



Lagula Singh Charitable Trust's (Regd.)

## THAKUR COLLEGE OF ENGINEERING & TECHNOLOGY

Autonomous College Affiliated to University of Mumbai

Approved by All India Council for Technical Education (AICTE) and Government of Maharashtra (GoM)

Conferred Autonomous Status by University Grants Commission (UGC) for 10 years w.e.f. A.Y 2019-20

Amongst Top 200 Colleges in the Country, Ranked 19<sup>th</sup> in NIRF India Ranking 2019 in Engineering College category

• ISO 9001:2015 Certified • Programmes Accredited by National Board of Accreditation (NBA), New Delhi

• Institute Accredited by National Assessment and Accreditation Council (NAAC), Bangalore

Website : [www.tcetmumbai.in](http://www.tcetmumbai.in)

Date: 12/8/2021

### National Initiative Program (Student/Faculty Exchange Program)

#### Report on Academic Exchange Program

#### (Webinar for knowing emerging technology and building leadership ability for budding engineers)

As per the Initiatives of Ministry of Human Resource -Development and AICTE, Thakur College of Engineering and Technology started to conduct Student exchange programs. Student exchange program gives an opportunity for students to broaden their knowledge on their study of choice from a different institute. This gives them a chance to develop their work experience by seeing how the course domain they are studying is being practiced in another institute. It helps them to understand the working philosophy of the other institute and also enhances their ability to work in collaboration for particular problem statements with students of other institute. The purpose is to learn the culture, living styles, social customs and such other aspects of the social and cultural affairs of each other's institute along with learning technical skills regarding a latest technology.

#### Objective:

1. To develop a platform for students to learn collaboratively with other institute students the knowing emerging technology, modern tool usage, societal and environmental problems, project management and professional ethics.
2. To give students an exposure to the skills such as team work, communication and lifelong learning.
3. To adopt the national initiatives under EBSB: Students exchange program at institute level.

#### Student Exchange Activity:

- **Academic Exchange Program** (Webinar for knowing emerging technology and building leadership ability for budding engineers):
- Artificial Intelligence and Machine Learning
  - Artificial Intelligence and Data Science
  - IOT
  - Leadership Development

### **Overall Coordinators:**

- Dr. Lochan Jolly (Dean SSW)
- Dr. Megharani Patil (Activity Head- National Initiative Program)

### **Track Faculty In-charges:**

- Artificial Intelligence and Machine Learning
  - Mr. Arpit Vyas : NIP Coordinator , Assistant Professor-CIVIL
  - Mr. Rahul Neve : NIP Coordinator , Assistant Professor- IT
- Artificial Intelligence and Data Science
  - Ms. Niki Modi : NIP Coordinator , Assistant Professor -COMP
  - Ms. Jalpaben D. Pandya : NIP Coordinator , Assistant Professor- ELEX
- Internet of Thing
  - Ms. Sonali Singh : NIP Coordinator , Assistant Professor- EXTC
  - Ms. Amruta Gokhale : NIP Coordinator , Assistant Professor- MECH
- Leadership Development
  - Mr. Ashwin Pathak : NIP Coordinator, Assistant Professor- ES&H

**Venue:** Online Platform (Zoom/YouTube), Offline Platform GCR

### **Target Participants:**

Undergraduate Engineering students from Host College and partner colleges.

### **Host College:**

(1) Thakur College of Engineering & Technology

### **Partner Colleges:**

- (1) Gandhi Institute of Engineering and Technology, Odisha
- (2) Vardhaman College of Engineering, Hyderabad (Telangana)
- (3) Government Engineering College Nawada, Bihar
- (4) KLS Gogte Institute Of Technology, Belagavi, Karnataka
- (5) Maratha Vidya Prasarak Samaj's Karmaveer Baburao Ganpatrao Thakare College of Engineering, Nashik, Maharashtra
- (6) Muthayammal Engineering College, Rasipuram, Namakkal, Tamilnadu, India
- (7) Lal Bahadur Shastri College of Engineering, Muliya P O, Kasaragod, Kerala.

