GOVERNMENT ENGINNERING COLLEGE, PATAN

ELECTRONICS & COMMUNICATION DEPARTMENT

REPORT

ON

INDUSTRIAL AUTOMATION AND EMBEDDED SYSTEMS WORKSHOP

Organized by

PROJI SYSTEMS & TECHNOLOGY

On

24th February

Details of Workshop

List of students who attended the session

An career-oriented workshop on Industrial Automation and Embedded Systems was organized at Government Engineering College, Patan on 24th February 2026 for the students of the Electrical and Electronics & communication Department. The session was conducted by Proji Systems with the primary objective of bridging the gap between theoretical academic knowledge and practical industrial applications. The workshop aimed to provide students with exposure to modern technologies and tools that are widely used in today's engineering industries.

The workshop commenced with an introduction to industrial automation, emphasizing its importance in increasing efficiency, accuracy, and productivity in various industrial processes. The experts elaborated on the working and applications of Programmable Logic Controllers, explaining how they are used to automate machinery and control complex systems in industries. Further, the concept of Supervisory Control and Data Acquisition was introduced, where students learned about real-time monitoring and control of industrial operations through graphical interfaces.

In addition to industrial automation, the session also focused on embedded systems and their applications. The students were introduced to Arduino-based systems, which provided insight into microcontroller programming and hardware interfacing. The fundamentals of the Internet of things were also discussed, highlighting how interconnected devices can communicate and function intelligently in smart environments. Basic concepts of robotics were explained to demonstrate how automation and embedded systems work together in real-life applications.

A major highlight of the workshop was the hands-on Arduino training and

practical project implementation. Students actively participated in building and understanding basic yet important projects such as LED blinking circuits, automatic light sensor systems, and temperature and humidity detection systems, touch sensor, ultrasonic distance measurement, LDR sensor, Water level sensor etc. These activities helped in strengthening the understanding of sensors, microcontrollers, and real-time data processing. The approach made it easier to connect theoretical knowledge with practical execution. Additionally, the students were provided the completion certificate which enhanced their confidence to greater level.

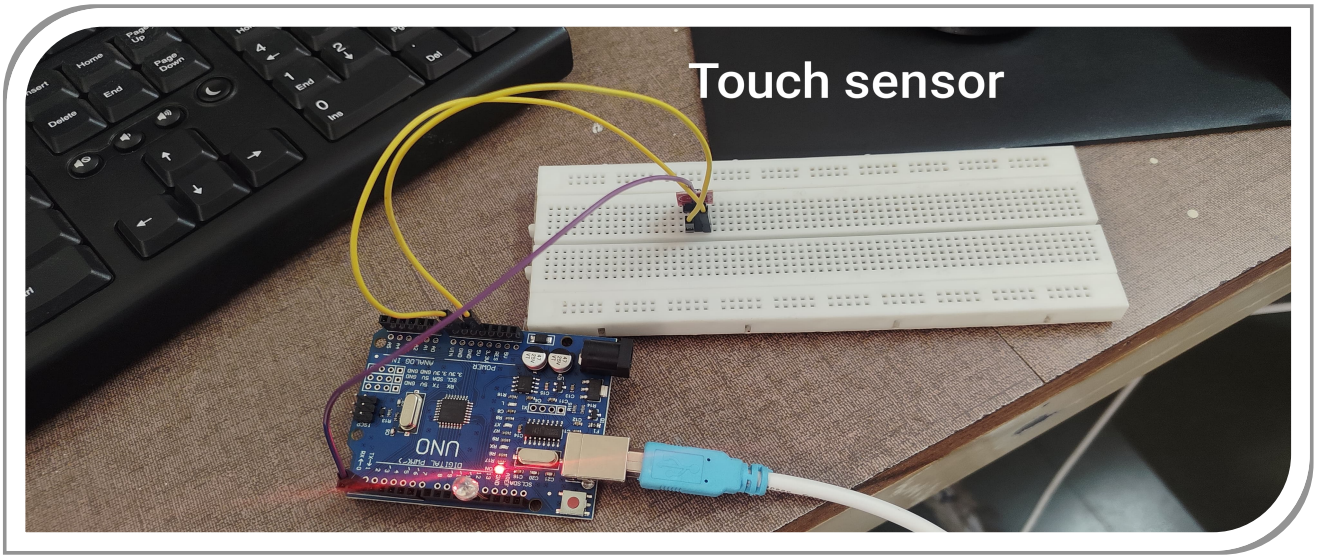
The workshop also included live demonstrations and interactive sessions with industry experts, who shared their professional experiences and provided valuable guidance regarding career opportunities and skill development in the field of automation and embedded systems. This interaction helped students gain clarity about industry expectations and future technological trends.

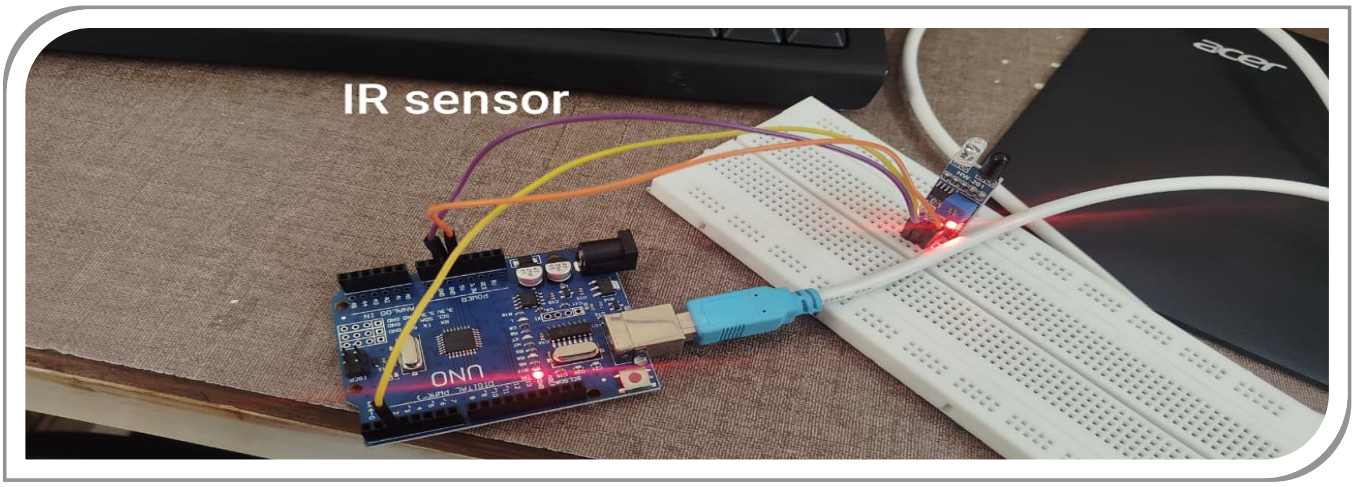
The workshop proved to be extremely beneficial in enhancing practical knowledge and developing a deeper understanding of industrial technologies. It helped in building confidence and encouraged a more application-oriented approach towards learning. The exposure to real-time systems and hands-on projects motivated students to explore innovative ideas and focus on skill-based learning, which is essential for future career growth.

In conclusion, the workshop was a valuable learning experience that successfully combined theoretical concepts with practical implementation. It not only enriched the technical knowledge of the participants but also inspired them to adapt to the evolving demands of the engineering industry. Such initiatives play a crucial role in preparing students to become competent and industry-ready professionals.

Glimpses of workshop


Systems & Technology
A BRIDGE BETWEEN STUDENTS AND INDUSTRIES


Touch sensor


IR sensor