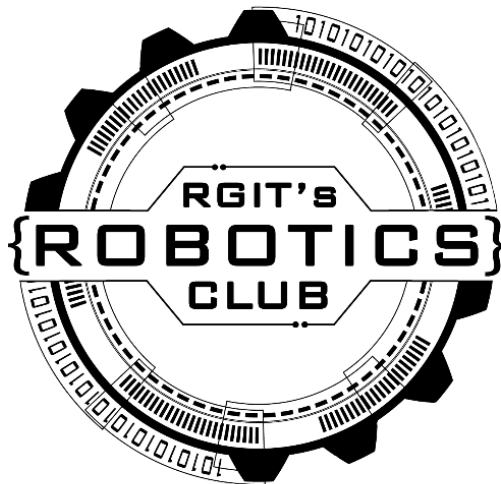# RGIT's ROBOTICS CLUB

REPORT OF ACADEMIC YEARS 2018-2021

Established in July 2018, RGIT's Robotics Club is the very first official Robotics committee of the institute. We abide by the mission to acquaint students of our institute with the current trends of Robotics and Automation in the Industries by providing sufficient practical exposure and opportunities, which will enhance their knowledge along with developing technical as well as soft skills thus in creating skilled individuals for the betterment of the society and country.

Today, Robotics is a rapidly growing field, as we continue to research, design and build new robots that serve various practical purposes including domestic, commercial and military. The RGIT Robotics Club strives to stimulate interest in robotics among the students of the institute. Besides making a serious endeavour to spread knowledge on Robotics and its diverse applications, it also stands by the subtle acronym of TEAM - 'Together Everyone Accomplishes More'. Well defined goals, an organized and disciplined work structure and motivated members are the features of the club.

Website: www.rgitsroboticsclub.com

Email ID: rgitsroboticsclub@gmail.com

Conveners: Prof. Chetan Rane and Prof. A.V. Gotmare

Sr. No.	Activity Name	Type of Activity	Date	Remarks
YEAR 2018-2019				
1.	Team Formation 2018-19	Declaration of position holders	July 2018	Completed
2.	Technorion 2018 (IIT Bombay)	Competition	October 2018	Completed
3.	Techfest IIT Bombay	Competition	December 2018	Completed
4.	TECHNOVANZA VJTI	Competition	December 2018	Completed
5.	DD RoboCon 2019	Competition	February 2019	Completed
6.	Robotech Workshop	Workshop	March 2019	Completed
7.	ICARUS Events	Technical Fest	March 2019	Completed
YEAR 2019-2020				
8.	Team Formation 2019-20	Declaration of position holders	23rd and 24th July 2019	Completed
9.	Robotics Club Website Launch	Website Launch	August 2019	Completed
10.	Workshop on Self Balancing Robot	Workshop in the Institute	27th, 28th & 29th August 2019	Completed
11.	Technorion 2019 (IIT Bombay)	Competition	6th October 2019	Completed
12.	e-yantra 2019 online selection test of 8 teams (IIT Bombay)	Competition	Multiple Dates	Completed (7 teams qualified for stage 1)
13.	Internship on Canine- An Autonomous Quadruped Walking Robot	Internship Program in the Institute	2nd to 6th December 2019	Completed

14.	A Talk delivered on Higher Education by Education Street	Seminar	14th January 2020	Completed
15.	Spectra The Fest (SPCE) Robomaze	Competition	31th January and 1st February 2020	Completed
16.	DD Robocon 2020 (Stage 1 Submission)	Competition	7th February 2020	Completed
17.	Recruitment 2020-21	New Member Registration	6th March 2020	Completed

YEAR 2020-2021

|				
18.	Team Formation 2020-21	Declaration of position holders	18th August 2020	Completed
19.	Recruitment	Selecting Junior team	24th August 2020	Completed
20.	Talk on Deep Learning by Mr. Rahul Agrawal	Webinar	12th September 2020	Completed
21.	Introduction to Computer Vision	e-Workshop	2nd, 3rd & 4th October 2020	Completed
22.	A Talk delivered on Higher Education by IMS	Webinar	7th October 2020	Completed
23.	Cozmo-clench (Techfest 2021 IITB)	Competition	Nov-Dec 2020	Completed
24.	e-Yantra 2020-21 (IITB)	Competition	Aug 2020-March 2021	Ongoing(Completed 4 out of 6 stages)
25.	DD RoboCon 2021	Competition	Dec 2020-June 2021	Ongoing
26.	Recruitment 2021	New Member Registration	20th -21st March 2021	Completed

EVENTS THROUGHOUT THE YEARS (2018-2019)

1. TECHNORION 2018

A competition held at IIT Bombay during September 2018, where six teams from the club had participated. The task was to make a manually controlled gripper robot used for completing the course.

2. TECHFEST - IITB 2018

A competition held at IIT Bombay, during December 2018. Two teams from the club participated in a competition called "COZMO-CLENCH" and successfully completed the task within the given stipulated time.
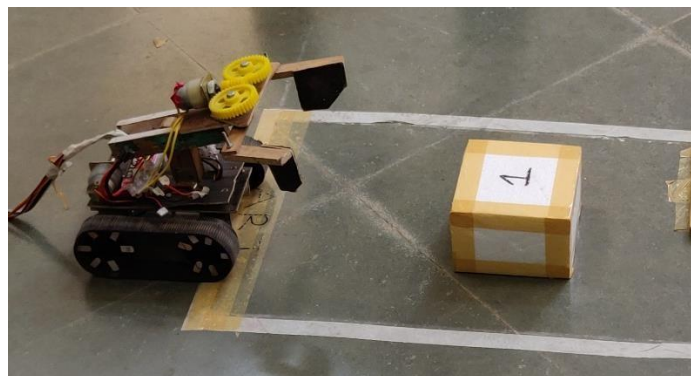
3. TECHNOVANZA -VJTI

