Sponsored by MHRD under the National Mission on Education through ICT program. An initiative by IIT Bombay that aims to create the next generation of embedded systems engineers with a practical outlook to help provide practical solutions to some of the real world problems.

e-Yantra Lab Setup Initiative (eLSI)

VISION

e-Yantra Lab Setup Initiative (eLSI) is a college level program under which colleges are encouraged to setup robotics labs. AIET is privileged to be a part of this initiative since 2013. Our college has conducted a workshop on robotics to students for the consecutive two years. This workshop has helped our students in knowing the basics and programming a robotic kit

e-Yantra Robotics Competition(eYRC)

e-Yantra Robotics Competition (eYRC) is a unique annual competition for undergraduate students in science and engineering colleges. 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. **The winners of this competition will get a cash prize and offered summer internship at IITB through e-Yantra Summer Internship Program.**

AIET has always encouraged its students to take part in e-yantra robotics competition.

e-YRC 2014 Competition

In the e-Yantra robotics Competition 2014 all the final year Project batches of ECE department Participated event only one batch cleared prelims and bagged 7th position in the

final. The theme assigned for the batch was "Fire Fighting Robot" they were awarded with Successful Completion Certificate from IIT Bombay.

#	Name	USN	Title	Guide
1	Nizammuddin	4AL11EC033	Fire Fighting Robot	Mr. Santhosh S.
2	D Souza Deepakraj	4AL11EC024		
3	Darshan D N	4AL11EC019		
4	Kanthesh Jogi	4AL11EC031		

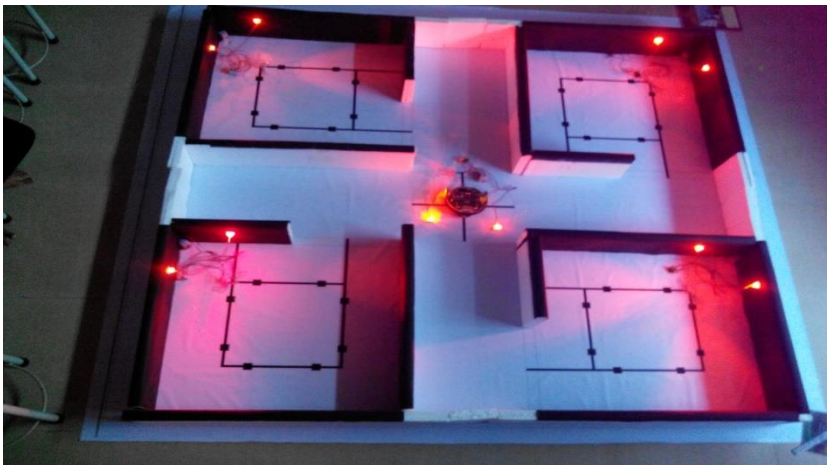


Fig: Fire fighting Robot Arena

Fig: e-YRC 2014 Team

e-YRC 2015 Competition

In the e-Yantra robotics Competition 2015 all the final year Project batches of ECE department Participated but no one cleared prelims.

e-YRC 2016 Competition

In the e-Yantra robotics Competition 2016 all the final year Project batches of ECE department Participated and 5 batches cleared prelims. All the five batches attended second round but two batches cleared for third round. Assigned theme for both the batches was **"Search and Rescue Robot".**

#	Name	USN	Title	Guide
1	Anoop Raj A R	4AL12EC017	**Search and Rescue Robot**	Mr. Santhosh S.
2	Chaitra M	4AL12EC026		
3	ChetanSuvarna	4AL12EC027		
4	RoopaMotilalRahod	4AL12EC064		

#	Name	USN	Title	Guide
1	AtionRoja H N	4AL12EC024	**Search and Rescue Robot**	Mr. Santhosh S.
2	RiaVinithaDsouza	4AL12EC063		
3	AnchanDivyalaxmiDiwakar	4AL12EC015		
4	Rashmitha M	4AL12EC061		

