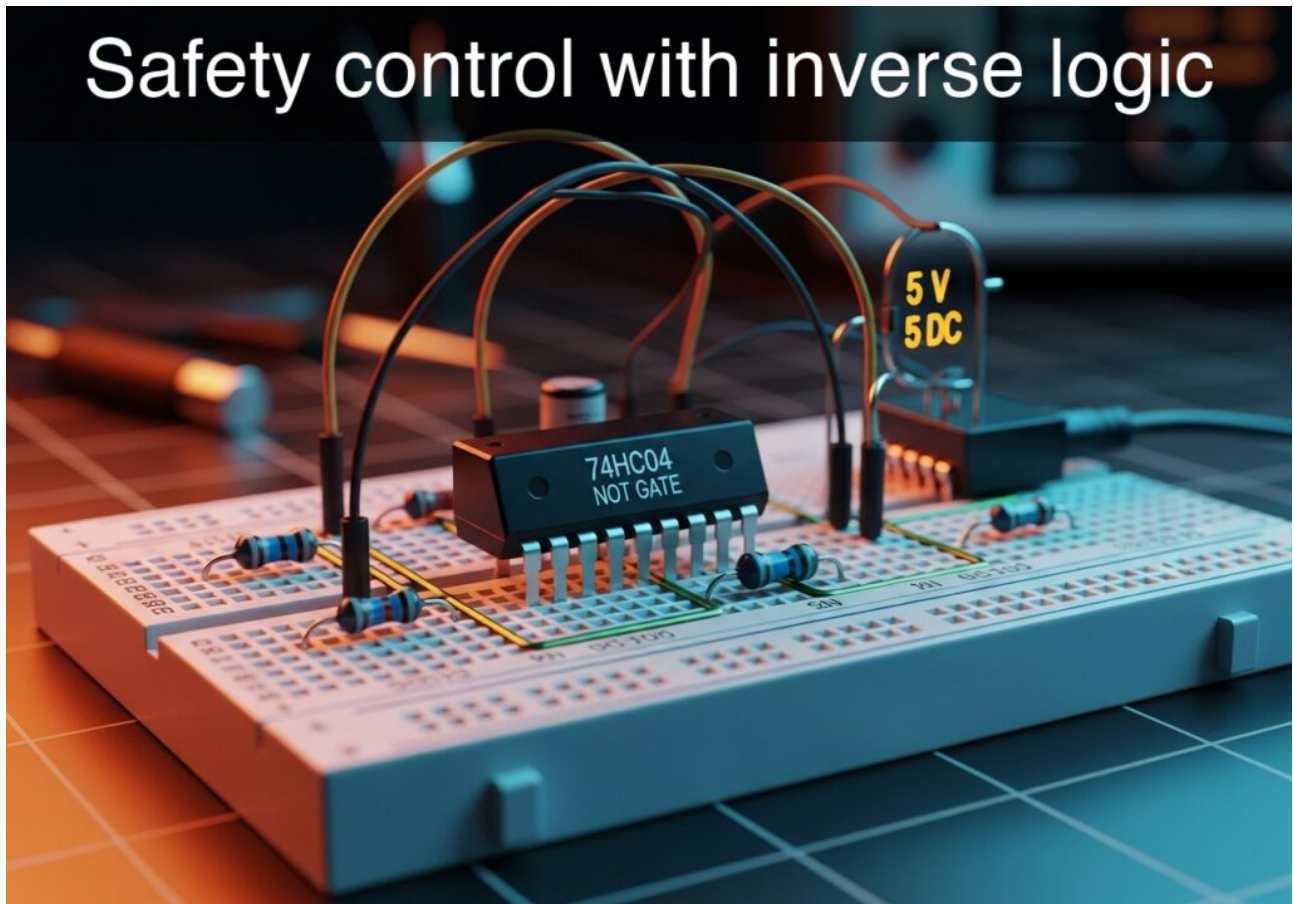


## Practical case: Safety control with inverse logic

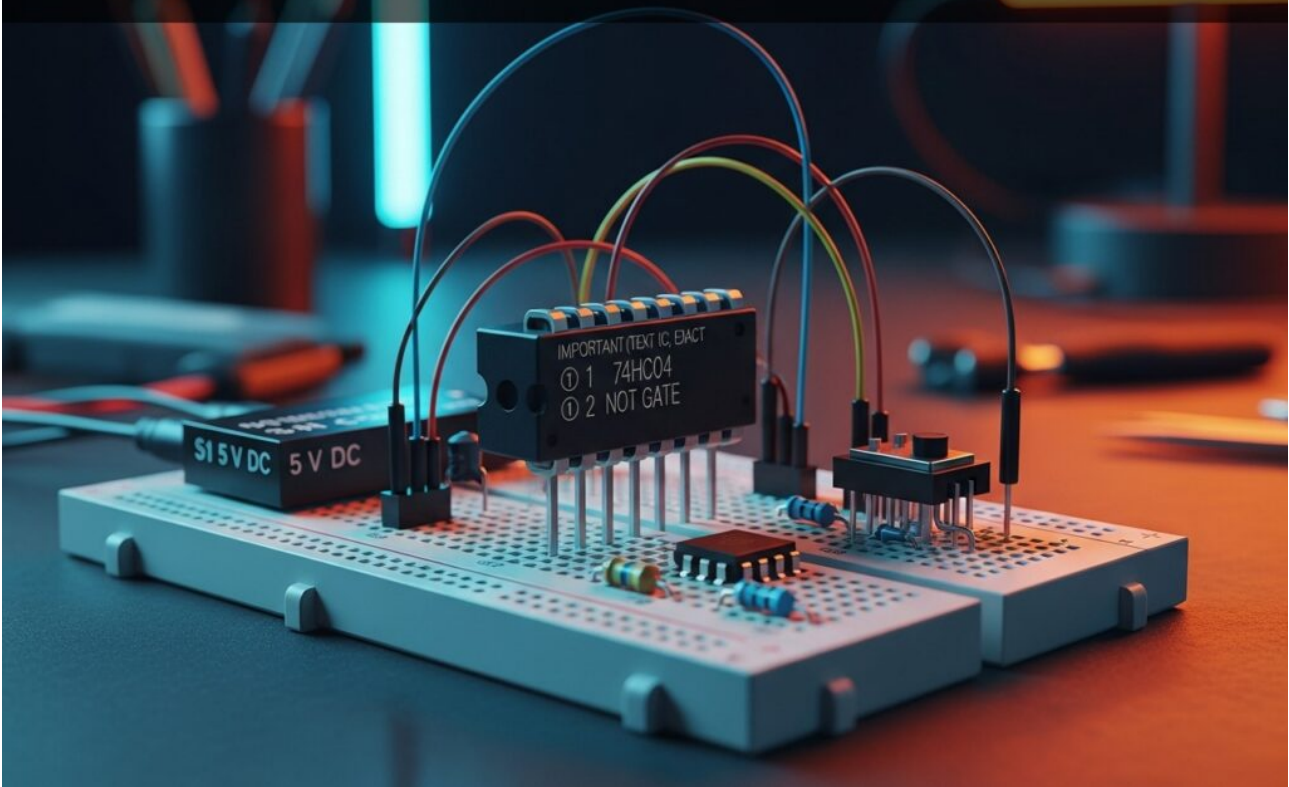


Master Digital Electronics by building an emergency stop circuit. Use a NOT gate to invert sensor signals and instantly halt a motor when a limit is reached.

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## Practical case: Signal inverter with indicator LED