Technovanza is the 3-day national-level annual techno-management festival of VJTI, organized by the students on non-profit basis. The competition in which the club participated are as stated above.
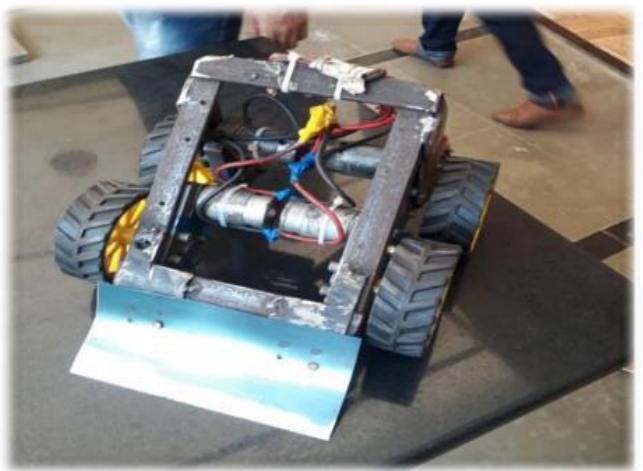

Robo – Strike

Robo- soccer

Robo-Maze

Robo-sumo

4. ABU ROBOCON 2019

Robocon (short for Robotic Contest) is organized by Asia-Pacific Broadcasting Union (ABU), a collection of over 20 countries of Asia Pacific Region. Two robots have to be designed as per the given problem statement and the designs have to be submitted on the given deadline along with a detailed document. The club participated for the following competition and successfully designed the robots. The club was not shortlisted for the stage 2.

Result of stage 1:
https://drive.google.com/file/d/1_UFpnK3_W7fo4FMG3Xwi4jVgvLeIp1p/view?usp=sharing

5. ROBOTECH WORKSHOP (PRE-ICARUS EVENT)

The Club conducted a workshop on "**Bluetooth controlled manual Robot**" for students of our institute on behalf of student council. The students were taught how to build the robot along with the insights and in detail codes of the robot. 22+ students participated and successfully learned the topic.

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List of Participants

Sr. No.	Name	Year
1.	Dishank Machkar	SE
2.	Shubham Baghwat	SE
3.	Saket Dhamapurkar	FE
4.	Mayuri Ghadigaonkar	FE
5.	Ankit Bhowad	SE
6.	Rohit Singh	FE
7.	Alisha Vinekar	FE
8.	Krishnakant Nalat	FE
9.	Sahil Pillikandlu	FE

10.	Swagat Das	FE
11.	Tejas Mulya	FE
12.	Sidhhi Raskar	FE
13.	Pranav Prabhu	FE
14.	Vaishnavi Wagh	FE
15.	Sourav Katkar	SE
16.	Shivam Mishra	SE
17.	Rahul Malgundkar	SE
18.	Umang Kholkiya	SE
19.	C A Akansha	SE
20.	Ahtesham	SE
21.	Ayush Rao	SE
22.	Sidhhiraj Bhidaye	SE

6. ICARUS 2019

The Club conducted altogether five events during the technical fest of the institute ICARUS 2019. The description of the events are as follows:

a) **ROBOSOCCER:** Robo-soccer is a tournament where manually controlled robots within the given specifications play soccer. This is a one on one game. The team which scores the maximum will be the winner.

b) **ROBORACE:** Robo-race is a tournament in which a manually controlled robot has to complete a series of tasks with certain obstacles.

c) **ROBOMAZE:** Robo-maze is a tournament consisting of knockout rounds, in which two manual robots have to compete with each other to solve the maze within given time and the winner will be decided on the basis of minimum completion time and/or scoring maximum points.

d) **ROBOWARS:** Robo-wars is a tournament in which two manually controlled robots fight with each other as they engage in a combat. The aim of each robot is to immobilize the opponent's robot. The winner will be decided on the basis of the degree of immobilization and the points scored.

e) **CHASE THE ACE:** It is a knock-out game to test one's controlling skills, patience and intelligence. The bot has to carry the coins to their respective deposit zones and chase the Ace to beat the opponent.

EVENTS THROUGHOUT THE YEAR (2019-2020)

1. Website Launch

The official Website of RGIT'S ROBOTICS CLUB was launched on August, 2019. It was created with the help of WordPress to provide knowledge about the activities of team. It also exhibits details about events, workshops, competitions, projects and technical papers publishing accomplished by team members.

Domain of website: www.rgitsroboticsclub.com

2. WORKSHOP ON SELF BALANCING ROBOT

RGIT's Robotics Club conducted a 3-day workshop on Self - Balancing Robots in collaboration with the RGIT's MESA from 27th, 28th and 29th August, 2019.

The inauguration of the workshop was done on 27th August,2019 at 12:30 pm, by the HOD, Dr. Rajesh Kale and convener, Prof. Ashwini Gotmare.
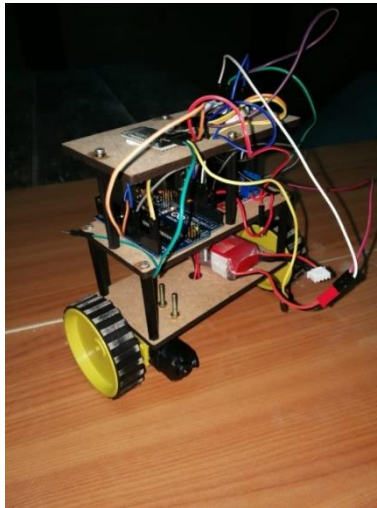
There were 74 students who attended this workshop most of them being from within the institute and rest from St. Johns college (Palghar), NMIMS Mukesh Patel college (Vile-Parle), DJ Sanghvi College of Engineering (Vile-Parle), VIVA college (Virar) etc.