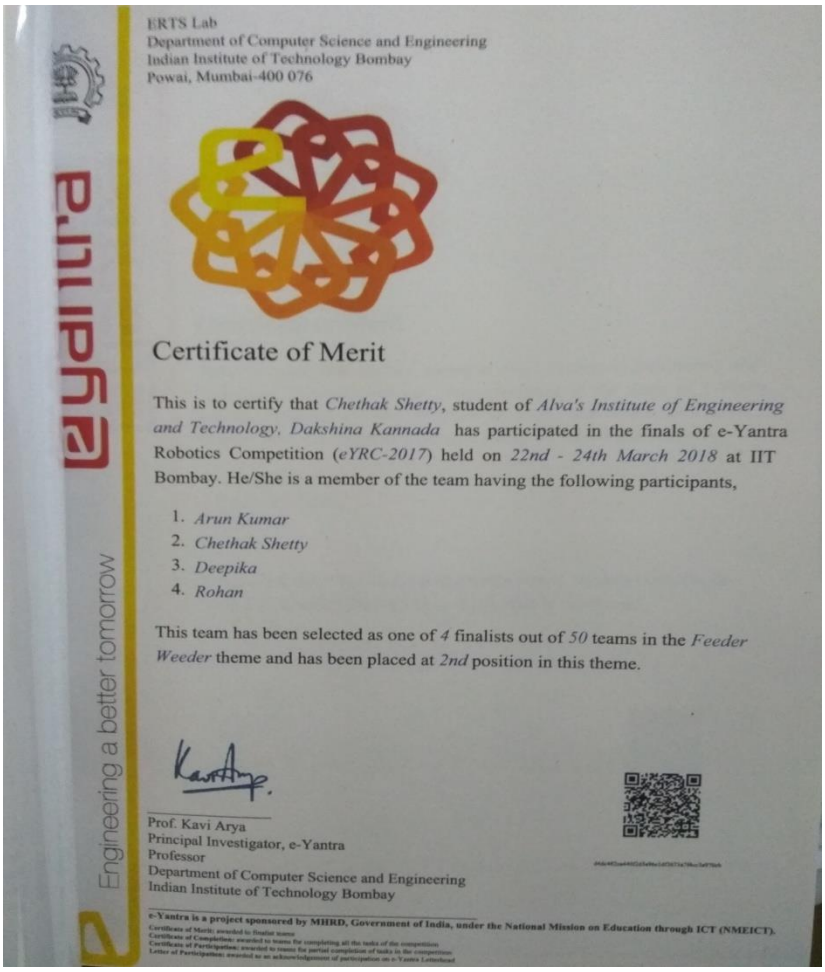
e-YRC 2017 Competition

In the e-Yantra robotics Competition 2017 all the final year Project batches of ECE department Participated and only one batch got selected in the prelims. The selected batch then cleared second and third task assigned under the theme called "**Feeder Weeder robot".** In the finals they bagged second prize in the sixth edition of National-level e-Yantra Robotics Competition (eYRC-2017) held at IIT Bombay from March 22 to 24.

#	Name	USN	Title	Guide
1	Arun Kumar	4AL14EC011	**Feeder Weeder Robot**	Mr. Santhosh S.
2	Chethak	4AL14EC023		
3	Deepika	4AL14EC027		
4	Rohan Sonal Dsouza	4AL13EC067		

Fig: Feeder Weeder Robot Arena

Fig: Fig: e-YRC 2017Team



ERTS Lab
Department of Computer Science and Engineering
Indian Institute of Technology Bombay
Powai, Mumbai-400 076

e-Yantra

Engineering a better tomorrow

Certificate of Merit

This is to certify that *Chethak Shetty*, student of *Alva's Institute of Engineering and Technology, Dakshina Kannada* has participated in the finals of e-Yantra Robotics Competition (*eYRC-2017*) held on *22nd - 24th March 2018* at IIT Bombay. He/She is a member of the team having the following participants,

1. *Arun Kumar*
2. *Chethak Shetty*
3. *Deepika*
4. *Rohan*

This team has been selected as one of *4* finalists out of *50* teams in the *Feeder Weeder* theme and has been placed at *2nd* position in this theme.

Prof. Kavi Arya
Principal Investigator, e-Yantra
Professor
Department of Computer Science and Engineering
Indian Institute of Technology Bombay

e-Yantra is a project sponsored by MHRD, Government of India, under the National Mission on Education through ICT (NMEICT).

Fig: Certificate of Merit Received

ರೋಬೊಟಿಕ್ಸ್ ಸ್ಪರ್ಧೆಯಲ್ಲಿ ಆಳ್ವಾಸ್‌ಗೆ ಪ್ರಶಸ್ತಿ

ಇ-ಯಂತ್ರ ರೋಬೊಟಿಕ್ಸ್ ಸ್ಪರ್ಧೆಯಲ್ಲಿ ಬಹುಮಾನ ಪಡೆದ ವಿದ್ಯಾರ್ಥಿಗಳು.

