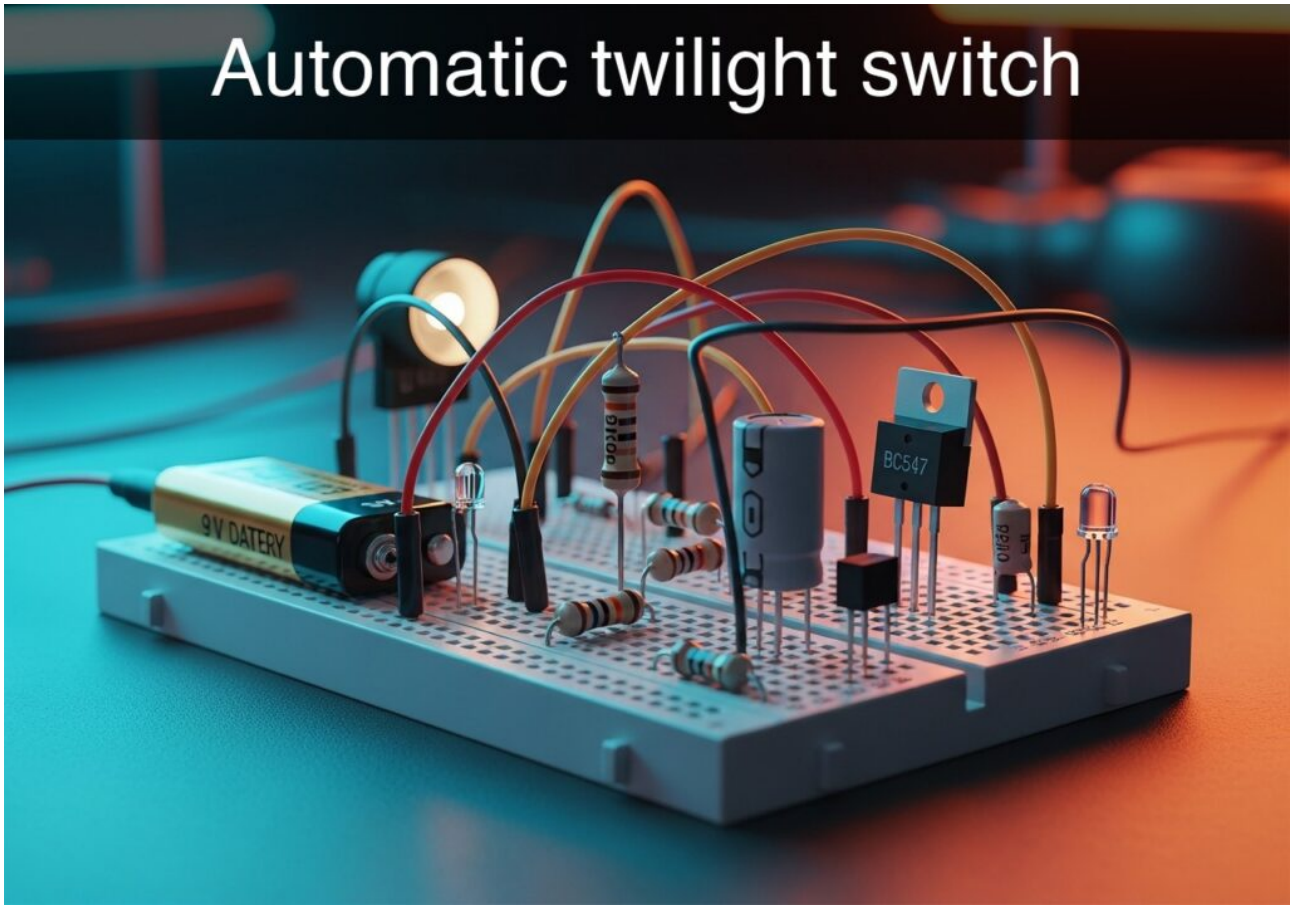
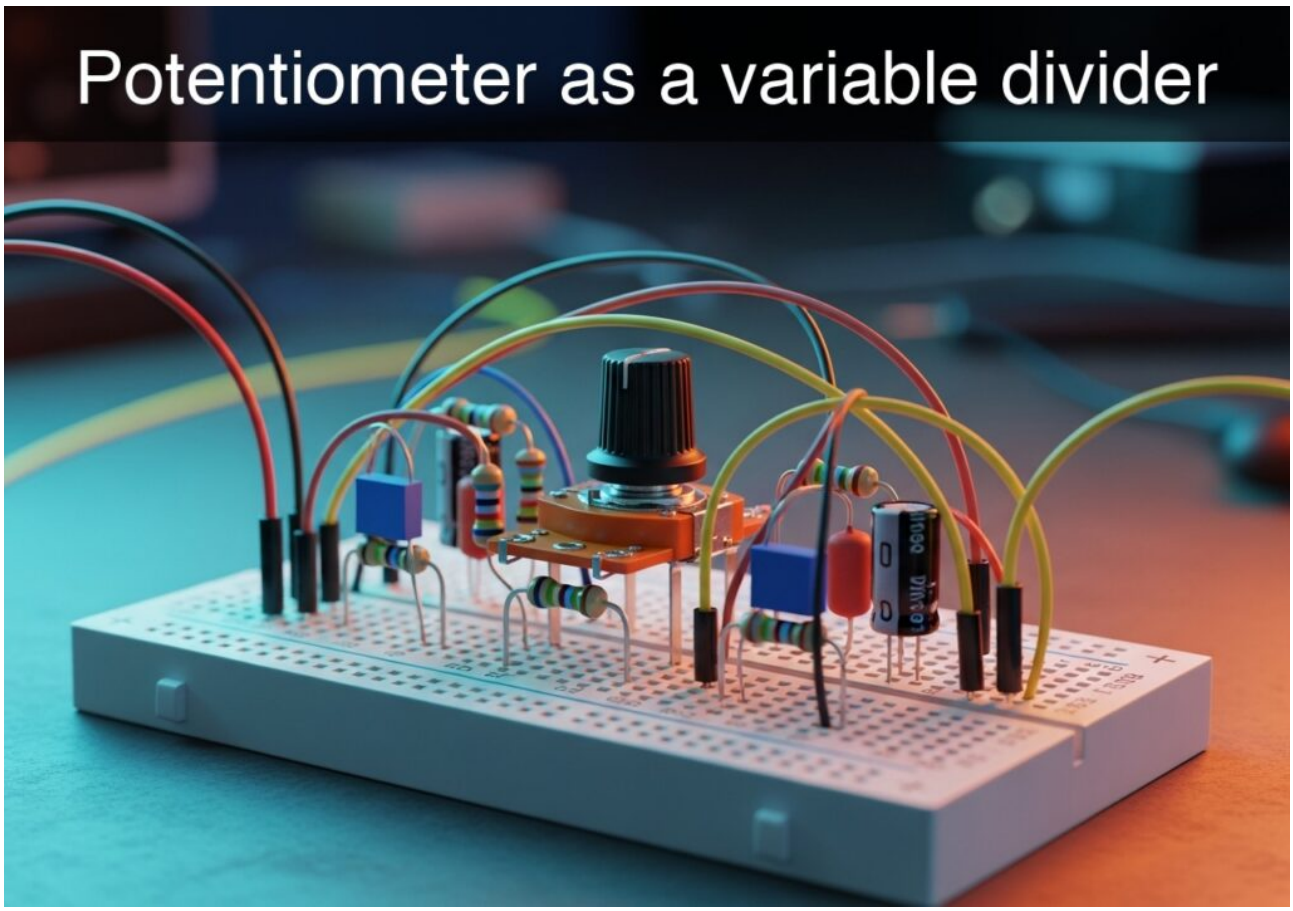
Practical case: Automatic twilight switch