# Signal inverter with indicator LED

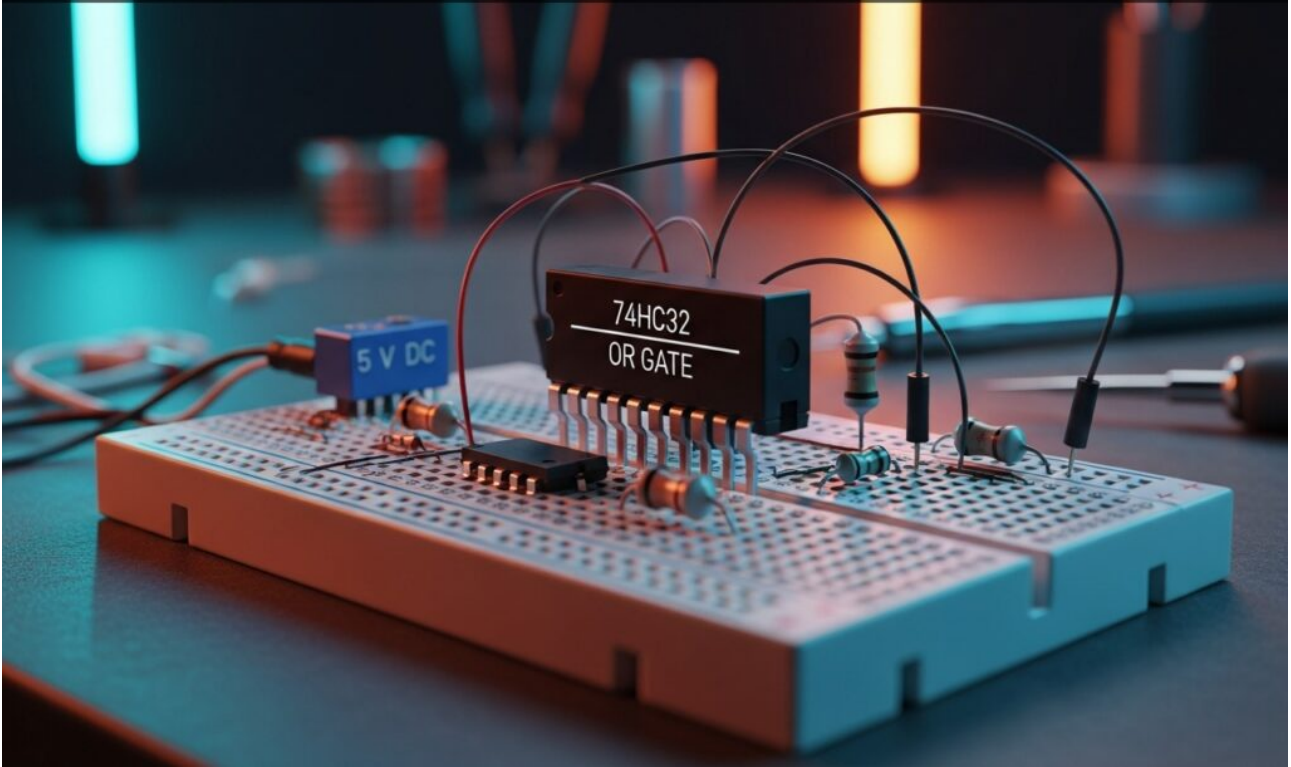


Master Digital Electronics by building a safety interlock circuit with a NOT gate. Learn to invert logic signals and control LED indicators for real-world...

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**Practical case: Emergency water pump activation**