The participants were taught about

- **Design and modelling of the robot on Solidworks**
- **Simulation of the Robot on MATLAB – Simulink**
- **Arduino microcontroller**
- **App creation by using MIT App Inventor.**

The students were provided a take away kit of their robots in a group of five. Students who participated successfully learned the topic and gained the insights of Robotics. All the participants provided positive feedback.

List of Participants

Sr. No.	Name	Dept.	Year	Year/Institute
1.	Vaibhav Sanap	Mechanical	FE	RGIT
2.	Vaibhav Kelkar	Mechanical	FE	RGIT
3.	Siddhesh Divate	Mechanical	FE	RGIT
4.	Jaya Verma	Mechanical	FE	RGIT
5.	Pranay Pawar	Mechanical	FE	RGIT
6.	Ishita Gharat	-	-	St. Johns
7.	Anmol Singh	-	-	St. Johns
8.	Dhanjeet Yadav	-	-	St. Johns
9.	Ojas Jadhav	-	-	St. Johns
10.	Aditya Das	-	-	St. Johns
11.	Yash Chaturvedi	Mechanical	TE	RGIT
12.	Kshitij Baria	Mechanical	TE	RGIT
13.	Rahul choudhary	Mechanical	TE	RGIT
14.	Mayur Chougule	Mechanical	TE	RGIT
15.	Sahil Chikhale	Mechanical	TE	RGIT
16.	Adit Sankhe	-	-	VIVA
17.	Yatharth Sankhe	-	-	VIVA
18.	Vinayak Sagar	-	-	VIVA
19.	Mayuresh Patil	-	-	VIVA
20.	Rohan Pagare	-	-	VIVA
21.	Saurabh Shirsikar	Mechanical	FE	RGIT
22.	Mayur Wadle	Mechanical	FE	RGIT
23.	Harshal Shikhare	Mechanical	FE	RGIT
24.	Shantanu Shinde	Mechanical	FE	RGIT
25.	Prathamesh Parab	Mechanical	FE	RGIT
26.	Vivek Rajput	Mechanical	-	St. Johns
27.	Abhishek Sinha	-	-	St. Johns

28.	Anish Patil	-	-	St. Johns
29.	Vivek Soni	-	-	St. Johns
30.	Rushikesh Sasane	-	-	St. Johns
31.	Sweta Kumari	EXTC	FE	RGIT
32.	Chitra Jain	EXTC	FE	RGIT
33.	Anush Sharma	EXTC	FE	RGIT
34.	Pranav Hare	EXTC	FE	RGIT
35.	Loukika Neve	EXTC	FE	RGIT
36.	Shreya Jagtap	IT	FE	RGIT
37.	Aditi Yadav	IT	FE	RGIT
38.	Varun Nadar	EXTC	FE	RGIT
39.	Vibha Shinde	IT	FE	RGIT
40.	Shantanu Shekadar	IT	FE	RGIT
41.	Shubham Mahindrakar	Mechanical	SE	RGIT
42.	Tanmay Raje	Mechanical	SE	RGIT
43.	Malkani Amir Rafik	Mechanical	SE	RGIT
44.	Rahul Mahadik	Mechanical	SE	RGIT
45.	Chinmay Nandoskar	EXTC	SE	RGIT
46.	Harshada Patole	-	-	Bhavans college
47.	Alisha Thakare	Mechanical	TE	RGIT
48.	Neha Yelve	Mechanical	TE	RGIT
49.	Siddhiq Pawaskar	Mechanical	SE	RGIT
50.	Tanmay Bhavsar	Mechanical	TE	RGIT
51.	Sahil Amerkar	Mechanical	FE	RGIT
52.	Rugved Raote	Mechanical	FE	RGIT
53.	Aryan Bhalerao	Mechanical	FE	RGIT
54.	Vaishnavi Pawar	Mechanical	FE	RGIT
55.	Balasaheb Jadhav	Mechanical	FE	RGIT
56.	Saurabh Parkar	Computer	FE	RGIT
57.	Akash Pawar	Computer	FE	RGIT

58.	Shubham Gupta	Computer	FE	RGIT
59.	Tushar Panchmukh	Computer	FE	RGIT
60.	Kunal Kakara	Computer	FE	RGIT
61.	Akhil Chauhan	-	-	MPSTME
62.	Aditya Sharma	Instrumentation	FE	RGIT
63.	Shravan Bangera	Mechanical	FE	RGIT
64.	Tanfaiz Shaikh	Computer	FE	RGIT
65.	Soham Deodhar	Computer	FE	RGIT
66.	Deep Mangaonkar	Mechanical	SE	RGIT
67.	Varun Patel	-	FE	RGIT
68.	Vighnesh Ganji	Computer	FE	RGIT
69.	Khushi Shetty	Computer	FE	RGIT
70.	Fletcher Fernandes	Computer	FE	RGIT
71.	Amitesh Dungarshi	EXTC	SE	RGIT
72.	Niyati Vaidya	Mechanical	FE	RGIT
73.	Rutvik Patel	Mechanical	FE	RGIT
74.	Vaibhav	-	-	-

3. SEMINAR ON GRE WITH ILW

ILW is one of the leading institutes for preparation of GRE, we approached them about conducting a seminar in our college to inform our students about the landscape of abroad education and the opportunities and also to promote their offered services.

The seminar received an overwhelming response with over 80 students. The seminar was conducted on 8th October 2019.