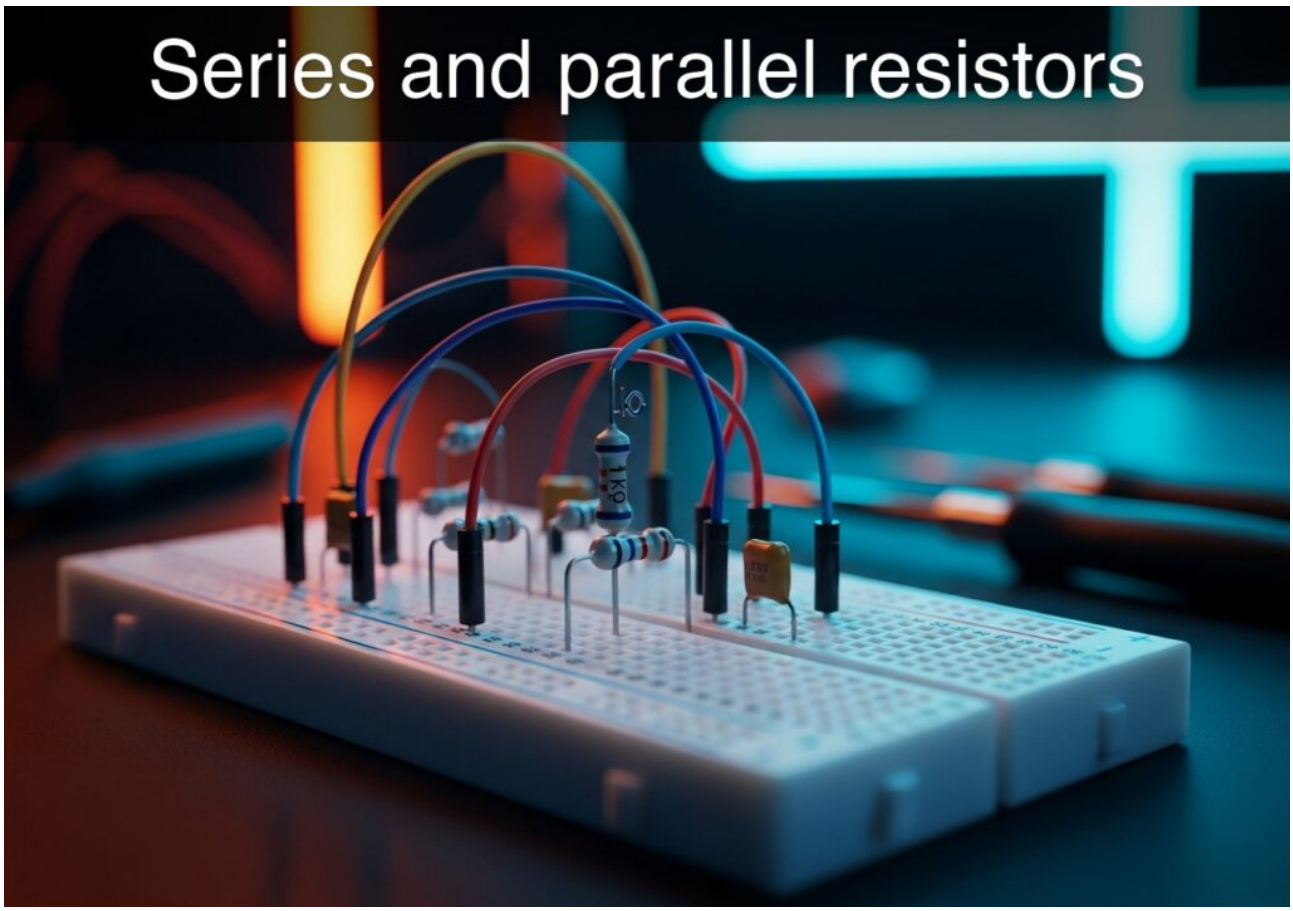
Learn Analog Electronics by building a dark-sensing switch with a Photoresistor. Create a circuit that automatically turns on an LED when ambient light drops.