ವಿಶ್ವವಾಣಿ ಸುದ್ದಿಮನೆ ಮೂಡುಬಿದಿರೆ

ಐಐಟಿ ಬಾಂಬೆಯಲ್ಲಿ ನಡೆದ ರಾಷ್ಟ್ರ ಮಟ್ಟದ ಆರನೇ ಆವೃತ್ತಿಯ 'ಇ-ಯಂತ್ರ ರೋಬೊಟಿಕ್ಸ್' ಸ್ಪರ್ಧೆಯಲ್ಲಿ ಆಳ್ವಾಸ್ ಎಂಜಿನಿಯರಿಂಗ್ ಕಾಲೇಜಿನ(ಎಐಇಟಿ) ನಾಲ್ವರು ವಿದ್ಯಾರ್ಥಿಗಳ ತಂಡ ದ್ವಿತೀಯ ಸ್ಥಾನ ಪಡೆದುಕೊಂಡಿದ್ದಾರೆ.

ಆರು ತಿಂಗಳ ಅವಧಿಯ ಈ ಸ್ಪರ್ಧೆಯಲ್ಲಿ ದೇಶದ ಸುಮಾರು 508 ಕಾಲೇಜಿನ 23728 ವಿದ್ಯಾರ್ಥಿಗಳು ಭಾಗವಹಿಸಿದ್ದರು. ಈ ವೈಕಿ ಅಗ್ರ 35 ತಂಡಗಳಲ್ಲಿ ಸ್ಥಾನ ಪಡೆಯುವಲ್ಲಿ ಎಐಇಟಿ ಯಶಸ್ವಿಯಾಯಿತು. ಈ ಸ್ಪರ್ಧೆಯು ಮೂರು ಹಂತದಲ್ಲಿ ನಡೆದಿದ್ದು, ಮೊದಲ ಹಂತದಲ್ಲಿ ಆನ್‌ಲೈನ್ ಪರೀಕ್ಷೆ, ನಂತರ ರೋಬೊಟ್‌ನಲ್ಲಿ ತಂತ್ರಜ್ಞಾನದ ಆಳವಡಿಕೆ ಹಾಗೂ ಕೊನೆಯ ಹಂತದಲ್ಲಿ ಯಂತ್ರದ ಯಶಸ್ಸು ಕಾರ್ಯಾಚರಣೆಯ ದೃಢತೆಯೊಂದಿಗೆ ಸ್ಪರ್ಧೆ ಕೊನೆಗೊಂಡಿತು.

ಎಐಇಟಿಯ ಎಲೆಕ್ಟ್ರಾನಿಕ್ಸ್ ಆ್ಯಂಡ್ ಕಮ್ಯೂನಿಕೇಶನ್ ಎಂಜಿನಿಯರಿಂಗ್ ವಿಭಾಗದ ತೃತೀಯ ಸೆಮಿಸ್ಟರ್ ವಿದ್ಯಾರ್ಥಿಗಳಾದ ರೋಷನ್ ಡಿಸೋಜಾ, ಚೇತಕ್, ಅರುಣ್ ಕುಮಾರ್ ಹಾಗೂ ದೀಪಿಕಾರ ತಂಡ ನಿರ್ಮಿಸಿದ 'ಫೀಡರ್-ವೀಡರ್' ಎಂಬ ಯಂತ್ರ ಎರಡನೇ ಸ್ಥಾನ ಗಳಿಸಿತು. ಎಐಇಟಿ ವಿದ್ಯಾರ್ಥಿಗಳು ತಯಾರಿಸಿದ 'ಫೀಡರ್-ವೀಡರ್' ಸ್ವಯಂಚಾಲಿತ ವ್ಯವಸಾಯ ವ್ಯವಸ್ಥೆಯಾಗಿದ್ದು, ಕೃಷಿಯ ಚಟುವಟಿಕೆ ಸುಲಭಗೊಳಿಸಲಿದೆ.

