Some Notes

On

Day 1: Introduction to Robots and Robotics

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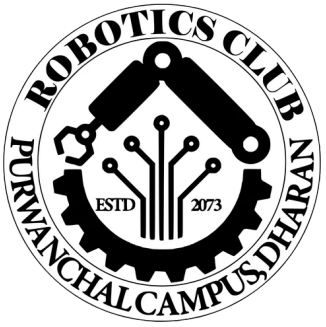
To

Scientiac



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1 Introduction

On the second day of robotics training, we shifted focus from theory to hardware-related fundamentals. The session introduced us to microcontrollers, especially the Arduino platform, and how to begin programming them using the Arduino IDE. We also practiced building circuits in a virtual environment using Tinkercad.

2 Topics Covered:

2.1 Introduction to Microcontrollers

We learned what microcontrollers are and how they form the brain of robotic systems. The Arduino Uno board was introduced as an example of a beginner-friendly microcontroller.

2.2 Basic programming concepts in arduino IDE

We were introduced to Arduino's basic programming structure:
setup() and loop() functions, Syntax for controlling pins using pinMode(), digitalWrite(), and delay() We wrote simple programs like blinking an LED and simulated them using virtual tools.

2.3 practicing Circuits in Tinkercad

Tinkercad was used to simulate real-world Arduino circuits. This allowed us to Connect virtual components (LEDs, resistors, breadboards), Upload and test code safely and Understand basic wiring and simulation logic
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3 Conclusion

Day 2 was a great transition into hands-on robotics. Setting up the Arduino IDE and programming it in a simulated environment helped solidify our understanding of how microcontrollers interact with electronic components. I am looking forward to working on real hardware in upcoming sessions.