4. EYANTRA 2019-20

e-Yantra Robotics Competition (eYRC) is a unique annual competition launched in the month of August every year for undergraduate students in science and engineering colleges, polytechnic. Selected teams are given a robotic kit complete with accessories and video tutorials to help them learn basic concepts in embedded systems and microcontroller programming. Abstracts of real world problems assigned as "themes" are then implemented by the teams using the robotic kits.

We participated with 7 teams in order to have a flexibility in choosing the theme that interests us the most. We qualified till Task 2 of the competition.

5. TECHNORION 2019 (IIT BOMBAY)

Technorion is a zonal level robotics competition for an international level Competitions like Cozmo Clench, Meshmerize and CoDecode for Techfest hosted at IIT Bombay During Dec/Jan every year. The zonal round – Technorion 2019 was held at IIT-B and the club participated in the aforementioned competitions.

a) Cozmo-Clench is a competition where the team has to build a robot which is capable of picking and placing a cuboidal object at desired location in the game field by avoiding all the obstacles and reaching the end in the shortest time possible. The team couldn't make it to the top but learned a lot from our mistakes and will continue to push our limits to make the finest robots.

b) Meshmerize is a competition where the team has to build a robot which is capable of following a line and solving a maze in a dark room. The maze is made up of white lines on black surface, an autonomous robot has to be made in order to accomplish the following task. The robot uses line following sensors along with precise and fast motors which are controlled by algorithms coded into an Arduino.

3) CoDecode is a competition where all the programmers are given with programming questions to solve. The one who solves the maximum questions correct by applying correct logic and coding it in an efficient coding language to get the solution is the winner.

Learning from our mistakes and the ways to avoid and improve them is our biggest takeaway.
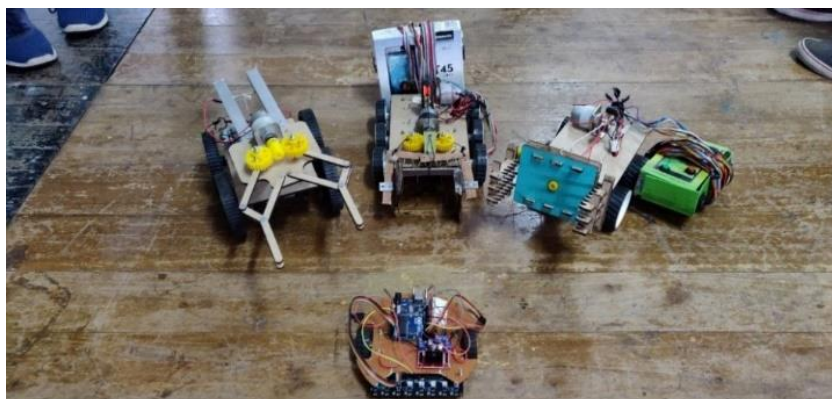
6. CANINE – AN AUTONOMOUS QUADRUPED-WALKING ROBOT

RGIT's Robotics Club organised a 6-day internship program on 'Canine – An Autonomous Quadruped Walking Robot' in collaboration with RoboRise Technologies and ASME RGIT from 2nd to 6th December, 2019. This internship on Autonomous Quadruped robot is the first of its kind in India. It gave the students a primary understanding of autonomous robots.

The participants gained hands-on experience on-

- **The designing (SOLIDWORKS),**
- **Simulation (MATLAB)**
- **Coding (Python) for the four legged robot**
- **PCB design using Proteus**
- **Coding Arduino using Arduino IDE.**

All students were provided with their own takeaway kits given in a group of five.The internship was concluded with everyone receiving an internship certificate given in collaboration with RoboRise Technologies and taking a picture with their newly created CANINE robot.
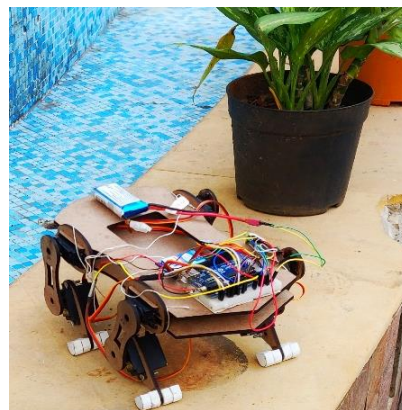
List of Participants

Sr. No.	Name Of Participant	Department	Year	Institute
1.	Onkar Bharat Koli	Mechanical	TE	Chhatrapati Shivaji Maharaj Institute Of Technology
2.	Prathamesh Dattatray Mane	Mechanical	TE	Rajiv Gandhi Institute Of Technology
3.	Prapti Shetty	EXTC	SE	RGIT
4.	Ashita Shetty	Mechanical	SE	RGIT
5.	Ashish Shetty	EXTC	SE	SAKEC
6.	Kritik Rathod	EXTC	SE	Sakec
7.	Utkarsh Gohil	EXTC	SE	SAKEC
8.	Yash Shetty	EXTC	TE	VIT
9.	Aman Aniruddh Chauhan	EXTC	TE	VIT

