Jigyasa

BUILDING ON IMAGINATION

INTERNET OF THINGS (IoT)

ABOUT US

Robotics Club MNNIT

Robotics Club MNNIT is a diverse group of robotics enthusiasts from all the college departments, which runs under the umbrella of the Student Activity Centre of MNNIT Allahabad.

Established in 2016, we are mainly concerned with building robots for academic purposes, competing at national events, or even building just out of imagination. This puts us in frequent contact with a plethora of software, hardware, and technologies, like Computer Vision, Simulation Softwares (Gazebo, Pybullet, etc.), CAD Softwares, ROS, devising algorithms, path planning, Machine Learning, Microcontrollers, Kinematics to name just a few of many. Since its creation, this club has seen the completion of hundreds of projects,

participated and won accolades in multiple national-level events, and organized various workshops with a decent footfall.

Working closely with the industries, our people regularly acquire lucrative tech giants packages, internships in IITs, and various tech companies.

Our club has also been the birthplace of a startup TSAW in the drone sector, gaining ground in the field and as a company.

We have a team of friendly experts equipped with all kinds of tutorials and workshops along with a compelling workspace to make you an integral part of this rapidly expanding world.

Jigyasa

"Tell me and I forget, teach me and I may remember, involve me and I learn."
                                        -Benjamin Franklin

Jigyasa is the workshop venture of the Technical clubs of MNNIT, namely Robotics, Aeroclub, and Astrowing, in collaboration with TSAW, a fully functional drone startup that emerged from our clubs. We are motivated by the desire to supplement education with the present-day industry requirements, making the participants future-ready with their skills and a problem-solving mindset.

The workshops under Jigyasa comprise various projects, activities, and interactive sessions, which will help you understand the most difficult concepts in the most comfortable manner. Hence, by emphasizing innovation and imagination, these workshops will instill in your minds a profound scientific temperament and fascination towards technology.

OVERVIEW

"The internet is becoming the town square for the global village of tomorrow"
                              -- Bill Gates

With advent of technologies like cloud and 5G, IoT is no longer a piece of science fiction but something very real. Simply put, IoT refers to connecting all the physical objects we interact with, to a desktop or mobile application. From automating home appliances, offices to cars that drive on their own, IoT is a very broad field that covers multiple technologies like embedded systems, networking, distributed systems, robotics etc.

This workshop will help you get started with IoT, understand the basics and develop interesting projects using the skills gained. In short, you will be ready to kickstart your journey into this interesting realm of IoT.

Prerequisties:

None

Target Audience:

Anyone Interested

WORKSHOP
SCHEDULE

DAY 1:

- WHAT IS INTERNET OF THINGS (IoT)
- APPLICATIONS OF IOT
- BASIC OF SENSORS AND INTERFACING
- INTRODUCTION TO ARDUINO
- SIMPLE LED PROGRAM FOR ARDUINO
- INTERFACING SENSORS WITH ARDUINO
- SIMULATING ARDUINO BASED CIRCUITS WITH TINKERCAD

DAY 2:

- ARDUINO(CONTD.)
- INTRODUCTION TO RELAY
- CONTROLLING AC DEVICES USING CODE
- INTRODUCTION TO INTERRUPTS
- INTRODUCTION TO CLOUD
- APPLICATION OF CLOUD

DAY 3:

- MAKING BASIC APPS TO CONTROL DEVICES
- INTRODUCTION TO NODEMCU AND ESP8266
- UPLOADING SENSOR DATA TO THINGSPEAK CLOUD
- NODEMCU WITH IFTTT AND FIREBASE
- HOME AUTOMATION- HOW TO AUTOMATE YOUR OWN ROOM
- PROJECTS YOU CAN BUILD ON THE KNOWLEDGE GAINED

OUR OTHER WORKSHOPS

ASTRONOMY

- Beginner's walkthrough of Astronomy
- Diving Deeper into the Cosmos
- Astronomy from an Engineer's Perspective
- Establishing an Astronomy Club

AEROSPACE

- Introduction to Flight
- A peek into the Aerospace Sector
- Getting Started with Drones
- Drone Automation
- Establishing an Aeroclub in your College
- First step to Aerodynamics with OpenVSP, F360 and Ansys

ROBOTICS

- Kickstart your journey into Robotics
- Introduction to Artificial Intelligence
- Introduction to Kinematics in Robotics using PyBullet
- Kit-up to Set-up: To Establish a Robotics Club
- Build your own Robot
- Introduction to Simulation Software in Robotics
- Stepping into Electronics and Arduino
- Introduction to Computer Vision with Raspberry Pi
- Introduction to Autonomous Vehicles with CARLA and Imitation Learning
- Internet of Things (IoT)

GENERAL

- Rise and Program
- Think3D: Fundamental of 3D Modelling and 3D Printing
- Learn3D: Introduction to CAD and 3D Printing

CONTACT US

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