Practical case: Potentiometer as a variable divider



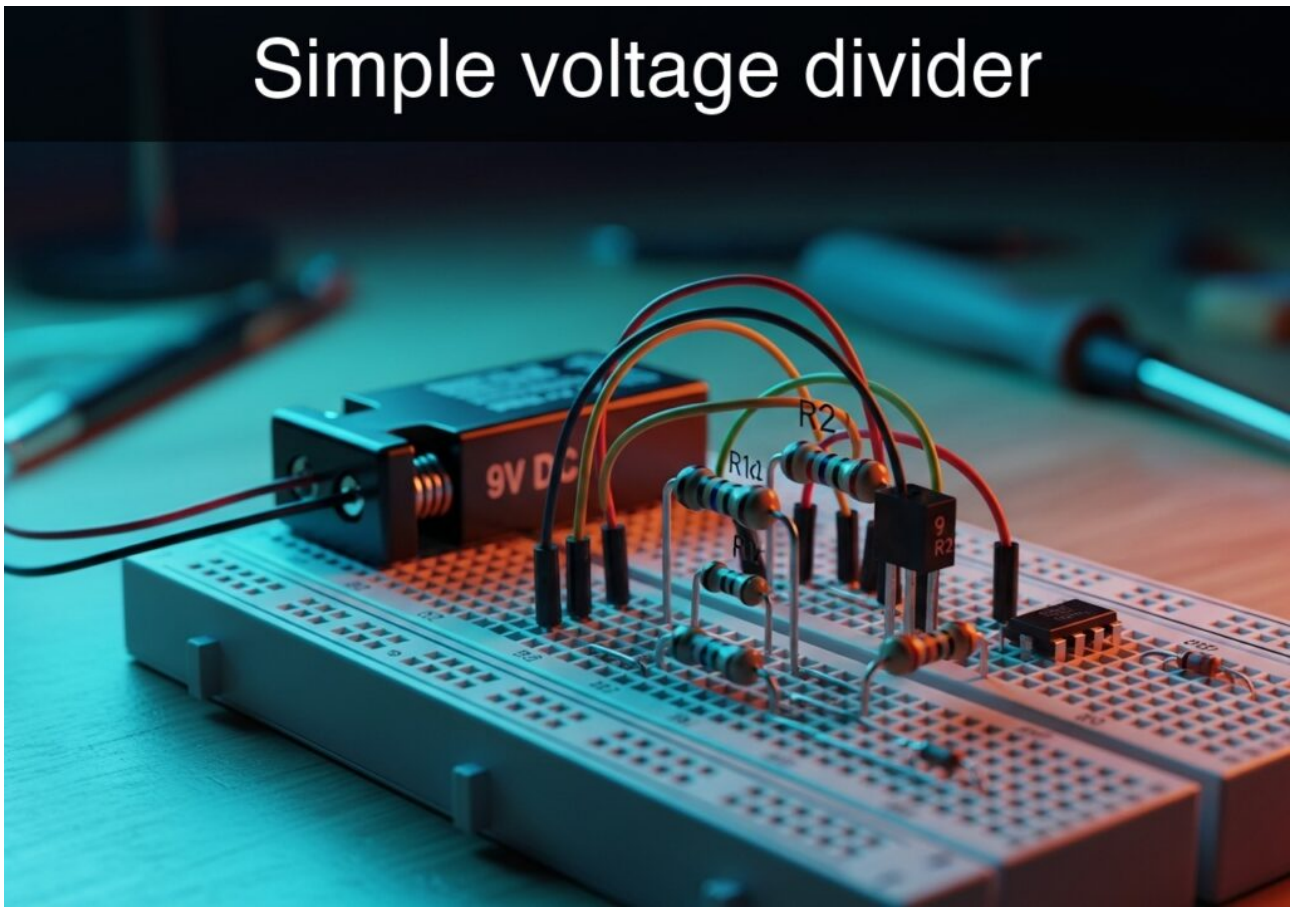
Master Analog Electronics basics by building a variable voltage divider. Use a potentiometer as a variable Resistor to control output signals from 0V to 5V.

