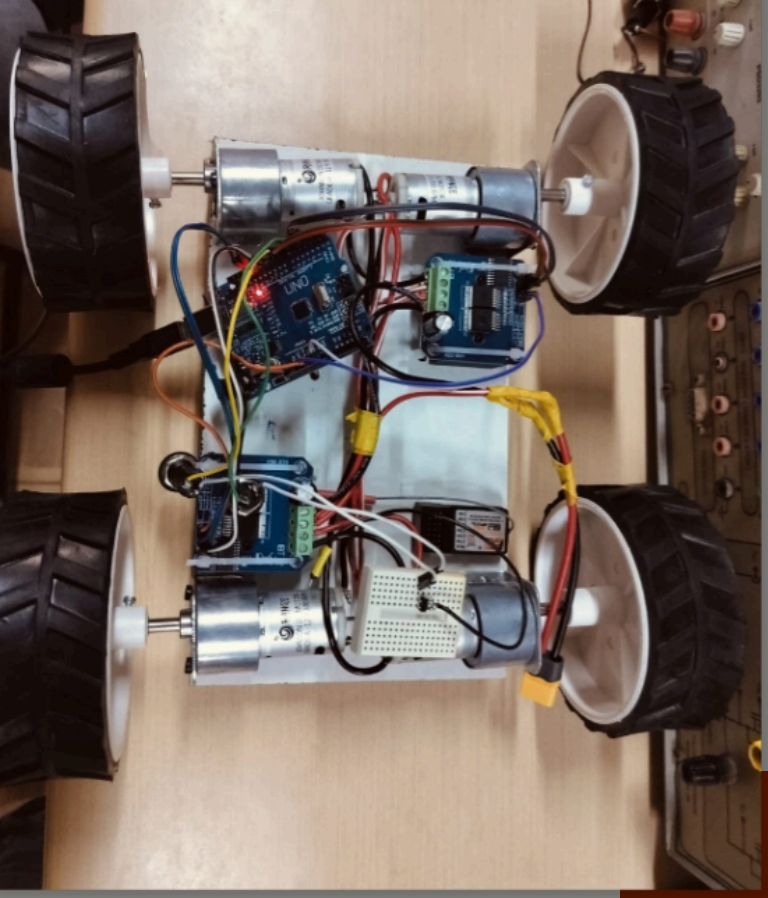

# ROBO RACE

The world of motor control is evolving rapidly, exemplified by the Remotely Operated Manipulator Vehicle (ROMV). This innovative project combines advanced motor drivers with remote control systems to address real-world challenges in robotics and automation.

At the core of ROMV lies the **BTS7960 motor driver**, renowned for handling high-current loads up to **43A** and precise control via PWM signals. Its built-in protections against overvoltage, overheating, and short circuits ensure reliability, making it a perfect match for high-torque **Johnson motors** used in the ROMV. Complementing this is the **FlySky FS-i6X transmitter**, enabling seamless wireless control with a 500-meter range and customizable configurations

ROMV's standout features include omnidirectional movement with **mecanum wheels**, modular attachments like a **detachable claw**, and efficient power management using LiPo batteries. These capabilities make it versatile for tasks like payload handling, environmental testing, and even search-and-rescue operations.

Overcoming challenges like heat management and wireless latency, the ROMV team showcased engineering ingenuity by optimizing algorithms and implementing robust ventilation systems. This project highlights the power of combining cutting-edge technologies with creative thinking to create solutions that are both functional and adaptable.