'ಇ-ಯಂತ್ರ ಕೇಂದ್ರ ಮಾನವ ಸಂಪನ್ಮೂಲ ಅಭಿವೃದ್ಧಿ ಮಂತ್ರಾಲಯ ಪ್ರಾಯೋಜಿತ ಕಾರ್ಯಕ್ರಮ ರಾಷ್ಟ್ರೀಯ ಸಾಕ್ಷರತಾ ಮಿಷನ್ ನಲ್ಲಿ ಐಸಿಟಿ(ಎನ್. ಎಮ್.ಇ.ಐ.ಸಿ.ಟಿ) ಮೂಲಕ ವಿಜ್ಞಾನ ಕಾಲೇಜುಗಳಲ್ಲಿ ರೋಬೊಟಿಕ್ ಶಿಕ್ಷಣ ಪರಿಣಾಮಕಾರಿಯಾಗಿ ಪಸರಿಸುವ ನಿಟ್ಟಿನಲ್ಲಿ ದೇಶಾದ್ಯಂತ ಈ ಸ್ಪರ್ಧೆ ನಡೆಸಲಾಗುತ್ತದೆ.

ಆಳ್ವಾಸ್ ಶಿಕ್ಷಣ ಪ್ರತಿಷ್ಠಾನದ ಅಧ್ಯಕ್ಷ ಡಾ. ಎಂ. ಮೋಹನ್ ಆಳ್ವ ಮಾತನಾಡಿ, ವಿದ್ಯಾರ್ಥಿಗಳು ಪಠ್ಯದಲ್ಲಿ ಕಲಿತ ವಿಷಯ ಪ್ರಾಯೋಗಿಕವಾಗಿ ದೇಶದ ತಂತ್ರಜ್ಞಾನದ ಅಭಿವೃದ್ಧಿಯ ಜತೆಗೆ ಸಮಾಜಮುಖಿಯಾಗಿ ಬಳಸಿದಾಗ ಪರಿಸರದಲ್ಲಿ ಬದಲಾವಣೆ ಸಾಧ್ಯ ಎಂದರು.

Classifieds

Alva's students win second prize at e-Yantra event

SPECIAL CORRESPONDENT
MANGALURU

A team of four students from Alva's Institute of Engineering and Technology (AIET), Mijar, won the second prize in the sixth edition of National-level e-Yantra Robotics Competition (eYRC-2017) held at IIT Bombay from March 22- 24.

Rohan D'Souza, Chethak, Arun Kumar and Deepika, all eighth semester Electronics and Communication Engineering students, qualified for the finals after successfully completing three rounds.

A release from Alva's here said that the first round was an online test, the second was to build hardware on robots and programme it to the specified task and the third was to complete a theme or project in which problem statements were abstracted into a game rulebook. The students were mentored by Assistant Professor Santhosh S. The competition, spanning over six months, witnessed a registration of 23,728 students from 508 colleges across the country. AIET was one among the top 35 teams to go through to the finals.

In its chosen project named "Feeder-Weeder", which consists of automated farming systems, AIET bagged the second prize.

Alva's Education Foundation Chairman M. Mohan Alva congratulated the students. e-Yantra is a project sponsored by the Union Ministry of Human Resource Development. .

