



Eklavya

Innovision

Invention is here...

MISSION

OUR MISSION IS TO PROVIDE INTELLECTUAL SERVICES IN THE VARIOUS FIELD OF RECENT DEVELOPMENTS AS WELL AS IN THE AREAS OF DAILY LIFE BY THE APPLICATION OF RECENT TECHNOLOGY AND MANAGEMENT WITH DEDICATED INVOLVEMENT OF HARD WORKING, EXPERIENCED AND EXCEPTIONAL PERSON OF THESE FIELDS IN ORDER TO OPTIMIZE THE GREAT EFFORT OF THE PEOPLES WISHING TO GROW WITH US.

VISION

OUR VISION IS TO DEVELOP STRONG FOUNDATION OF TECHNOLOGICAL BASICS AMONG THE STUDENTS WITH LEARNING BY DOING POLICY IN ORDER TO PROVIDE POTENTIAL PEOPLE TO THE SOCIETY ALSO TO OPTIMIZE THE PRODUCTION OF THE RURAL AREA BY PROVIDING CONTINUOUS SUPPORT IN THE FILED OF AGRICULTURE AND SMALL SCALE INDUSTRIES.

QUALITY POLICY

OUR QUALITY POLICY IS UNIQUE IN RESPECT OF PERSONNEL RELATION, OPTIMAL SERVICE COST AND EFFICIENT MODE OF KNOWLEDGE TRANSFER WITH POTENTIAL TRAINING AND WORKSHOP METHODS. TRUST, DEVELOPMENT, PERSONNEL SATISFACTION AND INCOURAGEMENT OF OUR SERVICE HOLDERS IS OF PRIME IMPORTACE FOR US.

ABOUT US

EKLAVYA INNOVISION is an organization which involved with the inventions in techno-managerial applications in daily life with motive to optimize productivity and improvement of lifestyle of people with us.

It was the idea of three engineering graduates in the various fields of science and technology having exceptional achievements during their study period. The foundation period was May,2010-July,2010 previously they were learning about robotics in their colleges and later giving support to juniors to learn about robotics.

Now to implement their idea they planned to provide robotics knowledge in the various technical and engineering colleges around the nation as well as in secondary schools with the motive of providing motivation about the technical and engineering field to encourage the student to know better about these career field with the exercised people of tsetse field to help them in making their career map.

Our another area of techno-management application is agribusiness and rural income enhancement via creating, simulating, designing , implementation and executing innovative plans.

Robotics operational center is at New Delhi and Agribusiness operation center under progress at Samastipur, Bihar.

In the field of Robotics we have experience of Robotics works at various prestigious Institution of India as IIT-Bombay, IIT-Kharagpur, IIT-Delhi, NIT-Jalandhar, PEC-Chandigarh. Thapar University, Punjab University Various Robotics Society across the Nation as well as active Industrial Interface.



OUR SERVICES

ROBOTICS & TECHNICAL INNOVATION

ROBOTICS WORKSHOP

ManBot (Mechanical/Manual Robotics)

AutoMaxi (Autonomous Robotics)

EmbedMe (Microcontroller Based Robotics)

EyeBot (Vision Based Robotics)

Robovision (General Robotics & Discrete Electronics)

PROJECT CONSULTANCY SERVICES

Basic Project Innovation Consultancy

Advance Project Research Consultancy

AGRIBUSINESS & RURAL INNOVATION

AGRIBUSINESS CONSULTANCY SUPPORT

Farming Innovation & Production Optimization

Agriculture Knowledge Management & Training

RURAL ECONOMY TECHNO-MANAGERIAL SUPPORT

Micro-Entrepreneurship Development & Support

Informal Technical Awareness Activities

Our motive of this dual work area is to interface these area under common window to establish the communication channel between these two areas and the two wealth level of our Nation.

ROBOTICS WORKSHOP COURSES:

ManBot (Manually Controlled Robotics):

This Workshop is based on the manually controlled robotics in which our main concern is to the fabrication of wired & wireless manually controlled robotics systems. The workshop type is fully practical, conducted with “*Learning by Doing*” Policy. The workshop duration normally 3x8 Hours.

Workshop Content:

Robotics fundamentals, Various subsections like Actuators, Sensors, Controller, Power supply unit, Communications unit etc.

Various type of control system like Electrical, pneumatic , mechanical etc.

Component description & Testing of its functioning for DC Motor, Motor derives with Power Transistor-MJE3055T, H-Bridge motor derive L239D, Toggle switches, RF Module etc.

Introduction to dynamics of car based system (It will help the student to carry out scientific analysis of the dynamics of car control which is very important at the time of BOT fabrication where placement of Wheels selecting the wheels to be powered are directly linked with these analysis in order to optimized the control of the BOT and this is our one of the unique features solely developed by EKLAVYA INNOVISION R&D team).

Pre fabrication discussion for the manually controlled Robot design along with testing of each subsystem.

Introduction to simulating tools like “Microsim Pspice” & “Tina Pro” in order to simulate the electronic circuitry employed for our BOT before fabrication.

Fabrication of Manually controlled BOT with toggle-switch based system.

Introduction to RF technology & some testing with RF module.

Discussion of the motor interfacing with RF module (This is a very important topic in the area of RF based system since we found people generally failed to interface in RF module with motor having higher power rating which leads to the failure of the Receiving circuitry of RF module up to the destruction , in this section we cover the various technique to amplify the power of the receiving terminal of the RF module).

Implementation of the RF based control to the fabricated BOT (in the manually controlled BOT section), testing and troubleshooting.

Introduction to Hand & Picking Mechanism like electromagnet based picking system, Sucking type picking system, frog modeled cross linked picking system fabrication and testing.