# Emergency water pump activation

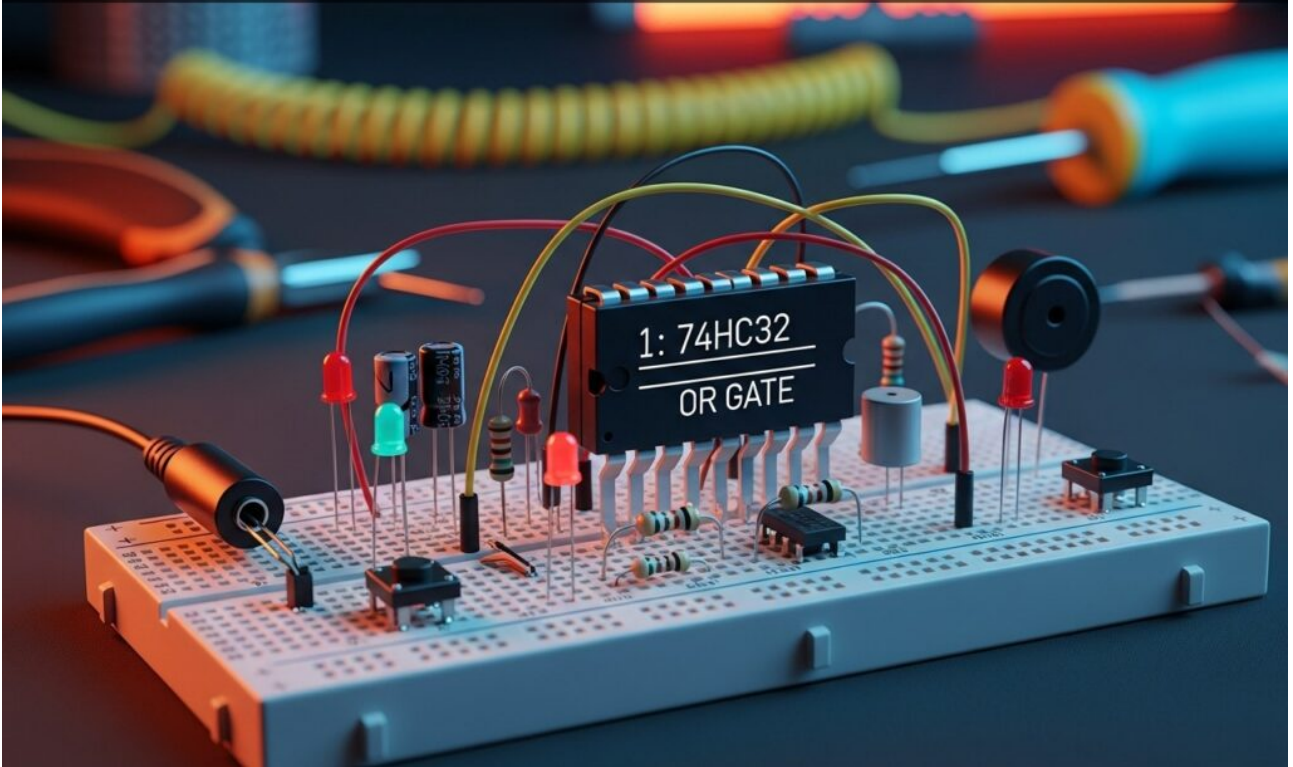


Master Digital Electronics by building a flood prevention system. Use an OR gate to activate a drainage pump when water sensors trigger a 5V logic signal.

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## **Practical case: Car Door Open Warning System**

# Car Door Open Warning System

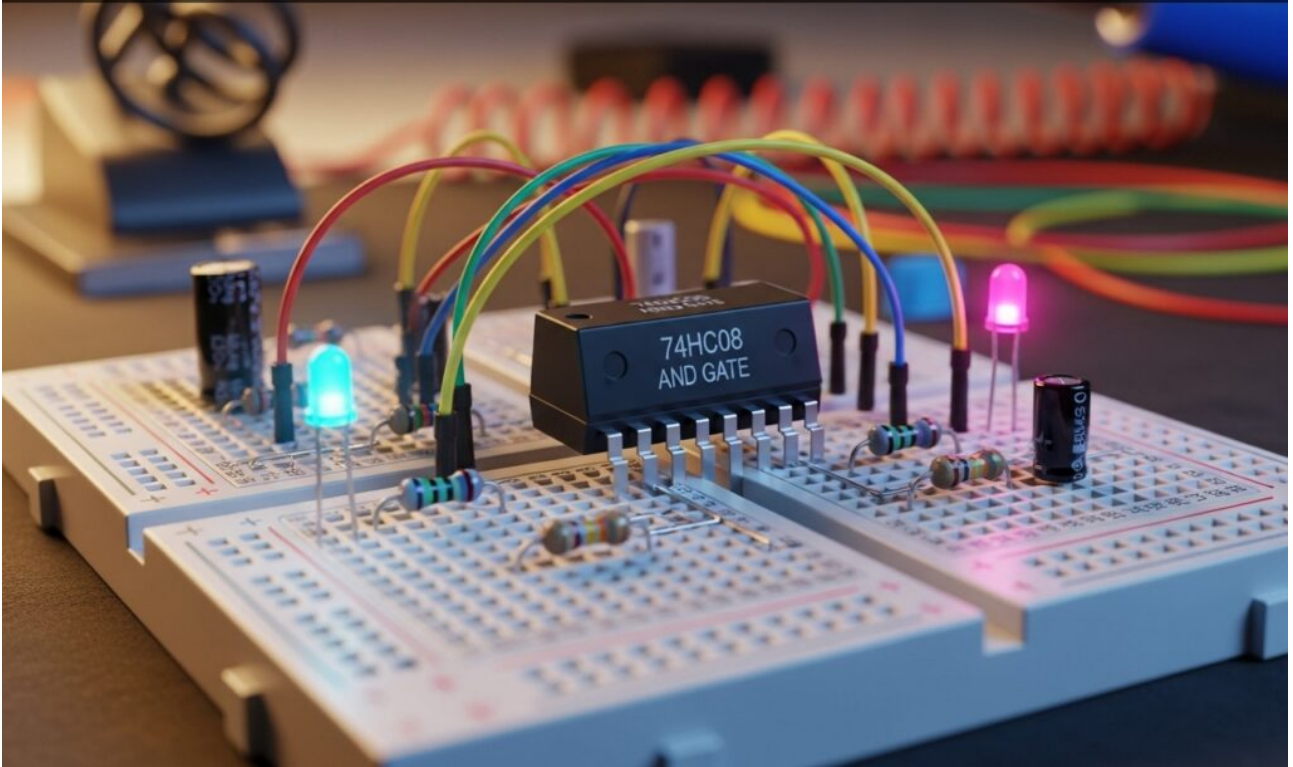


Master Digital Electronics by building a car door alarm with a 74HC32 OR gate. Learn to detect open circuits and trigger LED alerts for safer security systems.