Practical case: Series and parallel resistors



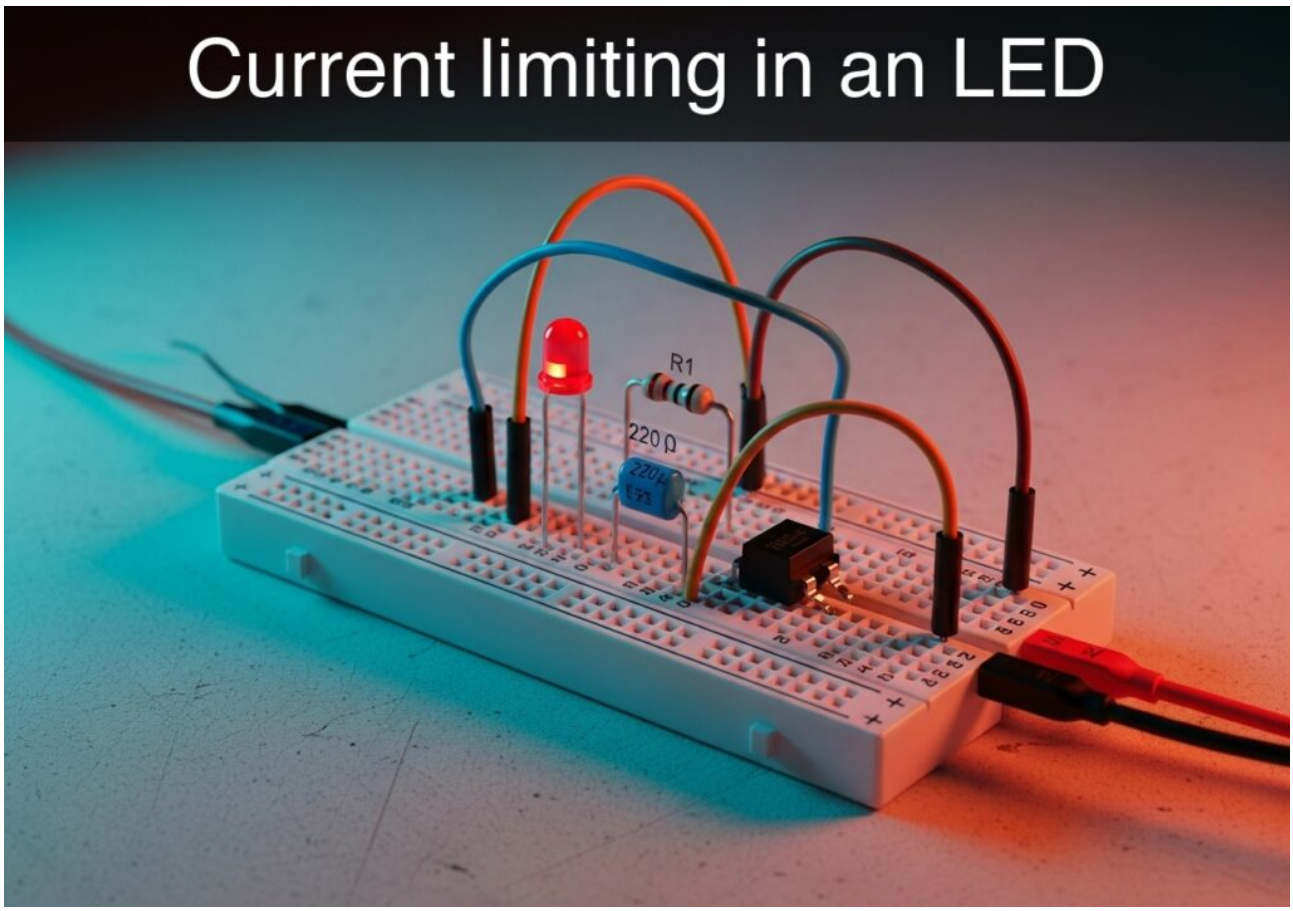
Master Analog Electronics basics by building series and parallel Resistor circuits. Measure equivalent resistance to design precise voltage dividers and loads.