- (8) Vikrant Institute of Technology and Management, Behind Veterinary College, Borkhedi Village, Harsola, Indore, Madhya Pradesh
- (9) Garden City University, Bengaluru, Karnataka

**Speakers:** TCET and Partner College Faculty members.

**Program Details and Duration:**

| Sr. No | Program   | Dates                       | Time   |
|--------|---|-----------------------------|--|
| 1      | <b>Academic Exchange Program (Webinar for knowing emerging technology and building leadership ability for budding engineers) :</b><br>1. Artificial Intelligence and Machine Learning<br>2. Artificial Intelligence and Data Science<br>3. IOT<br>4. Leadership Development<br><b>(4 Parallel Tracks)</b> | 7 <sup>th</sup> August 2021 | 10.00 AM to 1.00 PM<br>(2 Hrs Session followed by Interaction) |

**Details of Event:**

**1) Webinar for knowing emerging technology and building leadership ability for budding engineers:**

**a. Description of the event:**

NIP Webinar was held on 7<sup>th</sup> August, 2021 for the students of all departments of not only Thakur College of Engineering and Technology but also from other colleges all over India. The webinar was proposed for differ domains with different tracks by the suggested choice of interest. Due to pandemic situation, this event of TCET was conducted online where participants could learn in-depth about the specific track.

**Inauguration:** The event started at inauguration at 10.00 a.m. which comprised of welcome speech by Ms. Alisha Gupta, student of TCET. This was followed by Saraswati Vandana by student of TCET.

Next, Dr. Megharani Patil, Associate Professor, Computer Engineering Department, Activity head NIP,TCET introduced the student exchange program with its objectives and series of program included under it. Also introduced about Academic Exchange Program (Webinar for knowing emerging technology and building leadership ability for budding engineers) in details

about speakers, registrations etc. After that Principal and HoDs of Partner College given some important of student and faculty exchange program event.

This was followed by an address by Dr. B. K. Mishra, Principal where he talked about the Student Exchange Program initiative and its organization by TCET.

The inauguration ended with a vote of thanks proposed by Ms. Jalpa Bhatt, Assistant professor, Department of Electronics TCET where she expressed her gratitude to management, Principal, Vice Principal, Deans, Faculty members. Staff and students attending the event.

**Track wise Webinar:** - After the Inauguration function was continued by each track session at 10.30 a.m. The tracks AI-ML, AI-DS, IOT continued till 12.30 p.m. while the LD track continued till 1.00 p.m. Each webinar track covered precisely all the important technical aspects of the respective domain. True essence and motive of the webinar was achieved by imbibing the knowledge of emerging technology in the field of AI-ML, AI-DS and IOT in each attendee. LD track focused on building leadership ability for budding engineers.

**b. Track wise detailing of topic covered by speaker: -**

| Tracks  | Topic covered  |   |
|---------|--|---|
| AI & ML | Dr. Kamal Shah, Dean (R&D), HOD-IT PG Programs, B.Tech AI-ML                       | Highlighted: <ul style="list-style-type: none"> <li>• Importance of AI &amp; ML</li> <li>• Technical Competency for AI &amp; ML</li> <li>• Professional placement</li> <li>• Artificial Super Intelligence</li> </ul>                                   |
| AI & DS | Dr. Sheetal Rathi H.O.D. - PG COMP Programs, B.Tech (AI-DS)                        | Explored: <ul style="list-style-type: none"> <li>• Importance of DS</li> <li>• How data Science Work what is workflow of DS</li> <li>• What are the various branches of AI?</li> </ul>  |
| IOT     | Dr. Lochan Jolly Dean (Student & Staff Welfare) HOD-PG E&TC Programs, B.Tech (IOT) | Covered: <ul style="list-style-type: none"> <li>• Description and History of Internet of Things (IoT)</li> <li>• Importance and need of Internet of Things (IoT)</li> <li>• Benefits of IoT</li> <li>• Designing of Internet of Things (IoT)</li> </ul> |
| LD      | Mr. Amol Dapkekar, Assistant Professor H&S   | “Managing Self and other”   |

|  |   |  |
|--|---|--|
|  |   | <p>Emphasis on:</p> <ul style="list-style-type: none"> <li>• Why self-awareness is important</li> <li>• SWOT Analysis</li> <li>• How can we improve our intrapersonal skills?</li> <li>• Johari Window</li> </ul>  |
|  | Ms. Vidyadhari R. Singh,<br>Assistant Professor COMP                              | <p>“Attitude”</p> <p>Conveyed:</p> <ul style="list-style-type: none"> <li>• How attitude and most importantly positive attitude is essential for a leader</li> <li>• How we can bring out the positivity in life</li> </ul>  |
|  | Dr. Lochan Jolly Dean(Student & Staff Welfare) HOD-PG E&TC Programs, B.Tech (IOT) | <p>“Attributes of Student Leaders”</p> <p>Enlighted everyone by sharing:</p> <ul style="list-style-type: none"> <li>• Attributes of a true Leader</li> <li>• 10 golden rules for a leader</li> <li>• 7 Project Management Lessons</li> <li>• What is Success?</li> </ul> |

