



DEPARTMENT OF ELECTRONICS & COMMUNICATION ENGINEERING



The following batches have cleared e-yantra robotics competition prelims 2018-19. Further continues progress of all the batches in the future stages of the competition following faculty are identified as a guide/ mentor.

#	Batch	Name	USN	Theme	Guide Name and Signature
1	Batch-1	Mr. Mayur Shikhare	4AL15EC048	Thirsty Crow	Mr. Prasanna Kumar
2		Ms. Mangarshi Aishwarya Nagaraj	4AL15EC046		
3		Mr. Joel Crasta B	4AL15EC034		
4		Ms. Monisha P	4AL15EC051		
1	Batch-2	Ms. Ranjitha	4AL15EC069	Home Coming	Mr. Santhosh S
2		Ms. Shefali Shetty	4AL15EC080		
3		Ms. Srilaxmi Upadhyaya	4AL15EC086		
4		Ms. Teena Lobo	4AL15EC092		
1	Batch-3	Mr. Sumith Kumar S.K	4AL15CS0	Home Coming	Dr. S. Mohideen Badhusa
2		Ms. Varsha S	4AL15CS0		
3		Ms. Prathiksha P Rai	4AL15CS0		
4		Ms. Shetty Aishwarya Sadanand	4AL15CS0		
1	Batch-4	Ms. <u>Sangeetha S V</u>	4AL16EC064	Nutty Squirrel	Mr. Santhosh S
2		Mr. <u>Sangamesh Kajagar</u>	4AL16ECO79		



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3		Mr. <u>Samrath Jain N</u>	4AL16EC063		
4		Ms. <u>Shilpa N</u>	4AL16EC071		

#	Batch	Name	USN	Theme	Guide Name and Signature
1	Batch-5	Patel Davis Shashikant	4AL16EC045	Home Coming	Mr. Santhosh S
2		Chesmi B R	4AL16EC100		
3		Karthik J	4AL16EC030		
4		Anju Thomas	4AL16EC003		

- **eYRC 2018 All India Robotics Competition Task-2 Results**
- **Batch 4 and Batch 5** cleared and got the robot kit shipped from IIT Bombay. Both the batches are working towards the Final task and Video submission and last date for final submission will be on February first week of 2019.

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.



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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.



Fig: Team Home coming





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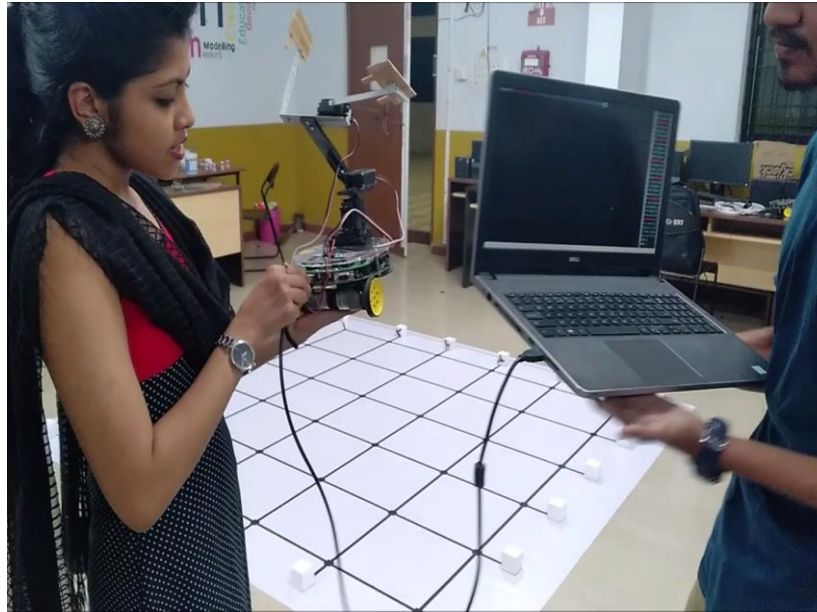
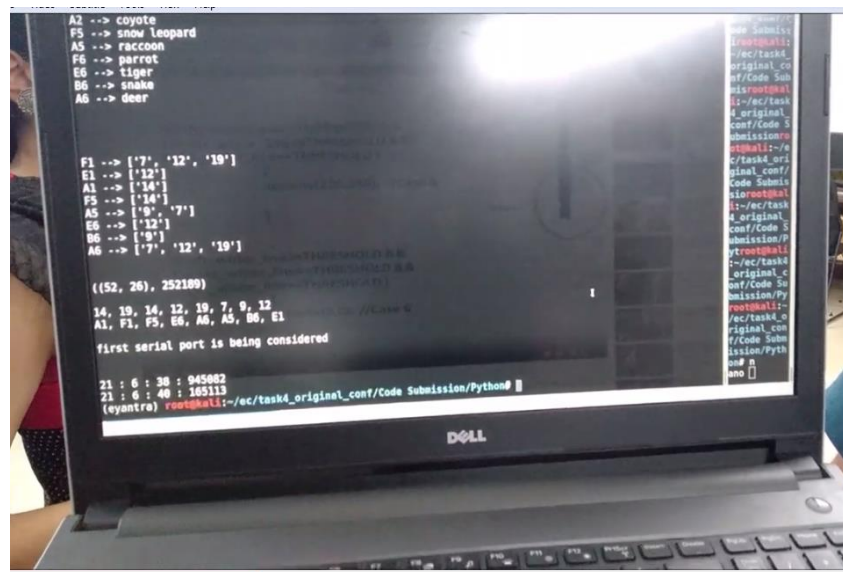


