



A COLLABORATION OF ASTROWING MNNIT AND TSAW.



**BUILDING ON IMAGINATION**



**KIT-UP TO SET-UP:  
TO ESTABLISH A  
ROBOTICS CLUB**



# ABOUT US

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**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

*“One change always leaves open for the establishment of others”*

*-- Niccolò Machiavelli*

“Those with the oracular ability to work with and tease valuable results out of increasingly complex machines will thrive.”

--- an excerpt from *Deep Work* by Cal Newport

The realm of robotics and technology is advancing so rapidly that being left out of it might literally hold you back from the potential riches and goodness that the power of automation and complex machines have to offer. As an established robotics club, we’ve had a chance to experience our fair share of innovation and success. We’re proud to have been a birthing nebula to a star like TSAW (a startup for drones), and alumni who have worked on a variety of projects and written papers. Since we believe in sharing this goodness, we, by the medium of this workshop, shall equip you sufficiently to do so.

## **Prerequisites:**

None

## **Target Audience:**

Anyone Interested

# WORKSHOP SCHEDULE

## DAY 1:

- What is Robotics-Understanding Perception, Planning and Control
- Getting Started with Robotics-What all you should study
- 10 Technologies used in Robotics - How to get started
- Must Need Equipments to begin with
- Purchasing the Right equipment at right prices

## DAY 2:

- How to Increase community engagement
- Convincing the authorities about your club.
- Activities to begin with
- Softwares To Learn
- Projects to begin with

## DAY 3:

- Projects to begin with(cont.)
- Managing Resources, Students and Project
- Expand your club beyond college
- Competitions to take part in
- How to do Industry tie ups
- How to develop on skills gained: Projects and Resources.



# 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

## GENERAL

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

## 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)

## CONTACT US

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