c. Track wise registered Participants (College-wise): -

| College   | AI & ML | AI & DS | IOT | LD | Total |
|---|---------|---------|-----|----|-------|
| Gandhi Institute of Engineering and Technology, Odisha                    | 18      | 8       | 0   | 0  | 26    |
| Thakur College of Engineering and Technology, Mumbai, Maharashtra         | 33      | 40      | 5   | 24 | 102   |
| Lal Bahadur Shastri College of Engineering, Muliya P O, Kasaragod, Kerala | 31      | 24      | 7   | 11 | 73    |
| Government Engineering College, Nawada, Bihar                             | 42      | 40      | 18  | 23 | 123   |
| KLS Gogte Institute Of Technology, Belagavi, Karnataka                    | 19      | 8       | 6   | 8  | 41    |

|  |            |            |           |            |            |
|--|------------|------------|-----------|------------|------------|
| Muthayammal Engineering College, Rasipuram, Namakkal, Tamilnadu, India   | 73         | 42         | 48        | 40         | 203        |
| Maratha Vidya Prasarak Samaj's Karmaveer Baburao Ganpatrao Thakare College of Engineering, Nashik, Maharashtra | 14         | 20         | 8         | 3          | 45         |
| <b>Total</b>   | <b>230</b> | <b>182</b> | <b>92</b> | <b>109</b> | <b>613</b> |

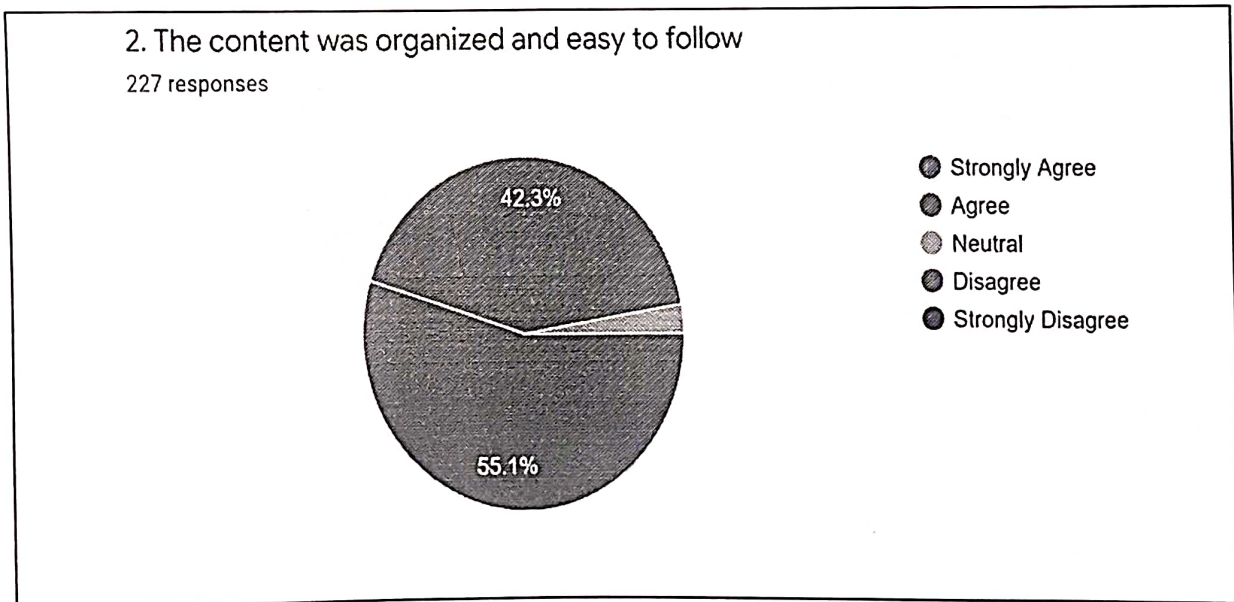
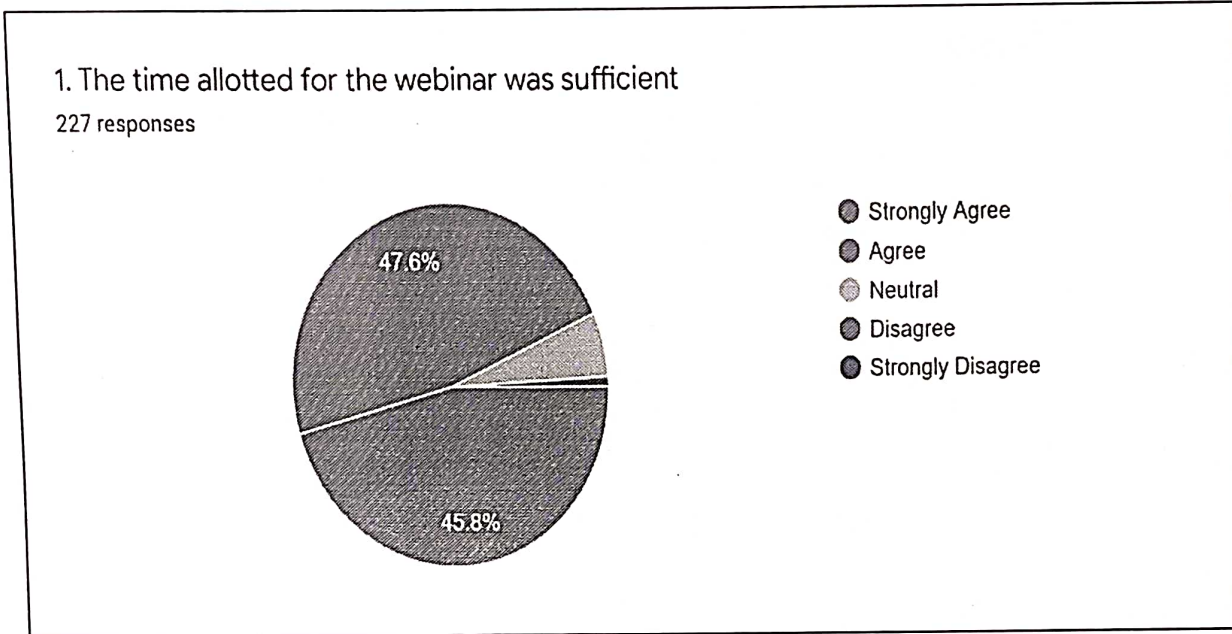
d. Webinar Attendance (College-wise): -