One event based on the fabricated BOT from our side having some prizes for winners.

Demonstration of one R&D project from our side for this workshop will demonstrate a project in which we can use our PC as a CRO which will help student to carry out the electronic lab testing in their room also with the help of their computer employing as CRO.

AutoMaxi (Automatic line follower Robotic mini-car)

where machine comes your way...

AutoMaxi stands for 'autonomous Taxi' means the automatic control of robotic mini car which follows some path like white line on black background or black line on white background in addition this may also extended to other guide-lines like side walls etc.

This workshop is designed for three days , six hours per day duration. It is basically an autonomous line follower design with additional added intelligence by simple digital logic and electronics circuit implementation. In which all the basics about the robotics component, circuit design, circuit simulation and fabrication with full time presence of top experience person in this field.

Main feature of this workshop is that the circuit design is carried in various ways at least four circuits and more, subject to availability of time and the speed of learning so that the participants get full control on the electronic circuit design for their applications. We also introduced with some of the circuit simulation tools so that we can make corrections and examined the performance of the designed circuit for respective application

Basic Robotic-Kit provided by us includes everything which will used for design of said mini-car. In addition some components for the design of the same for some advanced problem statements.

Workshop contents

Robotics fundamentals, Various subsections like Actuators, Sensors, Controller, Power supply unit, Communications unit etc.

Introduction to Tracking robots like white line follower

Component description & Testing of its functioning for DC Motor, Motor derives with Power Transistor-MJE3055T, H-Bridge motor derive L239D, 555 timer, LDR, IR Sensor, Phototransistor, IR receivers and various ICs employed for the fabrication.

Modeling of Kinematics of BOT in reference of sensor position (It will helps the student to carry out scientific analysis of the dynamics of car control which is very important at the time of BOT fabrication

where placement of Wheels and relative placement of sensor module in order to optimized the control of the BOT and this is our one of the unique features solely developed by EKLAVYA INNOVISION R&D team).

Pre fabrication discussion for the Autonomous Robot design along with testing of each subsystem.

Introduction to simulating tools like “Microsim Pspice” & “Tina Pro” in order to simulate the electronic circuitry employed for our BOT before fabrication.

Fabrication of Robotic base with optimize model in reference of wheel and sensor placement.

Fabrication of control circuit with stepwise testing, modification and optimization which followed by installation of control circuitry on the Bot.

Introduction to IC 555 (A timer circuit) its interfacing with digital circuitry and discussion of various issues like loading, spiking and the use of 555 for the well known problem statements frequently given in Robotics events.

One event based on the fabricated BOT from our side having some prizes for winners.

Demonstration of one R&D project from our side for this workshop will demonstrate a project in which we can use our PC as a CRO which will helps student to carry out the electronic lab testing in their room also with the help of their computer employing as CRO.

EmbedMe(Microcontroller Based Robotics):

The workshop course titled "EmbedMe" is designed to boost up the basic understanding of programmable devices and their implementation in step-wise practical manner. With this course we aimed to develop the basic understanding of programmable devices like microcontrollers, their real world interfacing, complete programming and burning procedures and most unique is the burner kit fabrication ourselves which will boost the understanding the computer interfacing of the microcontroller as well low cost design (as burning kit cost are very high in market). This course also includes the PCB fabrication techniques since it is compulsory for burning kit fabrication and lots more... The duration of the course is 3x8 Hours. We are also available with the course kit having respective components and utility tools.

WORKSHOP CONTENTS:

- . Robotics fundamentals, Various subsections like Actuators, Sensors, . Controller, Power supply unit, Communications unit etc.
- . Introduction to the Programmable Integrated circuits, P89V51RD2
- . Introduction to microcontroller programming and its burning process to the chip
- . Introduction to the PCB design technology and related tools
- . Pre fabrication discussion for the Autonomous Robot design along with testing of each subsystem.
- . Fabrication of Microcontroller development board with real time computer interface via serial communication.
- . Interfacing of motors and other devices with microcontroller
- . Fabrication of control circuit with stepwise testing, modification and optimization followed by installation of control circuitry on the Bot.
- . Interfacing of motors and other devices with microcontroller
- . One event based on the fabricated BOT from our side having some prizes for winners.
- . Demonstration of real time interfacing and control of a Motor with the personnel computer via serial communication trough the MATLAB
- . Some programming practices like digital counter design, timer design and other implications
- . Current and future trend of embedded system design.

EyeBot (Image Processing Robotics):

This is of high level training workshop needs some prior introductory knowledge about general robotics; Microcontroller based embedded system and Image Processing. It is of duration of Four days, 6 hours per day. It is a multidisciplinary training workshop as a combination of large area of engineering and technology. This is the very recent area in robotics and gateway to the humanoid robotics which is the finest creation in the field of machine intelligence. We have very skilled and motivated expert in this field having exceptional computation and infinite courage to train the university students in the field of Image processing based computation and the modern robot design.

Workshop Content:

Introduction to Vision based Robotics & Recent advancement in vision based practices.

Introduction to image and its mathematical representation for the ace of computation.

Introduction to computation tools, like MATLAB, Open CV etc

Refreshing the microcontroller technology with the emphasis on Motor interfacing, real time interfacing with PC, onboard programming.

Fabrication of Microcontroller P89V51Rd2 burner and the complete system for real time PC based serial communication.

Fabrication of general purpose I-BOT having facility of real time PC communication, onboard programming facility.

Introduction to Image processing toolbox of MATLAB and its implications.

Real time interfacing of microcontroller with PC via MATLAB, development of image processing algorithms and the application of prepared I-BOT.

Introduction to GUI-based software development and stand alone exe file development with the GUI-based software development of current problem.

CONTACT

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