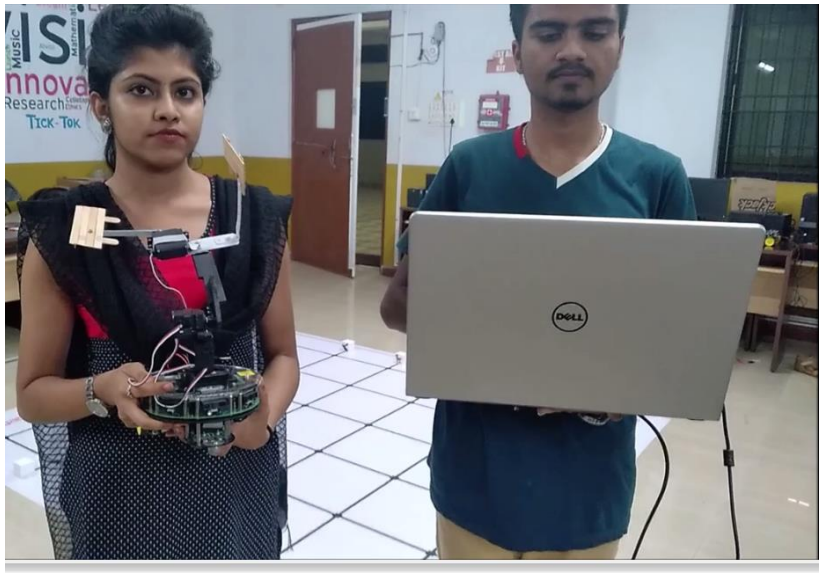
eYRC 2018-19

Theme Home coming

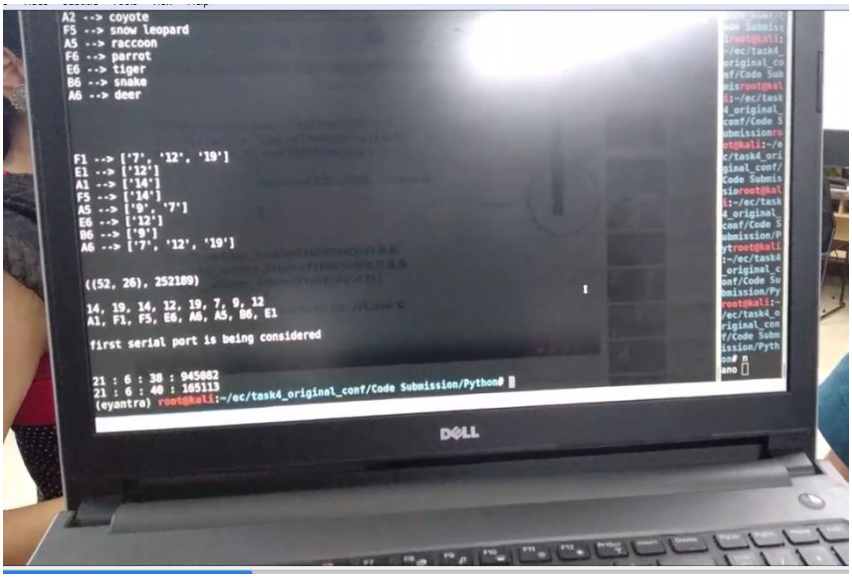
#	Batch	Name	USN	Theme	Guide Name
1	**Batch-1**	Patel Davis Shashikant	4AL16EC045	**Home Coming**	**Mr. Santhosh S**
2		Chesmi B R	4AL16EC100		
3		Karthik J	4AL16EC030		
4		Anju Thomas	4AL16EC003		

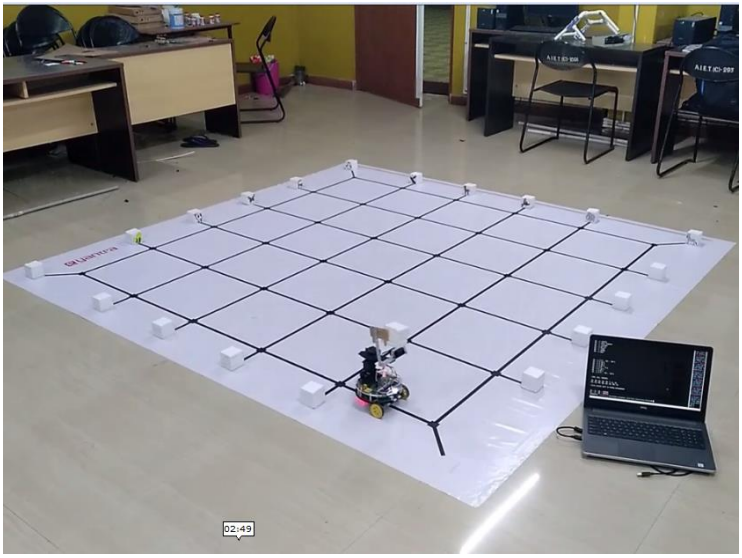
India is a home to a number of varied species of flora and fauna. The different habitats include Oceans, Wetlands, Forest, Grasslands, Deserts, and Mountains etc. After visiting a plethora of fauna in our Jungle Safari we find different types of animals and their natural habitats.

