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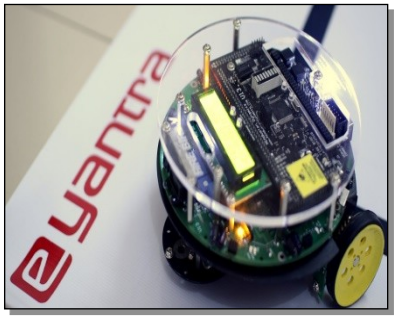
e-Yantra



The A. P. Shah Institute of Technology has launched its e-Yantra laboratory in July, 2018. Institute encouraged to setup robotics activities and competitions with an adequate guidance and support for increasing the awareness on the recent trends in the **robotics sector**.

Project e-Yantra is an initiative to spread education in embedded systems and Robotics by IIT Bombay. This program is sponsored by Ministry of Human Resource Development through the National Mission on Education through ICT (NMEICT).

e-Yantra Lab Setup Initiative (eLSI) supports the infrastructure creation at colleges by providing a platform for training teachers both in theory and applications of Robotics. A. P. Shah Institute has established Robotics Lab under E-Yantra Lab with the help of eLSI.

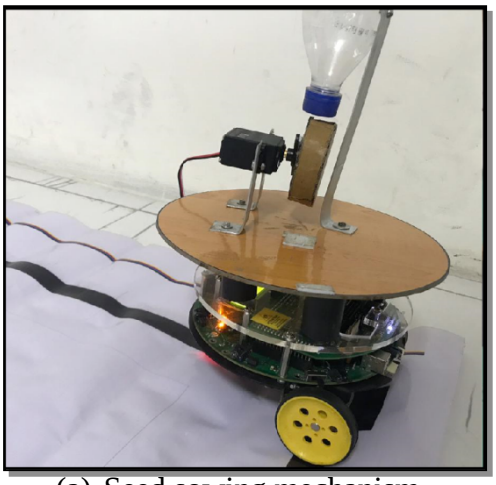
Inauguration of e-Yantra laboratory

From Left, Prof. Kiran Deshpande(HOD, IT), Prof. A. M. Deshpande (HOD, EXTC) , Prof. (Dr.) U. D. Kolekar Kolekar (Principal, APSIT) and Prof. Sachin Malve (HOD, Comp)

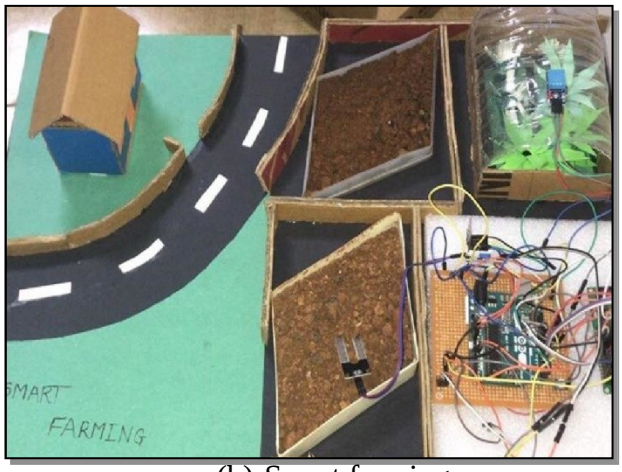
Objective

The main benefit of engaging with e-Yantra is to empower students to create a culture of innovation and entrepreneurship. Main objects of developing this modern laboratory are…

1. To enable resource of open source projects and tutorials.
2. To enhance quality of final year projects in the area of Embedded Systems and Robotics.
3. To provides a platform for innovative projects ideas through e-Yantra laboratory.
4. To gain visibility and attract local industries for internships and placements.



(a) Seed sowing mechanism



(b) Smart farming

Project Developed by final year students

Major Laboratory Equipment

Modern and technologically sophisticated lab devices provide us quality results. E-Yantra Robotics laboratory is well equipped with modern tools and devices. Some major equipments are given below…

- Fire Bird V 2560
- Fire Bird V Hexapod Robot
- Spark V robot
- Wireless Camera
- Sharp GPY0A21YK0F infrared sensor
- Metal Geared Servo Motor
- NRF24L01
- Zigbee Modules.
- Fire Bird V adapter card and 89V51RD2 Development
- Fire Bird V LPC-2148 adapter card.

