

Auto Off TV with Parental Control

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Abstract: *Nowadays screens fill kids' lives, yet too much time close to them harms eyes - sometimes causing lasting vision problems. A new solution emerges through connected devices that manage how TVs operate around young viewers. Built on multiple small computers working together - a setup including NodeMCU ESP8266, ESP32, and Arduino Uno - it watches both space and seconds. At its heart runs something called Guardian Logic: sensors track how near someone stands while a clock chip counts minutes used. When limits appear likely to break, actions follow without shouting needed. One piece serves pages online so grown-ups adjust settings far away. Another weighs risks moment by moment based on facts fed live. Meanwhile lights change on a small screen showing what is happening now. Not magic, just careful wiring making care automatic. Sitting too close - under 30 centimeters - or watching past the allowed duration triggers an instant feed shutdown or shows a "Blocked" notice. What lies behind it? A setup built on three MCUs, linked through custom serial signaling, tested and confirmed to gently guide better screen routines.*

Keywords: IoT Parental Control, ESP32 Guardian, ESP8266, Ultrasonic Distance Sensing, UART Communication, Digital Eye Strain, Smart TV Automation, Embedded Systems