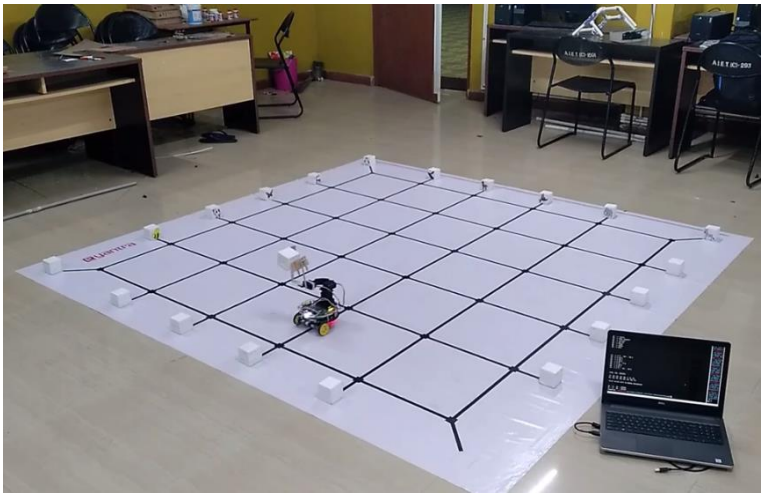
The theme includes building and training a robot to negotiate a path on the arena, which is an abstraction of eco system in grid form, and visit animals and their habitats. Identification is done by algorithms based on Machine Learning and path traversal using sensors. The identified animals have to be picked and placed in their respective habitats.

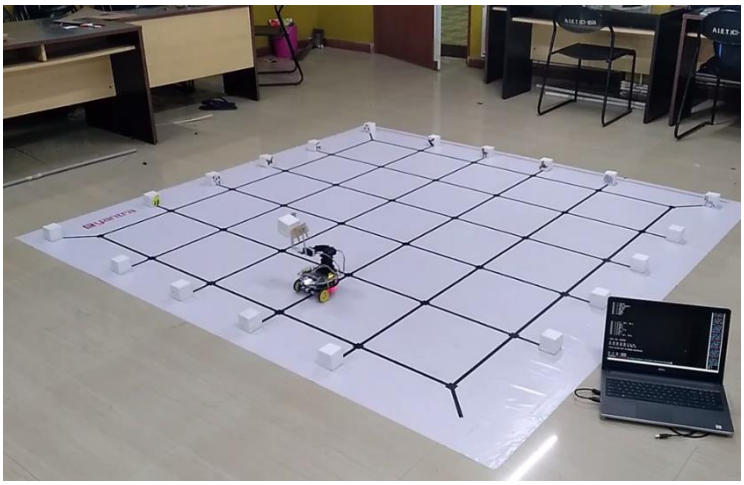

Research
TICK-TOK
DELL


Modeling


A2 --> coyote
F5 --> snow leopard
A5 --> raccoon
F6 --> parrot
E6 --> tiger
B6 --> snake
A6 --> deer
F1 --> ['7', '12', '19']
E1 --> ['12']
A1 --> ['14']
F5 --> ['14']
A5 --> ['9', '7']
E6 --> ['12']
B6 --> ['9']
A6 --> ['7', '12', '19']
((52, 26), 252189)
14, 19, 14, 12, 19, 7, 9, 12
A1, F1, F5, E6, A6, A5, B6, E1
first serial port is being considered
21 : 6 : 38 : 945082
21 : 6 : 40 : 165113
(eyantra) root@kali:~/ec/task4_original_conf/Code Submission/Python#
DELL