Practical case: Simple voltage divider



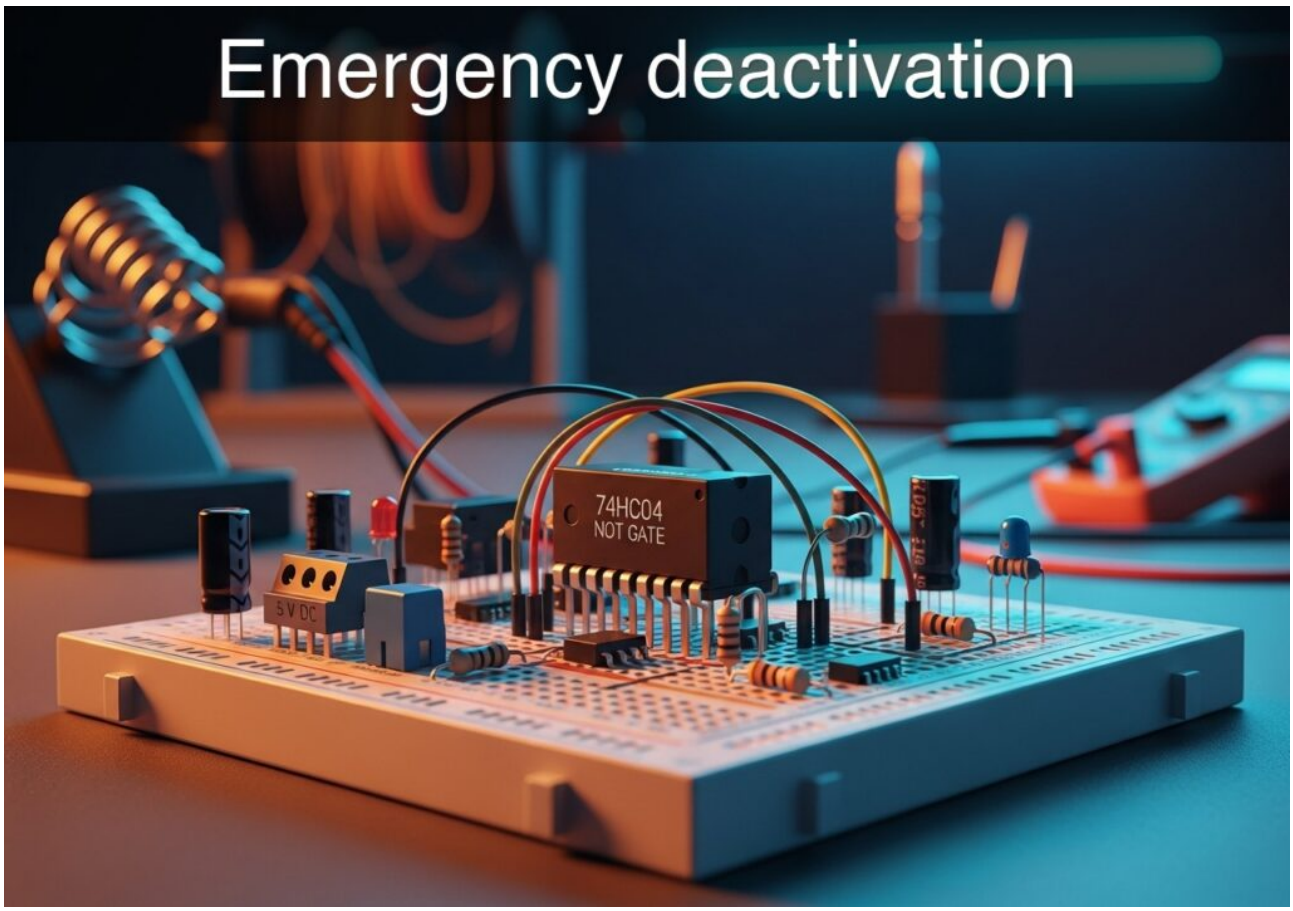
Master Analog Electronics by building a voltage divider with a Resistor pair. Learn to step down 9V to 4.5V for sensor interfacing and verify the output ratio.

Practical case: Current limiting in an LED



Master Analog Electronics basics by building a circuit where a Resistor protects an LED. Apply Ohm’s Law to limit current and ensure safe, steady illumination.

Practical case: Emergency deactivation



Learn Digital Electronics by building a safety kill switch using a NOT gate. Create a circuit where pressing a button instantly cuts the Ready signal voltage.