10.	Sahil Kothawale	EXTC	TE	VIT
11.	Damini Malpote	EXTC	SE	VIT
12.	Kaustubh Gupte	EXTC	TE	VIT
13.	Rahul Prabhu	EXTC	TE	VIT
14.	SHUBHAM MANOJ PATIL	Computer	SE	VIDYAVARDHINI COLLEGE OF ENGINEERING
15.	Nikita Mayekar	Mechanical	SE	L. Re. Tiwari
16.	Zahid Salim Shaikh	IT	SE	M.H.Saboo Siddik College Of Engineering
17.	Parth Powale	EXTC	SE	Shah And Anchor Kutchhi Engineering College
18.	Dhananjay Maru	EXTC	SE	Shah And Anchor Kutchhi Engineering College
19.	Sitara Khadka	EXTC	SE	Kjsieit
20.	Deepankar Makwana	B. Com	FE	Xaviers
21.	Devam Mhatre	Mechanical	TE	Rajiv Gandhi Institute Of Technology
22.	Abhishek	Mechanical	TE	Sies
23.	Iyer Shabharish	Mechanical	TE	SIES
24.	Shreyas Waikar	Mechanical	TE	SIES
25.	Bamania Keval Jitendra	Electrical	BE	Noble Group Of Institutions-Junagadh
26.	Priya Saroj	EXTC	TE	RGIT
27.	Vishal Shroff	EXTC	TE	RGIT
28.	Tanay Bhoyar	Science	11th	Ramsheth Thakur Junior College Of Science
29.	Niyati Vaidya	Mechanical	FE	RGIT
30.	Shreeya Sanjay Tambe	Mechanical	SE	RGIT

7. SEMINAR ON GRE WITH EDUCATION STREET

In collaboration with RGIT MESA, we organized a GRE Seminar on 14th January 2020.

Education Street is one of the leading overseas education counselors. Ms. Ankita Thakker shared her valuable experiences about applying overseas education. This helped the students of our institute in multiple ways.

Ms. Ankita Thakker shared insights information of visa processing, universities selection and the GRE examination. She also shared the importance and salary difference and explained us about the pay scale according to selected profession and course.

8. ROBOMAZE (SPCE)

Spectra The Fest is one of the largest technical fest in Maharashtra which was hosted at Sardar Patel College of Engineering. In 2020, The fest was conducted on 31th January and 1st February and the club participated in Robomaze Competition.

Robomaze is an event in which all the participants have to show their driving capability to complete the entire maze with the help of Robot .The participant has to complete the entire maze with minimum time for winning the match. The team Secured 7th rank in the competition and received a certificate of participation.

9. DD ROBOCON 2020

DD-Robocon is a part of the Asia-Pacific Robot Contest (ABU Robocon). This event is aimed to build technical skills of under graduate engineering students of our country. IIT Delhi hosts DD-Robocon 2020 on behalf of Doordarshan (DD).

The theme of ABU Robocon 2020 is "ROBO RUGBY 7s", where teams have to play rugby 7's using two robots. Each game is between two teams (red and blue). Both the robots should collaborate to score maximum points within the time limit. A typical game lasts for three minutes. The competition is divided into three stages at domestic level, where the first stage is submission of design file and documents specifying details of both robots. Second stage includes video proof of robots based on designs created. Third and final stage is the challenge round in which two teams face off against each other within the given time limit. This round takes place in IIT Delhi. Team scoring maximum in all three stages will represent their country at International level of competition which is supposed be held at Suva, FIJI. Two robots were designed as per the given problem statement and were submitted on February 7,2020 along with a detailed document for first stage challenge. The Club's designs cleared the first stage and secured an AIR 6 and successfully qualified for stage 2 of DD Robocon.

We were not able to complete the requirements of Stage 2 due Covid-19 Pandemic.

|						
MCT's Rajiv Gandhi Institute of Technology, Andheri, Mumbai	Paid	20	38	38		96
MIT Academy Of Engineering, Alandi	Paid	20	36	38		94
MIT-SCHOOL OF ENGINEERING, MIT ADT UNIVERSITY	Paid	18	35	40		93
MIT-World Peace University	Paid	20	37	40		97
MKSSS's Cummins College of Engineering for Women Pune	Paid	20	40	40		100
Muffakham Jah College of Engineering and Technology	Paid	18	40	40		98

EVENTS THROUGHOUT THE YEAR (2020-2021)

1. TALK ON DEEP LEARNING

RGIT's Robotics Club in collaboration with IETE, RGIT conducted a webinar on Introduction to Deep Learning on 12th September 2020 at 5pm with duration of 2 hrs. The webinar was inaugurated by Vice-principal Dr. S. D. Deshmukh.

Hosts: 1) Abhishek Jagushte (Coding Team Head of RRC)
      2) Nidhi Pawar (Member of IETE RGIT)

Speaker: Mr. Rahul Agrawal, Principal Machine Learning Manager at Microsoft.
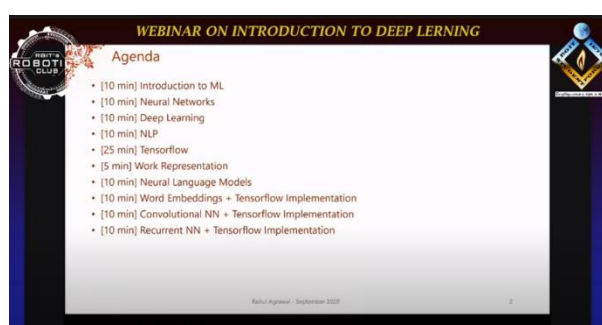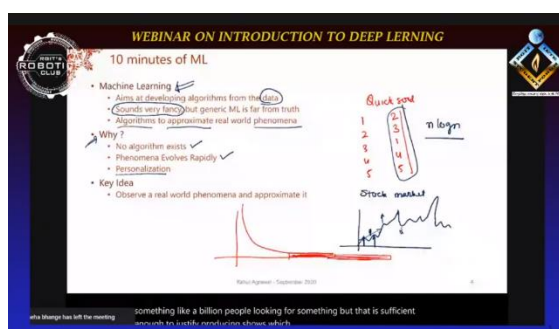
There were 85 participants who attended this webinar most of them being from within the institute and rest from St. Johns college (Palghar), Thadomal Sahani Engineering College, DJ Sanghvi College of Engineering (Vile-Parle), SPIT (Andheri) and many more across Mumbai.