02:49

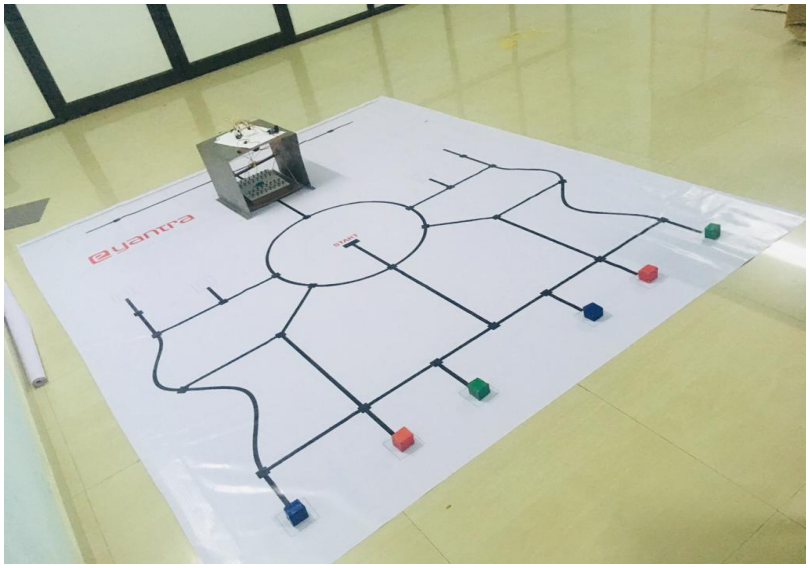


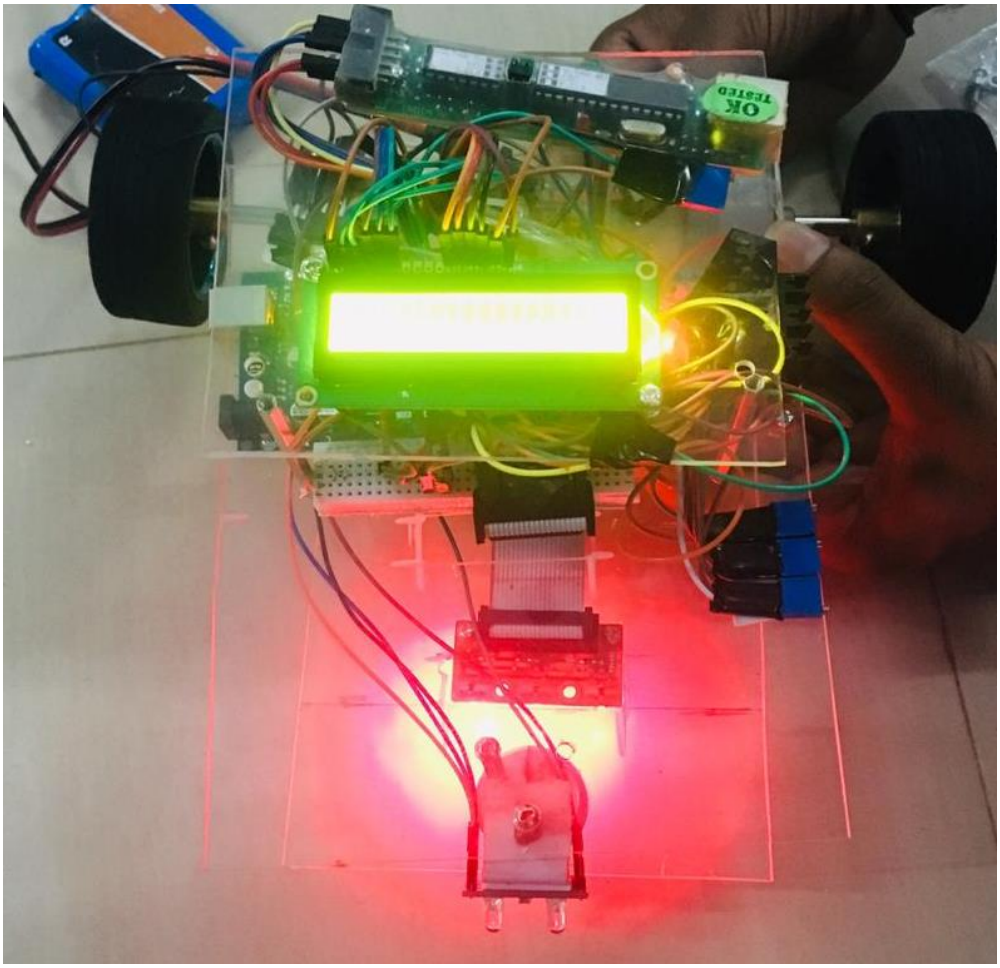


Theme Nutty Squirrel

The ecology has discrete organisms which functions based on the factors and weather conditions of the environment. Let us consider a squirrel as an example where in its essential features are sniffing, accumulation of food, storage of food during winter and provide protection to it from predators. Mimicking the features of squirrel we have brought an e-bot which traverses the path free of obstacle, senses the nut using color sensor then segregates the nuts based on the threshold value of the color and places in appropriate positions. Explaining this with examples each of which like, color sensing ability is imbibed in food production and quality check industry. Lifting mechanism used for our e-bot is used at a larger scale in stacker crane which lifts heavy duty objects. The traversal of path where obstacles could be avoided is used in road navigation and traffic detection.

#	Batch	Name	USN	Theme	Guide Name
1	**Batch-2**	Ms. Sangeetha S V	4AL16EC064	**Nutty Squirrel**	**Mr. Santhosh S**
2		Mr. Sangamesh Kajagar	4AL16ECO79		
3		Mr. Samrath Jain N	4AL16EC063		
4		Ms. Shilpa N	4AL16EC071		




OK
TESTED