[100+ Simple Raspberry Pi Projects for Beginners with Code and Schematics (circuitdigest.com)](https://circuitdigest.com/simple-raspberry-pi-projects-for-beginners?page=4)

HERRAMIENTAS

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| Text-toSpeech Converter | [Comparing Text-to-Speech (TTS) Converters available for Raspberry Pi - eSpeak, Festival, Google TTS, Pico and PYTTSX3 (circuitdigest.com)](https://circuitdigest.com/microcontroller-projects/best-text-to-speech-tts-converter-for-raspberry-pi-espeak-festival-google-tts-pico-and-pyttsx3) |
| Block ads | [Block all your Ads with PI-hole on Raspberry Pi (circuitdigest.com)](https://circuitdigest.com/microcontroller-projects/block-all-your-ads-with-pi-hole-on-raspberry-pi) |
| Scanear codigo QR | [QR Code Scanner using Raspberry Pi and OpenCV (circuitdigest.com)](https://circuitdigest.com/microcontroller-projects/qr-code-scanner-using-raspberry-pi-and-opencv) |
| Speaking Alarm Clock | [Raspberry Pi Based Jarvis themed Speaking Alarm Clock (circuitdigest.com)](https://circuitdigest.com/microcontroller-projects/raspberry-pi-based-jarvis-themed-speaking-alarm-clock) |
| Usar RPi sin monitor ni teclado | [Raspberry Pi Headless Setup without a Monitor or Keyboard (circuitdigest.com)](https://circuitdigest.com/microcontroller-projects/raspberry-pi-headless-setup) |
| Usar node-red | [Getting started with Node.js and Raspberry Pi: Controlling an LED with Node.js Webserver (circuitdigest.com)](https://circuitdigest.com/microcontroller-projects/programming-raspberry-pi-with-nodejs-to-blink-led) |
| Amazon Echo | [Build your own Amazon Echo using a Raspberry Pi with Alexa Voice Service (circuitdigest.com)](https://circuitdigest.com/microcontroller-projects/raspberry-pi-amazon-echo) |
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SENSORS

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| Alert when getting sleep to drivers | [Driver Drowsiness Detector System using Raspberry Pi and OpenCV (circuitdigest.com)](https://circuitdigest.com/microcontroller-projects/driver-drowsiness-detector-using-raspberry-pi-and-opencv) |
| Lector de valores analogos con PCF8591 | [How to Interface PCF8591 ADC/DAC Analog Digital Converter Module with Raspberry Pi (circuitdigest.com)](https://circuitdigest.com/microcontroller-projects/interfacing-pcf8591-adc-dac-module-with-raspberry-pi) |
| Lector de valores analogos con MCP4735 | [Raspberry Pi MCP4725 DAC Tutorial: Interfacing MCP4725 12-Bit Digital-to-Analog Converter with Raspberry Pi (circuitdigest.com)](https://circuitdigest.com/microcontroller-projects/raspberry-pi-mcp4725-dac-tutorial) |
| Temperatura sin convertidor | [Raspberry Pi DS18B20 Temperature Sensor Interfacing Tutorial (circuitdigest.com)](https://circuitdigest.com/microcontroller-projects/raspberry-pi-ds18b20-temperature-sensor-interfacing) |
| DHT11 temperatura y humedad | [Interfacing Raspberry Pi with DHT11 Temperature and Humidity Sensor (circuitdigest.com)](https://circuitdigest.com/microcontroller-projects/raspberry-pi-dht11-interfacing-with-python-code) |

RED-NUBE

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| VPN gratis | [Turn Your Raspberry PI Zero into A VPN Server with OpenVPN (circuitdigest.com)](https://circuitdigest.com/microcontroller-projects/turn-your-raspberry-pi-zero-in-to-a-vpn-server-using-openvpn) |
| Controlar Arduino con pyFirmata | [Controlling Arduino with Raspberry Pi using pyFirmata (circuitdigest.com)](https://circuitdigest.com/microcontroller-projects/controlling-arduino-with-raspberry-pi-using-pyfirmata) |
| NAS server con Samba | [How to build Raspberry Pi NAS Server using Samba (circuitdigest.com)](https://circuitdigest.com/microcontroller-projects/diy-raspberry-pi-nas-server-using-samba) |
| Google assistant con Node-Red | [How to use Google Assistant with Node-RED for Home Automation – An Alternative to IFTTT (circuitdigest.com)](https://circuitdigest.com/microcontroller-projects/how-to-use-google-assistant-with-node-red-for-home-automation) |
| Por eternet o por putty conectarse a RPi | [Raspberry Pi Headless Setup without a Monitor or Keyboard (circuitdigest.com)](https://circuitdigest.com/microcontroller-projects/raspberry-pi-headless-setup) |
| Publicar valores en Azure | [Azure IoT with Raspberry Pi - Publish Temperature and Humidity Sensor Data to Azure IoT Hub using Python (circuitdigest.com)](https://circuitdigest.com/microcontroller-projects/azure-iot-with-raspberry-pi-publish-temperature-and-humidity-sensor-data-to-azure-iot-hub) |
| Envio de grabacion a telefonos y capturar respuesta | [Build an IVR System to make Automated Phone calls and send Messages using Raspberry Pi and SIM800L (circuitdigest.com)](https://circuitdigest.com/microcontroller-projects/build-an-ivr-system-to-make-automated-phone-calls-and-messages-using-raspberry-pi-sim800l) |
| WebServer for WordPress | [How to Setup Webserver on Raspberry Pi and Host a WordPress Website (circuitdigest.com)](https://circuitdigest.com/microcontroller-projects/how-to-setup-webserver-on-raspberry-pi-and-host-a-wordpress-website) |
| Publicar temperature con AWS | [Publishing Temperature and Humidity Sensor Data to AWS - IoT using Raspberry Pi (circuitdigest.com)](https://circuitdigest.com/microcontroller-projects/publish-sensor-data-to-amazon-aws-raspberry-pi-iot) |
| Publicar valores en Azure | [Azure IoT with Raspberry Pi - Publish Temperature and Humidity Sensor Data to Azure IoT Hub using Python (circuitdigest.com)](https://circuitdigest.com/microcontroller-projects/azure-iot-with-raspberry-pi-publish-temperature-and-humidity-sensor-data-to-azure-iot-hub) |