The participants were taught about Types of Neural Networks, Basics of Natural Language Processing followed by the QnA session.

The entire session was also streamed on our official YouTube channel named RGIT's Robotics Club. Participants successfully learned the topic and gained the insights of Deep Learning. At the end, all the participants provided positive feedback.

YouTube Livestream: https://youtu.be/IJx7l6N-Yfg

List of Participants

Sr. No.	Name	Institute
1.	Shubham Baghwat	RGIT
2.	Yash chitroda	Thakur ramnarayan collage
3.	Aniket Patil	RGIT
4.	Roshani Santosh Karambele	RGIT
5.	Vaibhav Gorakshanath Sanap	RGIT
6.	Kirti Karawde	A.C.Patil College of Engineering
7.	Bandgar Mamta	RGIT
8.	Shivam Mishra	RGIT
9.	Rupali Tiwari	RGIT
10.	Ravi singh	RGIT
11.	Aman Mali	RGIT
12.	Ashish Bansal	Madhav Institute of Technology and Science
13.	Jahnavi Kodakandla	RGIT
14.	Sanamdeep	RGIT
15.	Rahul Shukla	RGIT
16.	Gandhali Malve	RGIT
17.	Vishal Deshmukh	Dr.Babasaheb Ambedkar Technological university
18.	Sakshi Mankar	RGIT
19.	Ashika kumar	RGIT
20.	Diksha Muneshwar	RGIT
21.	Mayur K. Poojary	Datta Meghe College Of Engineering
22.	Anukool Sasi	RGIT
23.	Anukool Sasi	RGIT
24.	Ankit jasuja	Thadomal shahani engineering college
25.	Siddhesh Parab	RGIT
26.	Prathamesh bidaye	RGIT
27.	Anagha Patil	RGIT
28.	Lajree Lohar	RGIT
29.	Prathamesh Kadam	RGIT
30.	ROHIT PAWAR	RGIT

31.	Vijay Chikkannavar	RGIT
32.	Tanvi Kadam	RGIT
33.	Siddhant Shetty	RGIT
34.	Rishabh Gilda	RGIT
35.	Harsh Ghosalkar	RGIT
36.	Aaditya Auti	RGIT
37.	Pritika temkar	Kce college of engineering jalgaon
38.	Nabhika	RGIT
39.	Harsh Shirke	RGIT
40.	Tejal temkar	RGIT
41.	Saloni Vichare	RGIT
42.	Shubham Manish Hedavkar	RGIT
43.	Abhishek Mahendrakumar Gupta	St. John College of Engineering and Management
44.	Aniket Rai	RGIT
45.	Vijay Tembugade	RGIT
46.	Rohit Rajendra Prasad Yadav	Thakur College of Engineering and Technology
47.	Devansh Trivedi	RGIT
48.	Dipak	
49.	Rohit Kedia	RGIT
50.	Akash Pawar	RGIT
51.	Pranav Palkar	
52.	Saurabh singh	RGIT
53.	Varunkumar Mishra	SJCEM, Palghar
54.	RONIT BISWAS	SIR M VISVESVARAYA INSTITUTE OF TECHNOLOGY
55.	Chaitali Ramesh Sumbe	RGIT
56.	Janhavi Parvesh Sakat	RGIT
57.	Prathibha Sudhakaran	Amity University
58.	Manav Shetty	RGIT
59.	Vaishak Mishra	RGIT
60.	Swagat Das	RGIT
61.	CEON BENDOAMAR	RGIT
62.	Atharva Sirdeshpande	RGIT

| 63.	Kuldeep Prajapati	CSMIT
64.	Abhay Vekhande	RGIT
65.	Parth Chavan	RGIT
66.	Anush Sharma	RGIT
67.	Amit Nemade	RGIT
68.	Tejashree Jadhav	VIVA Institute of Technology
69.	Sarvesh K	SFIT
70.	Parth	RGIT
71.	JITESH GAWAS	RGIT
72.	Smith Barbose	St Francis institute of technology
73.	Numan khan	SFIT
74.	Pranay Agatrao Lendave	KJSCE
75.	Ajay yadav	St John collage of engineering and technology
76.	Krishna Mandal	Mvlu
77.	Satyam Koul	RGIT
78.	Aayush Yadav	Shree lr tiwari College of engineering
79.	Smeet	SFIT
80.	Arshunnu bare	RGIT
81.	Ritika Ghanekar	RGIT
82.	Ankit Bhowad	RGIT
83.	Rohan Sunil Gaikwad	RGIT
84.	ashraf khan	RGIT
85.	Aryan Bhalerao	RGIT
86.	Kunal	Vidyalnakar institute of technology

2. E-WORKSHOP ON INTRODUCTION TO COMPUTR VISION

RGIT's Robotics Club conducted a three days online E-workshop on Introduction to Computer Vision from 2nd to 4th October 2020 from 3pm-5pm. The instructors for the workshop were the coding team members of our club.