Fig: Programming a Home Coming Robot





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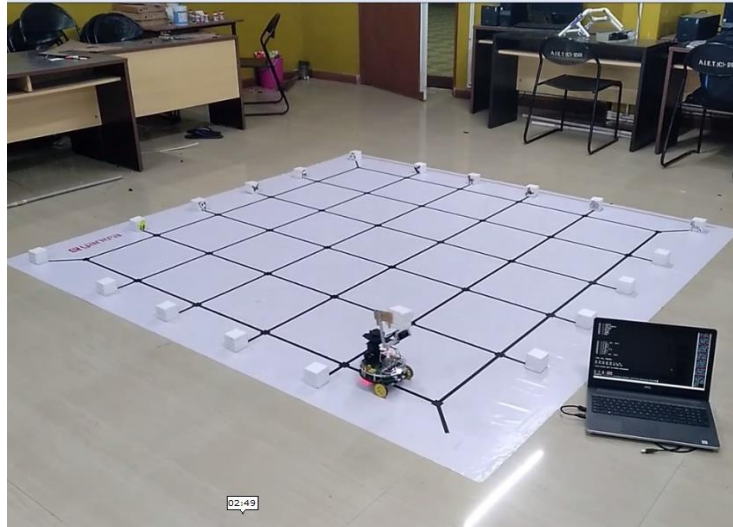


Fig: Robot traversal on the arena

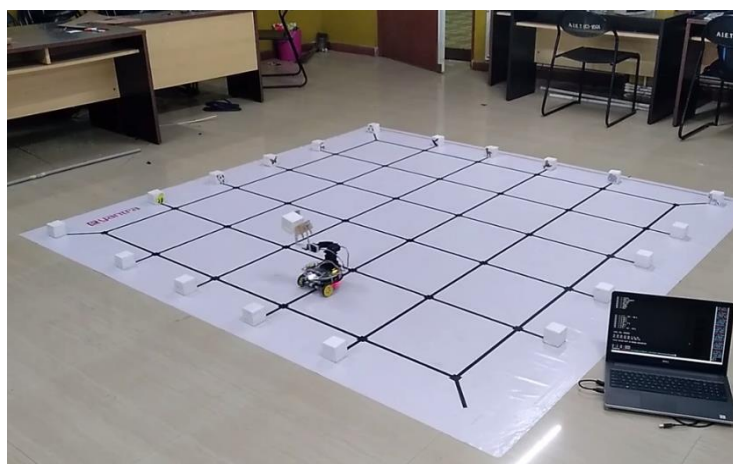


Fig: Robot finding habitants for the respective animal



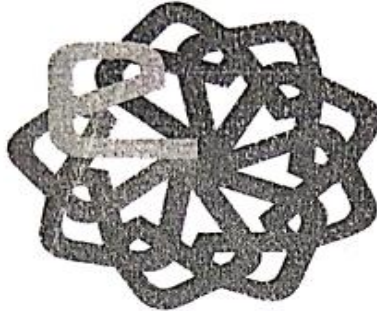
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eYantra

Engineering a better tomorrow

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



Certificate of Completion

This is to certify that *Chesmi B R*, a student of *Alva's Institute of Engineering and Technology, Dakshina Kannada* has participated in the *e-Yantra Robotics Competition (eYRC-2018)*.

He/She is a member of the team having the following participants,

1. *Chesmi B R*
2. *Patel Davis Shashikant*
3. *Karthik J*
4. *Anju Thomas*

This team has successfully completed all the assigned tasks in *Homecoming* theme.