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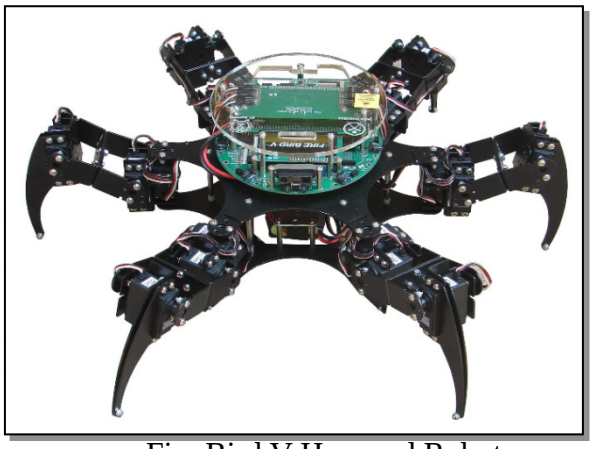
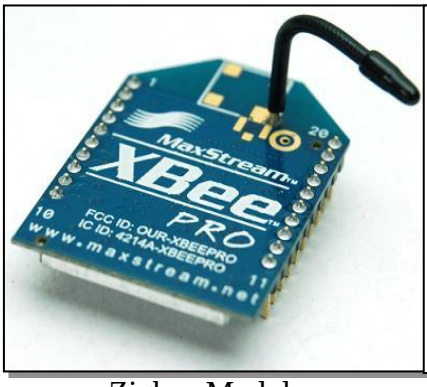
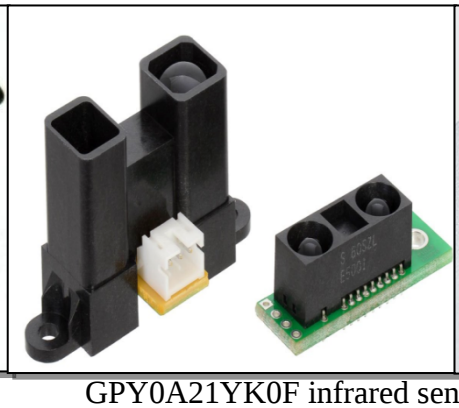


Fire Bird V Hexapod Robot

Fire Bird V 2560



Zigbee Modules



GPY0A21YK0F infrared sensor

Wireless Camera

Task Based Training

Task Based Training (TBT) is an endeavor to train teachers already familiar with Firebird V robot to implement hands-on experiments as the second phase of training through eLSI.

Institute encouraged to setup robotics activities and competitions with an adequate guidance and support for increasing the awareness on the recent trends in the robotics sector. APSIT, Thane e-Yantra includes the following team

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1) Prof. Selvin V. Furtodo, (Electronics & Telecommunication Engineering)
2) Prof. Sonal A. Jain, (Electronics & Telecommunication Engineering)
3) Prof. Mahesh C. Pawaskar, (Electronics & Telecommunication Engineering)
4) Prof. Swapnil Kondawar, (Mechanical Engineering)

Team has successfully completed three months Task Based Training (TBT) with 'A' grade.

Student's achievements

Institute is very happy to share that, one of the team of institute has participated in e-Yantra Robotics Competition-2018 and cleared 1st stage of competition. Name of students are as follows.

1. Sanjay Dav (SE, IT)
2. Suyesh Patil (SE, Mech)
3. Vidyabhushan Singh (SE, Mech)
4. Prem Parde (SE, Mech)

Following students of final year EXTC participated in e-Yantra Ideas Competition-2019 and presented their ideas under the guidance of Prof. H. C. Hardas. This group reached up to semi-final which was conducted at A. C. Patil College of Engineering, Khargar on 28th Feb 2019. students received cache price of Rs. 5000/- and wireless Drone.

1) Shreyas Somani
2) Ishwar Prajapat
3) Guruprasad Singh