Timeline of the workshop:

Day	Topic	Instructors
1	Host	Swagat Das
1	Basics of openCV	Adrian D'Souza
2	Object Recognition	Avadhoot Khedekar
3	Face Recognition	Niyati Vaidya
3(End)	Quiz round	-
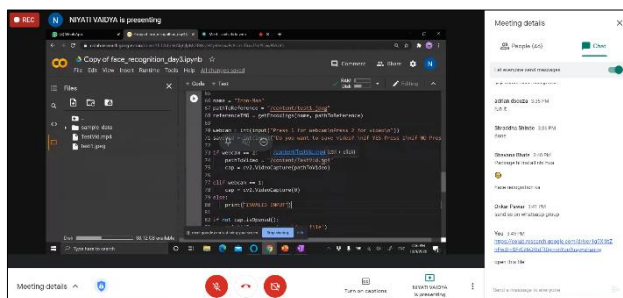
Day 1 of the Workshop
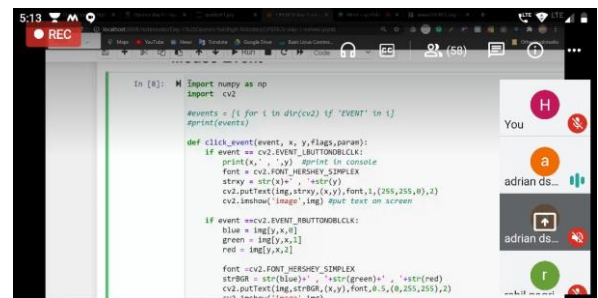
Day 2 of the Workshop
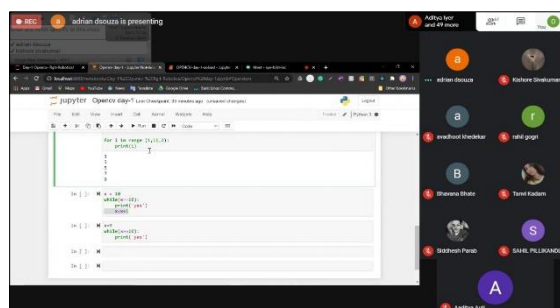
Day 3 of Workshop

There were 44 participants who attended this workshop. Most of them were from within the institute and rest from Terna Engineering College, SPN Doshi College, Bangalore institute of technology (Karnataka), MVJ College of Engineering and technology, Dr. Mahalingam college of engineering (Tamilnadu) and many more. The participants were taught about Basics of openCV to most used computer vision applications such as object recognition and face recognition on Google Colab. Participants successfully learned the topic and gained the insights of Computer Vision.

At the end, we conducted a quiz round based on all the topics which were covered in the course of three days. All Participants received a Certificate of Completion and top 3 scorer in the quiz received Certificate of Excellence. All the participants provided positive feedback.

List of Participants

Sr. No	Name	College
1.	Aaditya pradeep auti	Rajiv Gandhi Institute of Technology
2.	Omkar Balkrishna Parab	Rajiv gandhi institute of technology
3.	Tejal temkar	Rajiv gandhi institute of technology
4.	Tejas Moolya	Rajiv gandhi institute of technology
5.	Sahil Nasir Pillikandlu	Rajiv gandhi institute of technology
6.	Bhavana Kolkondi	Rajiv gandhi institute of technology
7.	Swagat Das	Rajiv gandhi institute of technology
8.	Anushka Dhamankar	Rajiv Gandhi Institute of Technology
9.	Aryan Bhalerao	Rajiv Gandhi Institute of Technology
10.	Akshata Teli	Rajiv Gandhi Institute of Technology
11.	Nikita More	Rajiv Gandhi Institute of Technology
12.	Nandita Attawar	Rajiv Gandhi Institute of Technology
13.	Neha Laxman Kadam	Rajiv Gandhi Institute of Technology
14.	Ritika Ghanekar	Rajiv Gandhi Institute of Technology
15.	Shravan Bangera	Rajiv Gandhi Institute of Technology
16.	Kavya.M.V	MVJ COLLEGE OF ENGINEERING
17.	Sangamesh K B	Bangalore institute of technology

18.	SNEHA. Ls	MVJ. College of engineering
19.	Kunal Gaikwad	Terna Engineering College
20.	Aishwarya Warkhande	Rajiv Gandhi institute of technology
21.	Rahil Sunil Gogri	Rajiv Gandhi institute of technology
22.	Nitish Venugopal Poojari	Terna Engineering College
23.	Tanvi Kadam	Rajiv Gandhi Institute Of Technology
24.	Aditya Narayan Iyer	Rajiv Gandhi Institute Of Technology
25.	Parthesh Haswar	Rajiv Gandhi Institute Of Technology
26.	Priyal Rajgor	SPN Doshi
27.	Chinmay ravindra warang	Terna engineering college
28.	Madhura mohan parab	Terna engineering college
29.	Prasanna Mahesh Kolte	Datta Meghe College Of Engineering
30.	Shraddha Sunil Shinde	Datta Meghe College Of Engineering
31.	Kishore Sivakumar	Dr. Mahalingam college of engineering and technology
32.	Siddhesh Parab	Rajiv Gandhi Institute of Technology
33.	Bhavana Rajesh Bhate	Rajiv Gandhi Institute of Technology
34.	Mayuri M Ghadigaonkar	Rajiv Gandhi Institute of Technology
35.	Prajakta G Kudtarkar	Rajiv Gandhi Institute of Technology
36.	Mayur Arun Khalane	Rajiv Gandhi Institute of Technology
37.	Devrath Suku Nediyirippil	Rajiv Gandhi Institute of Technology
38.	Nabhika Dipak Vartak	Rajiv Gandhi Institute of Technology
39.	Sejal Agarwal	Rajiv Gandhi Institute of Technology
40.	Abhiral Dubey	Rajiv Gandhi Institute of Technology
41.	Altmash Siddique	Rajiv Gandhi Institute of Technology
42.	Urvi Jagdish Tambe	Rajiv Gandhi Institute of Technology
43.	Prakash Lambor	Rajiv Gandhi Institute of Technology
44.	Atharva Sirdeshpande	Rajiv Gandhi institute of technology

3. EYANTRA 2020-21

e-Yantra Robotics Competition (eYRC) is a unique annual competition launched in the month of August every year for undergraduate students in science and engineering colleges, polytechnic. Selected teams are given a robotic kit complete with accessories and video tutorials to help them learn basic concepts in embedded systems and microcontroller programming. Abstracts of real world problems assigned as "themes" are then implemented by the teams using the robotic kits.