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



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

Certificate of Merit: awarded to finalist teams
Certificate of Completion: awarded to teams for completing all the tasks of the competition
Certificate of Participation: awarded to teams for partial completion of tasks in the competition
Letter of Participation: awarded as an acknowledgement of participation in e-Yantra Eventhead

Fig: Certification of Completion



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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. <u>Sangeetha S V</u>	4AL16EC064	Nutty Squirrel	Mr. Santhosh S
2		Mr. <u>Sangamesh Kajagar</u>	4AL16ECO79		
3		Mr. <u>Samrath Jain N</u>	4AL16EC063		
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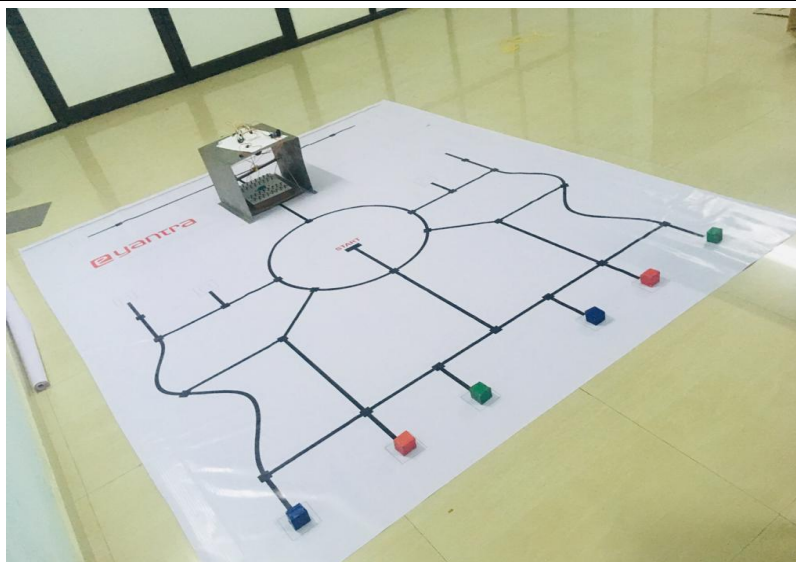


Fig: Nutty squirrel arena



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Fig: Nutty squirrel Arena with lift chamber