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**Practical case: Data transfer synchronization**

# Data transfer synchronization

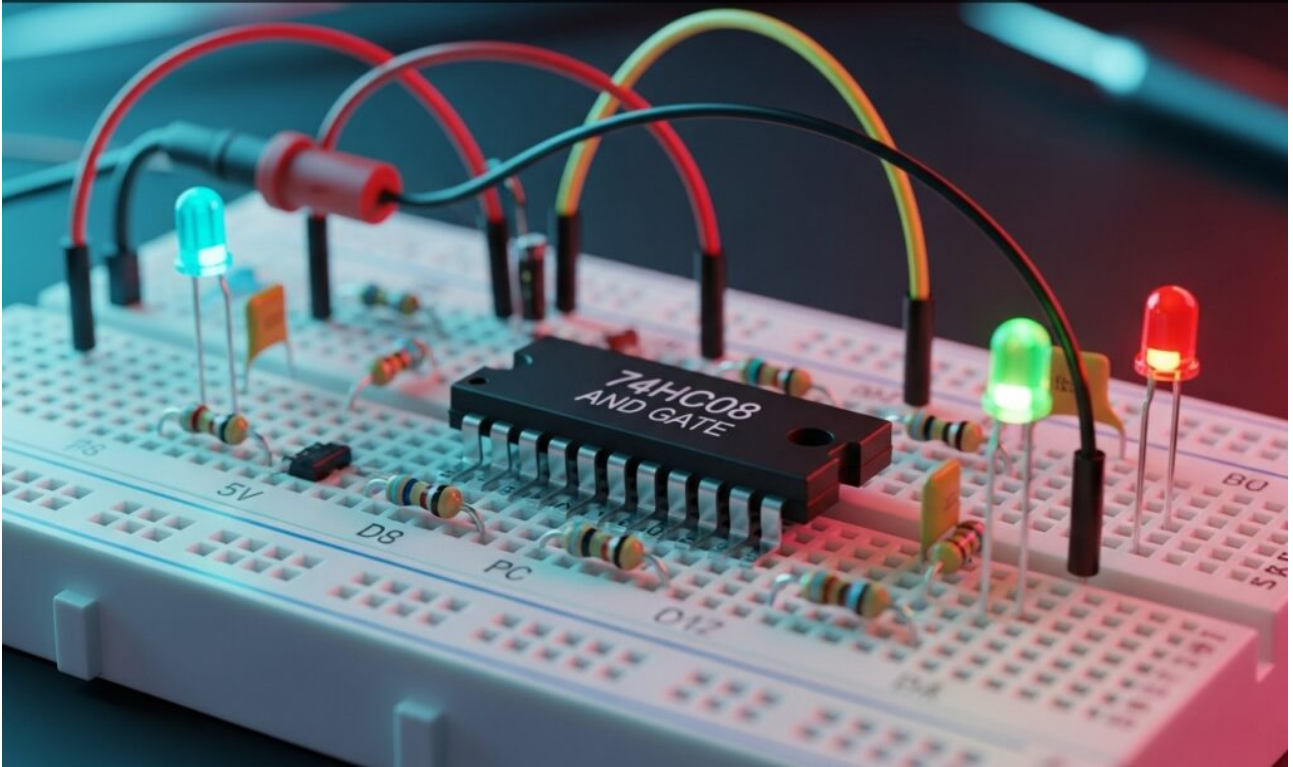


Master Digital Electronics by building a clock gating circuit with an AND gate. Ensure precise synchronization pulses and reduce power only when data is ready.

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**Practical case: Safety interlock in a chemical reactor**

# Safety interlock in a chemical reactor



Master Digital Electronics by building a redundant safety interlock. Use an AND gate circuit to validate three critical inputs and activate a high-power relay.