



EASWARI ENGINEERING COLLEGE

(An Autonomous Institution)

Bharathi Salai, Ramapuram, Chennai – 600 089
DEPARTMENT OF INFORMATION TECHNOLOGY



RESEARCH FACILITY DETAILS

E-Yantra (Embedded Systems and Robotic Lab)

Well-equipped Robotics lab which helps the interested students to work on projects.

List of Components

| S. No. | Equipment | Quantity |
|--------|-------------------------------------------------------------------|------------|
| 1 | FireBird V 2560 | 5 |
| 2 | Spark V Robot | 10 |
| 3 | Fire Bird V P89V51RD2 adapter card | 5 |
| 4 | Fire Bird V LPC2148 adapter card | 5 |
| 5 | Zigbee Modules 100m range | 10 |
| 6 | Zigbee Modules Adapter | 5 |
| 7 | AVRISP mkII USB Programmer | 5 |
| 8 | Two Axis Camera pod with Wireless Camera | 3 |
| 9 | USB TV Tuner for Interfacing wireless camera with Laptop | 3 |
| 10 | Raspberry-Pi | 2 |
| 11 | Metal-gear Servo Motors | 10 |
| 12 | Sharp GP2D120C infrared range sensor (4cm to 30cm) | 10 |
| 13 | Sharp GP2Y0A21YK0F infrared range sensor (10cm to 80cm) | 20 |
| 14 | Sharp GP2Y0A02YK infrared range sensor (20cm to 150cm) | 5 |
| 15 | Sharp GP2Y0A710K0F infrared range sensor (100cm to 500cm) | 5 |
| 16 | Maxbotix ultrasonic range sensor | 5 |
| 17 | L3G4200 3 axis digital gyroscope | 2 |
| 18 | LSM303 3 axis digital accelerometer and 3 axis magnetometer | 2 |
| 19 | GPS receiver | 2 |
| 20 | Gyroscope, accelerometer and GPS interfacing module for the robot | 2 |
| 21 | Servo Motor Based Gripper kit for the Fire Bird V robot | 2 |
| | Total | 118 |

List of Projects Developed

| Department | Id of the teams | Name of the Students | Title of the Project | Name of the event |
|-------------------------|------------------------|------------------------------------------------------------------------|--------------------------------|--------------------------------------------------------|
| Robotics and Automation | Id: HB_4238 | Monishraju R, Monish R, Ashwin S, Yohit K. | Holabot (Holonomic Art Bot) | eyrc (e yantra robotics competition) E-Yantra Forum |
| | Id: HB_4252 | Riya Catherine A, Barat Vikraman M J, Kiruthika V, Lavanya M. | Holabot (Holonomic Art Bot) | eyrc (e yantra robotics competition) E-Yantra Forum |
| | Id: eyrc#db#4252 | Kavya S, Karthikeshwar M S, Akhil Y, Joe Mathew I. | Delivery Bike | eyrc (e yantra robotics competition) E-Yantra Forum |

Photos:



2.GPU Server for Machine learning Applications

Configuration Details:

- DELL I7 Processor
- 32 GB RAM,24” Monitor,3TB HD

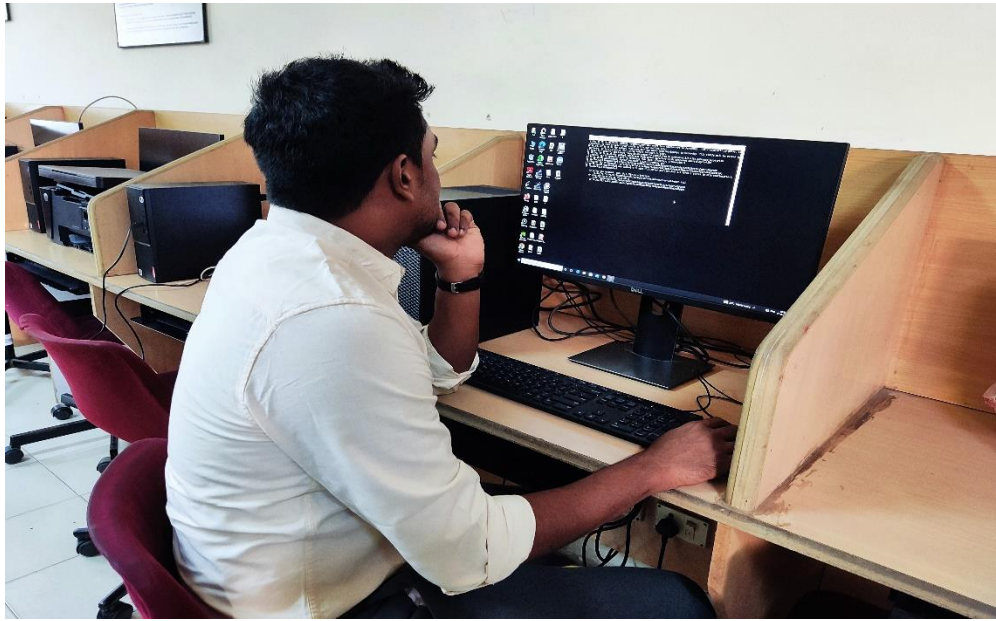
GPU UTILIZATION OUTCOME

Outcome of GPU Utilization for Research Proposal

| S.No | Name of the Faculty | Name of the project | Agency | Amount granted | Year of grant |
|-------------|----------------------------|---------------------------------------------------------------------------|---------------|-----------------------|----------------------|
| 1 | Ms.Sandhiya | An association based deep learning framework for detecting COVID 19 | ICMR | Rs.4,44,060 | 08.03.22 |
| 2 | Ms.Sowmiya, Ms.Deepika | Deep Learning Based Detection for COVID 19 Disease Spread and Forecasting | ICMR | Rs.4,08,760 | 14.12.21 |

Utilization of GPU for Ph.D Work

| S.No | Name of the Faculty | Research Title | University | Ph.D Awarded |
|-------------|----------------------------|--------------------------------------------------------------------------------------------------------------------------------------|-------------------|---------------------|
| 1 | Dr.Valarmathi | An Efficient prediction based dynamic resource allocation framework in cloud using knowledge based hybrid system | Anna University | 15.06.2022 |
| 2 | Mr.Kumaran | An efficient task offloading and resource allocation using dynamic arithmetic optimized double deep Q-network in cloud edge platform | SRM University | Ongoing |
| 3 | Mrs.P.M.Lavanya | Auto capture on drug text detection in social media through NLP from the heterogeneous data | SRM University | Ongoing |



GPU for Research

Outcome of GPU Utilization for Student Projects

| S.No | Date of the Event | Name of the Student | Title of the Project | Name of the Event | Award Received |
|------|-------------------|----------------------------------------------------------------------------------------|---------------------------------------------------|----------------------------------------|----------------|
| 1 | 2022 | PRASANNA PHANINDRAN S | TECH ECO SYSTEM TO KEEP THE SOLAR PANEL DUST-FREE | HACK-O-PITCH, IITM PARADOX, IIT MADRAS | Rs.15,000 |
| 2 | 22-04-22 | DASARI SHIMMY ROY, A. GAVIN GLADSTON, ASHWIN S, PRITHAM GANESH S, JANANI B | REVERSE WASTE MANAGEMENT | PROJECT DAY, SRMIST | Rs.25000 |
| 3 | 22-04-22 | HARIVIGNESH, HARISHKUMAR, ARUNKUMAR R, ABDULWASEEM NIHAAL | TRUCK LOAD MONITORING SYSTEM TO PREVENT ACCIDENT. | PROJECT DAY, SRMIST | Rs.5000 |
| 4 | 27-03-23 | PRASANNA PHANINDRAN S | AI BASED LEGAL ECO SYSTEM | PROJECT DAY, SRMIST | Participated |
| 5 | 27-03-23 | SANJAY R | THIRD-EYE | PROJECT DAY, SRMIST | Rs.5000 |
| 6 | 2023 | BALAJI R NAVEEN S KEERTHANA J KANIMOZHI | ANYCOMM (ANYONE CAN COMMUNICATE) | SAE | Rs.750 |