Website: https://portal.e-yantra.org/

This year the competition was a paid competition with INR 2000 as an entry fee for each team of 4 members. We participated with only one team which was as follows,

Sr. No.	Name	Year-Dept	Team
1.	Tejas Phutane (Leader)	BE-EXTC	Simulation
2.	Aaditya Auti	TE-EXTC	Electronics
3.	Niyati Vaidya	SE-MECH	Coding
4.	Tejal Temkar	SE-MECH	Design & Manufacturing

The team cleared all the 6 tasks of the theme "Vargi Bots" which extensively used the intricacies of Robot Operating System (ROS) and IoT to control robots from a remote location. The competition was completely simulation based. **Our team is among the top 90 of total of 500 teams participating in our theme.**

Each team member have opportunity for summer internship depending upon the performance in each task, an online quiz, resume. Final shortlisting will be carried out on the basis of technical interviews.

e-Yantra 2021 Results of each task

Task 0 Result:

Task Status: Accepted

Remark: **For Task0** :Pass. Task 0 output is as expected. Keep it up!

Task 2 Result:

Marks	Penalty	Total Marks
100.00	0.00	100

Remark: **For Task 2** :Pass. Task 2 output is as expected output.
Keep it up!

TASK 2 GRAPH

Task 1 Result:

Marks	Penalty	Total Marks
100.00	0.00	100

Remark: **For Task 1** :Pass. Task 1output is as expected output.
Keep it up!

TASK 1 GRAPH

Task 3 Result:

Marks	Penalty	Total Marks
96	0	96

Remark: **For Task 3** :Pass. You are using the default velocity/acceleration of the Arm. So, your score is adjusted accordingly.Task 3 output is as expected output.
Keep it up!

TASK 3 GRAPH

Task 4 Result:

Marks	Penalty	Total Marks
94.34	0.00	94.34

Remark: **For Task 4** :Pass. Task 4 output is as expected output.
Keep it up!

TASK 4 GRAPH

Task 5 Result:

Marks	Penalty	Total Marks
97.87	25.00	72.87

Remark: **For Task 5** :Pass. Task 5 output is as expected output.
Keep it up!

TASK 5 GRAPH

Task 6 Result:

Task	Marks	Penalty	Total Marks
Original Configuration	100.00	0.00	100
Bonus Configuration	33.33	0	33.33
Code	100	0	100

Remark: **For Task 6** : Pass. Task 6 output is as expected

4. Overseas Studies Webinar with IMS

RGIT's Robotics Club organized a webinar on overseas studies on 7th October 2020 which was conducted by IMS Mumbai.

IMS Mumbai is one of India's pioneering institutions in management education training and was single-handedly responsible for building awareness about the MBA among the masses. Over the years, IMS has expanded into other sectors as well, providing training, counselling, and guidance for international tests like GMAT, GRE, and the SAT, and undergraduate tests like the BBA, Law entrance exams, and Bank exams.

The speaker was Mr. Sumeet Verlekar who conducted the session where he shared his valuable experiences about applying overseas. This would help the students of our college in multiple ways for choosing right career path.

3. Cozmo-Clench (Techfest 2021 IITB)

Cozmo-clench (Techfest) is an National level robotics hosted at IIT Bombay in online mode in Nov-Dec 2020.

It is a competition where the team has to build a robot which is capable of picking and placing a cuboidal object at desired location in the game field by avoiding all the obstacles and reaching the end in the shortest time possible.

From the club, two teams (8 members) participated in the competition and both the teams were among the 60% of the participants. Hence were eligible to receive the Certificate of Participation as mentioned in the problem statement.

6. DD RoboCon 2021

DD-Robocon is a part of the Asia-Pacific Robot Contest (ABU Robocon). This event is aimed to build technical skills of under graduate engineering students of our country. IIT Delhi hosts DD-Robocon 2021 on behalf of Doordarshan (DD).

The competition is divided into three stages at domestic level, where the first stage is submission of design file and documents specifying details of both robots. Second stage includes video proof of robots based on designs created.

Due to pandemic, this year final stage may be held in online mode where teams need to shoot a complete continues video of robot performing all the tasks.

In offline mode, Third round is the challenge round in which two teams face off against each other within the given time limit. This round takes place in IIT Delhi. Team scoring maximum in all three stages will represent their country at International level of competition which is supposed be held at Jimo, China.

In stage 1, we have secured AIR 7 with marks 94/100 which qualified us for stage 2.

Our team is currently working on manufacturing process of the robots.

National Competition Website: http://www.ddrobocon.in/

International Competition Website: http://www.robocon2021.com/

Schedule:

Robocon National 2021 Live
30-July-2021 (ONLINE)

Important Dates

- Solution ideas(Proposal) submission by : March 04, 2021 by 11:59 pm
- Shortlisting : March 21, 2021
- Proof of concept(Video) submission by : May 25, 2021
- Shortlisting : June 2, 2021
- Online Event on : July 30, 2021

Stage 1 Result:

Manipal Institute of Technology	Paid	20	40	40	100
Marathwada Mitra Mandal's College of Engineering, Karvenagar, Pune 52.	Paid	20	40	40	100
Maulana Azad National Institute of Technology, Bhopal	Paid	18	40	40	98
MCT's Rajiv Gandhi Institute of Technology, Mumbai	Paid	14	40	40	94