

Road Sign Recognizing Robot (Teachable Machine + ROS) Overview: This robot project uses computer vision to recognize traffic signs and control a two-wheeled robot accordingly. It's built with a simple hardware setup and leverages machine learning for intelligent navigation. Components: - Arduino (Nano or Uno) - 2 Hobby motors + motor driver - 5V regulated power supply - Webcam for image capture - Trained model using Google Teachable Machine (204 stop, 199 forward, 199 right, 199 left images) - ROS (Robot Operating System) integration for command processing Features: - Real-time road sign recognition - Movement commands issued based on detected sign - Accurate sign classification with custom-trained model - Lightweight, beginner-friendly AI-robotics implementation Application: - Ideal for educational robotics, AI-embedded projects, or prototyping autonomous navigation systems.