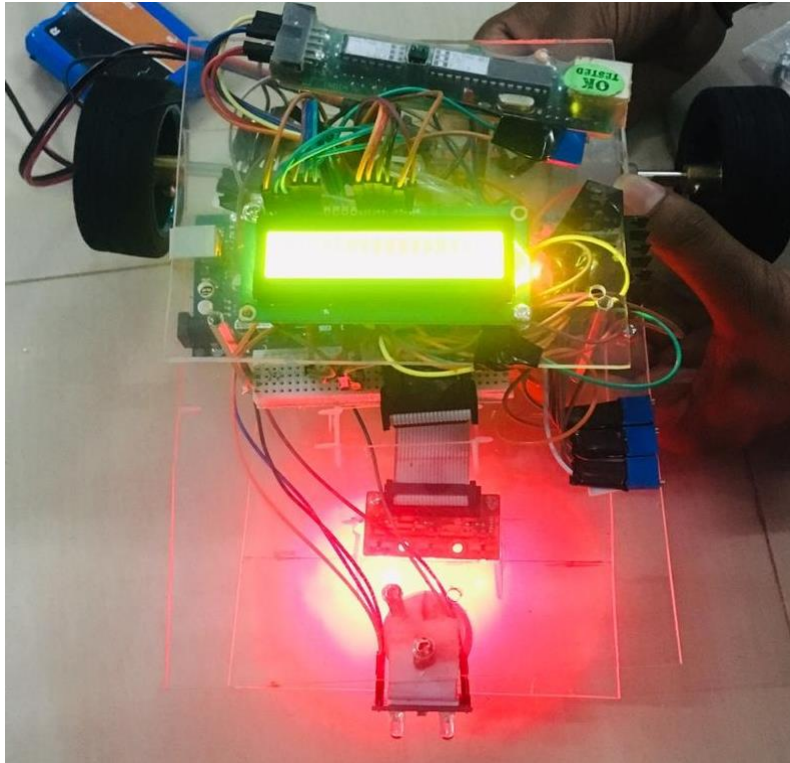


Fig : Nutty squirrel robot

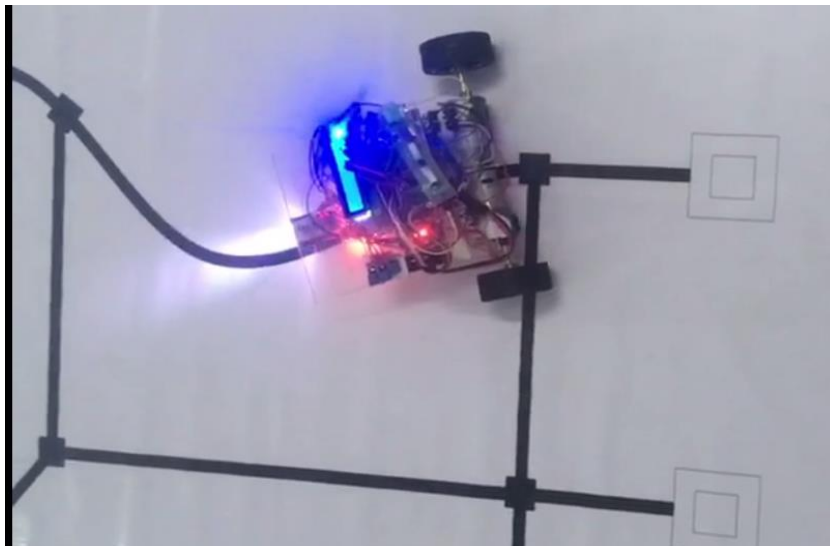
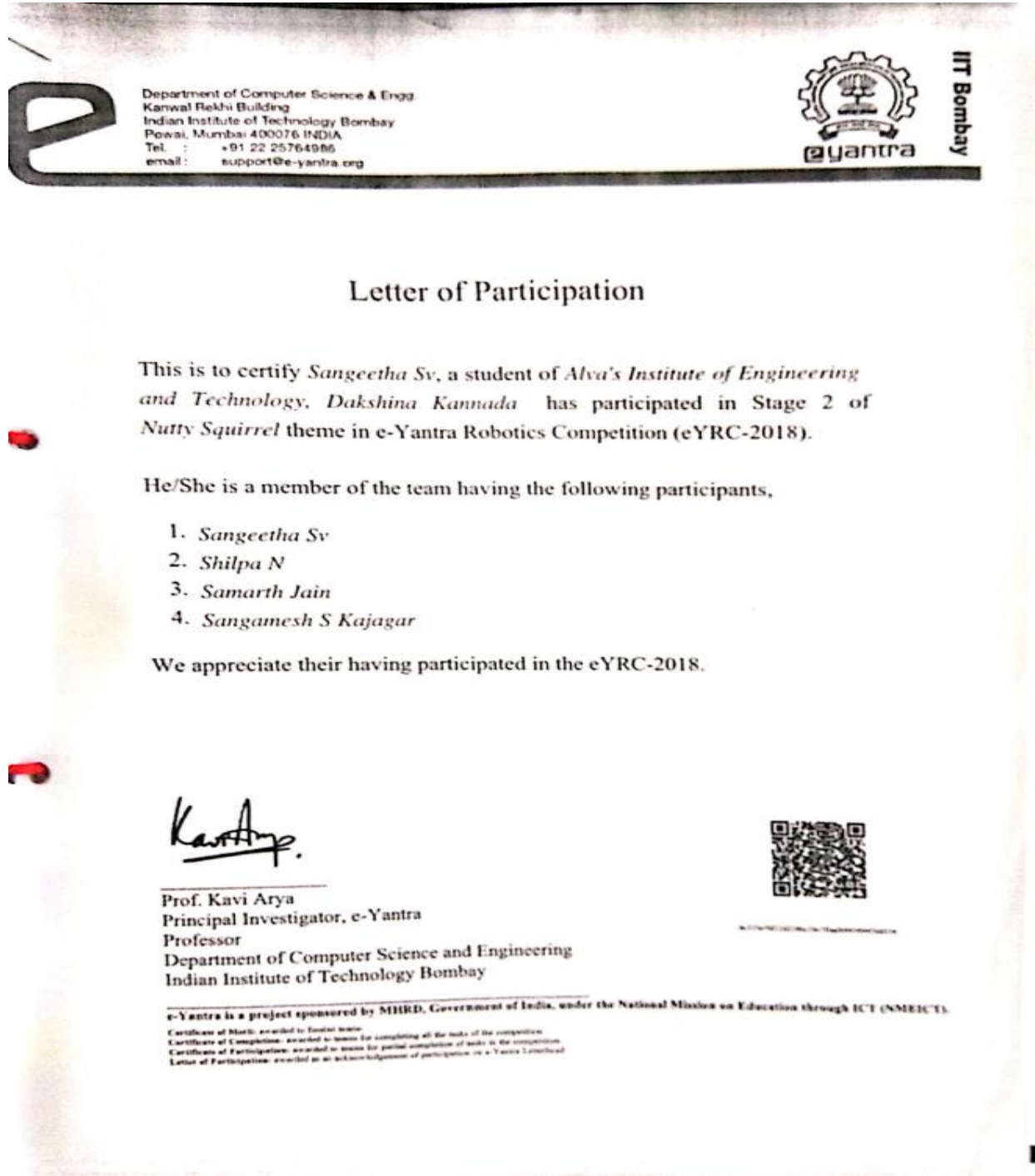


Fig : Nutty squirrel robot traversal on the arena



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Fig: Certification of Completion