| College  | AI & ML    | AI & DS   | IOT       | LD        | Total      |
|--|------------|-----------|-----------|-----------|------------|
| Gandhi Institute of Engineering and Technology, Odisha   | 13         | 02        | 00        | 00        | 15         |
| Thakur College of Engineering and Technology, Mumbai, Maharashtra  | 19         | 23        | 07        | 17        | 66         |
| Lal Bahadur Shastri College of Engineering, Muliya P O, Kasaragod, Kerala                                      | 26         | 17        | 04        | 05        | 52         |
| Government Engineering College, Nawada, Bihar  | 15         | 08        | 01        | 08        | 32         |
| KLS Gogte Institute Of Technology, Belagavi, Karnataka   | 07         | 02        | 03        | 02        | 14         |
| Muthayammal Engineering College, Rasipuram, Namakkal, Tamilnadu, India   | 24         | 11        | 09        | 04        | 48         |
| Maratha Vidya Prasarak Samaj's Karmaveer Baburao Ganpatrao Thakare College of Engineering, Nashik, Maharashtra | 07         | 08        | 02        | 03        | 20         |
| <b>Total</b>   | <b>111</b> | <b>72</b> | <b>26</b> | <b>39</b> | <b>247</b> |

**\*Note: Details of the students who successfully attended the webinar are attached in annexure.**

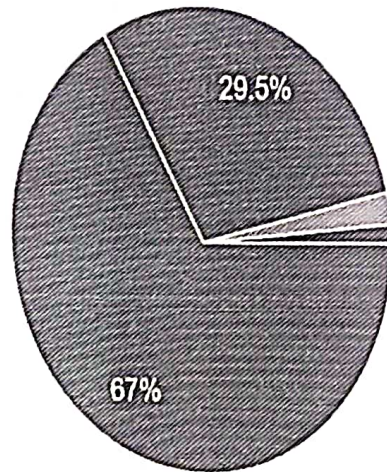
**e. Overall feedback:**

A total 227 feedback were received overall including all the 4 webinar tracks. Feedback analyses are as follows



### 3. The Speaker was knowledgeable about the topic

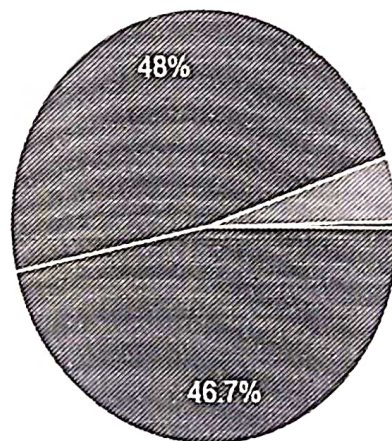
227 responses



- Strongly Agree
- Agree
- Neutral
- Disagree
- Strongly Disagree

### 4. Exposure to new methodology, tools, and technologies

227 responses



- Strongly Agree
- Agree
- Neutral
- Disagree
- Strongly Disagree





# Artificial Intelligence and Machine Learning (AI-ML)

**AI & ML in Blockchain Technology**

Supply Chain Diagram:

- Farm
- Picking House
- Transportation
- Importer/Exporter
- Customer
- Store (Walmart)
- Distribution Center
- Processing

Participants (2/6):

- Rahul Nave (2/6)
- Arpit Vyas (2/6)
- Faisal Shah (2/6)
- Dr. Sanku Nath (2/6)

# Artificial Intelligence and Data Science (AI-DS)

## Types Of AI

- Interactive AI**: Interactive AI allows businesses to automate communications without compromising on interactivity.
- Functional AI**: Functional AI also scans huge amounts of data and searches for patterns and dependencies in it. However, instead of giving recommendations, functional AI takes actions.
- Analytic AI**: Analytic AI scans tons of data for dependencies and patterns to ultimately produce recommendations or provide a business with insights, thus contributing to data-driven decision-making.
- Text AI**: Businesses that use text AI can enjoy text recognition, speech-to-text conversion, machine translation, and content generation capabilities.
- Visual AI**: Businesses can identify, recognize, classify and sort objects or convert images and videos into insights.

Tree Diagram:

- Interactive AI**: Chatbots, smart personal assistants
- Text AI**: Text recognition, speech-to-text conversion
- Functional AI**: IoT solutions, robots
- Visual AI**: Computer vision, augmented reality
- Analytic AI**: Sentiment analysis, supplier risk assessment

**AI & DS**

# Internet of Things (IOT)

**Why do we need IoT?**

- IoT is continuously monitoring our health
- As any irregular condition is monitored, hospital is notified
- Before ambulance is arrived, all facilities are ready for patient based on his report

**Participants:** Amruta Gokhal..., Anjali Gokhal..., Sonali Singh NI..., NIP Vashnavi S..., AJAY WADHAWE, BHARANEESH S..., Mrs. Aradhana...

# Leadership Development (LD)

**7 Project Management Lessons**

- DIVERSITY**  
Celebrate diversity of talent on your team
- SKILLS**  
Take the time to learn Skills
- TRANSPARENCY**  
Transparency will Inspire your teammates
- SCALABILITY**  
If scope changes, scale your team accordingly
- ATTITUDE**  
Arrogance leads to misguided thinking
- DON'T BE AFRAID**  
Don't be afraid to go off script
- HOPEFUL**  
No project is entirely protected from negative events

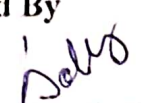
**Participants (40):** Ashwin Pathak (Me), NIP\_Shreya Mishra (Host), Lochan Jolly, 02\_FT\_Malhar Bakshi, 10\_COMP\_A\_Anil Bajaj, 16\_IT\_A\_DURVESH GAWADE, 47\_FT\_A\_Habib Manhar, 61\_Hibik Kamble Group no. 11, 64\_Comp\_B\_Vishal Rawat, 65\_TE\_COMP\_C\_Ananya Patilwal, Aayush Ghosh, Abhishek Ballulaya K, Apshath Shahama

**Outcome:** 247 students from host and partner colleges including EBSB Maharashtra- Odisha paired institute Gandhi Institute of Engineering and Technology, Odisha successfully attended the webinar with interactive participation and live-long learnings. Academic Exchange program of Webinar for knowing emerging technology and building leadership ability for budding engineers included 4 different parallel tracks AL-ML, AI-DS, IOT, and Leadership Development. This program was based on EBSB, Student Exchange Program. In Artificial Intelligence and Machine Learning track the participant understood the application and research area of AI & ML & also gain knowledge for industry based project. In Artificial Intelligence & data science track expert gave the importance of Data science can be important in terms of Direct action Based, Empowering management, Recruiting right talent for the organizations also identifying opportunities. In Internet of things system can be designed based on ecosystem there are various layers of ecosystem based on that we can improve security level. Leadership development session participants learn attitude and the role it plays to make us a very good leader as a student and in our professional, personal life to incorporate the qualities of leadership and team building. So that the students will be able to become a pro-active, democratic and successful team player and leader.

**Collectively Proposed By**

  
Dr. Megharani Patil

**Activity Head NIP**

  
Dr. Lochan Jolly

**Dean SSW**

**Reviewed By**

  
Dr. Deven Shah

**Vice Principal**

**Approved By**

  
Dr. B. K. Mishra

**Principal**