTA      | VIVO MOBILE<br>INDIA PVT. LTD.                  | 3.6     | FIRST |
| 34 | 1603331149 | SWAPNIL<br>SRIVASTAVA | HESTABIT<br>TECHNOLOGY                          | 2.4     | FIRST |

| 35 | 1603331050 | BINDESHWAR<br>YADAV         | PAYTM<br>PAYMENTS<br>BANK  | 2.20-2.4 | FIRST      |
|----|------------|-----------------------------|----------------------------|----------|------------|
| 36 | 1603331016 | AMAN<br>BAROLIYA            | TECH<br>MAHINDRA           | 2.34     | FIRST      |
| 37 | 1603331165 | VIKRANT<br>TIWARI           | NUCLEUS<br>SOFTWARE        | 3.48     | FIRST      |
| 38 | 1603331101 | PRIYANSHI<br>PANWAR         | NUCLEUS<br>SOFTWARE        | 3.48     | FIRST      |
| 39 | 1603331168 | VISHNU<br>KUMARIL<br>PANDEY | NUCLEUS<br>SOFTWARE        | 3.48     | FIRST      |
| 40 | 1603331145 | SPARSH<br>MATHUR            | DESIGNOWEB<br>TECHNOLOGIES | 2.4-3.6  | SECON<br>D |
| 41 | 1603331099 | PRIYA GUPTA                 | DESIGNOWEB<br>TECHNOLOGIES | 2.4-3.6  | FIRST      |
| 42 | 1603331017 | AMAN<br>JAISWAL             | DXC<br>TECHNOLOGY          | 3.4      | FIRST      |
| 43 | 1603331105 | RAHUL<br>KUMAR<br>TIWARI    | ADECCO                     | 3.03     | FIRST      |
| 44 | 1603331013 | ADITYA<br>SHARMA            | INFOSYS                    | 3.6      | FIRST      |
| 45 | 1603331132 | SHIRSH<br>GUPTA             | INFOSYS                    | 3.6      | FIRST      |
| 46 | 1603331111 | RISHABH<br>TRIPATHI         | ECKOVATION                 | 4.5      | SECON<br>D |
| 47 | 1603331022 | AMRISH<br>YADAV             | TEAM<br>COMPUTERS          | 2.64     | SECON D    |

| 48 | 1603331072 | MEHAK SINGH           | HCL<br>TECHNOLOGIES    | 3.5 | FIRST      |
|----|------------|-----------------------|------------------------|-----|------------|
| 49 | 1603331127 | SAURAV<br>BARANWAL    | PRECISION<br>INFOMATIC | 1.8 | FIRST      |
| 50 | 1603331160 | VANDANA<br>SINGH      | HCL<br>TECHNOLOGIES    | 3.5 | FIRST      |
| 51 | 1603331078 | MUDIT<br>DWIVEDI      | CAPGEMINI              | 3.8 | SECON<br>D |
| 52 | 1603331070 | KRITIKA<br>PANDEY     | CAPGEMINI              | 3.8 | FIRST      |
| 53 | 1603331105 | RAHUL<br>KUMAR        | WIPRO LIMITED          | 3.5 | FIRST      |
| 54 | 1603331062 | KANUPRIYA             | CAPEGEMINI             | 3.8 | FIRST      |
| 55 | 1603331002 | AAKANKSHA<br>BHARGAVA | SAAS LABS              | 4   | FIRST      |
| 56 | 1603331144 | SOUMYA<br>GUPTA       | CAPGEMINI              | 3.8 | FIRST      |
| 57 | 1603331095 | PRASHANT<br>PHULERA   | CAPGEMINI<br>INDIA LTD | 3.8 | SECON<br>D |
| 58 | 1603331080 | NAINCY<br>KASAUDHAN   | CAPGEMINI<br>INDIA LTD | 3.8 | FIRST      |
| 59 | 1603331072 | MEHAK SINGH           | CAPGEMINI<br>INDIA LTD | 3.8 | FIRST      |

| 60 | 1603331018 | AMAN<br>SAXENA            | CAPGEMINI<br>INDIA LTD          | 3.8 | FIRST      |
|----|------------|---------------------------|---------------------------------|-----|------------|
| 61 | 1603331153 | UJJWAL<br>SAXENA          | CAPGEMINI<br>INDIA LTD          | 3.8 | FIRST      |
| 62 | 1603331025 | ANKIT<br>KUMAR<br>JAISWAL | CAPGEMINI                       | 3.8 | FIRST      |
| 63 | 1603331038 | ARUSHI<br>VERMA           | CAPGEMINI                       | 3.8 | FIRST      |
| 64 | 1603331143 | SONALI SINGH              | WIPRO                           | 3.5 | SECON<br>D |
| 65 | 1603331165 | VIKRANT<br>TIWARI         | WIPRO                           | 3.5 | FIRST      |
| 66 | 1603331153 | UJJWAL<br>SAXENA          | GIRIKON<br>SOLUTIONS PVT<br>LTD |     | FIRST      |
| 67 | 1603331165 | ASHWANI<br>TIWARI         | COGNIZANT<br>TECHNOLOGY         |     |            |
| 68 | 1603331138 | SHUBHANSHI<br>SRIVASTAVA  | WIPRO                           | 3.5 |            |

#### **ALUMNI SPEAK**

I can positively say Raj Kumar Goel Institute of Technology has made me of me a better person. It has helped me to develop a positive attitude towards my studies and discover more about myself. Teachers are very caring and interested in students educational and interactive fields. The Department of Electronics and Communication Engineering has always helped me to achieve good scores as well as in developing skills which is helpful in my career.



RKGIT is a prestigious institution which not only focuses on academics but also on co-curricular activities, which develops the

personality of a student. The faculties have taught me everything from basic and which eventually helped me a lot in my interviews. I am very grateful to my college for everything I am today.

Name -Indraneel Ganguli

Batch-2015-2019

**Current organization-Cognizant (Kolkata)** 

**Profile-Programmer Analyst** 

### **BRAIN TEASERS**

1. Guess the missing number?

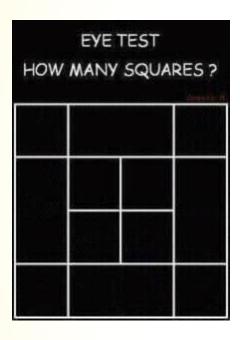
| 4  | 9   | 1 |  |
|----|-----|---|--|
| 6  | 8   | 3 |  |
| 34 | 113 | ? |  |

#### 2. Fill the boxes?

3. One-tenth of the cars in a car park are yellow. Another car arrives and now one-ninth of the cars are yellow.

How many cars are now in the car park?

4. Eye Test, How many squares are there in the below image?



#### 5. Medical riddle

I am a type of mutation that doesn't produce any negative effect on the body.

In fact, the more severe this mutation is, the better it is for the human body.

Let the genius here answer.