IoT

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| Home Automation with Particle Cloud | [IoT controlled Home Automation Project using Raspberry Pi and Particle Cloud (circuitdigest.com)](https://circuitdigest.com/microcontroller-projects/iot-controlled-home-automation-using-raspberry-pi-particle-cloud) |
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| Monitorear temperatura y mandar alerta por email | [IoT Based Contactless Body Temperature Monitoring using MLX90614 Infrared Temperature Sensor, Raspberry Pi with Camera and Email Alert (circuitdigest.com)](https://circuitdigest.com/microcontroller-projects/iot-based-contactless-body-temperature-monitoring-using-raspberry-pi-with-camera-and-email-alert) |
| Instalar MQTT | [Installing and Testing Mosquitto MQTT Broker on Raspberry Pi for IoT Communication (circuitdigest.com)](https://circuitdigest.com/microcontroller-projects/installing-and-testing-mosquitto-mqtt-broker-on-raspberry-pi) |
| Publicar valores en Azure | [Azure IoT with Raspberry Pi - Publish Temperature and Humidity Sensor Data to Azure IoT Hub using Python (circuitdigest.com)](https://circuitdigest.com/microcontroller-projects/azure-iot-with-raspberry-pi-publish-temperature-and-humidity-sensor-data-to-azure-iot-hub) |
| Garage Opener | [IoT Smart Garage Door Opener using Raspberry Pi (circuitdigest.com)](https://circuitdigest.com/microcontroller-projects/iot-smart-garage-door-opener-using-raspberry-pi) |
| Usar node-red | [Getting started with Node.js and Raspberry Pi: Controlling an LED with Node.js Webserver (circuitdigest.com)](https://circuitdigest.com/microcontroller-projects/programming-raspberry-pi-with-nodejs-to-blink-led) |
| Google Home Assistant | [Build your own Google Home using a Raspberry Pi (Install Google Assistant on Raspberry Pi) (circuitdigest.com)](https://circuitdigest.com/microcontroller-projects/raspberry-pi-smart-home-with-google-assistant) |
| Voice controller with Amazon Alexa | [Voice controlled Home automation using Amazon Alexa on Raspberry Pi (circuitdigest.com)](https://circuitdigest.com/microcontroller-projects/voice-controlled-home-automation-using-amazon-alexa-and-raspberry-pi) |
| Voice controller with Amazon Alexa con ESP32 | [IoT Based Alexa Voice Controlled LED using Raspberry Pi and ESP12 (circuitdigest.com)](https://circuitdigest.com/microcontroller-projects/iot-based-alexa-voice-controlled-led-using-raspberry-pi-and-esp12) |
| Google Home Assistant | [Build your own Google Home using a Raspberry Pi (Install Google Assistant on Raspberry Pi) (circuitdigest.com)](https://circuitdigest.com/microcontroller-projects/raspberry-pi-smart-home-with-google-assistant) |

INSTALAR

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| Install node-red | [How to install Node-RED on Raspberry Pi to Control an LED (circuitdigest.com)](https://circuitdigest.com/microcontroller-projects/how-to-install-node-red-on-raspberry-pi) |
| MQTT | https://circuitdigest.com/microcontroller-projects/mqtt-based-raspberry-pi-home-automation |
| Instalar MQTT broker | [Installing and Testing Mosquitto MQTT Broker on Raspberry Pi for IoT Communication (circuitdigest.com)](https://circuitdigest.com/microcontroller-projects/installing-and-testing-mosquitto-mqtt-broker-on-raspberry-pi) |
| Install Machine Learning TensorFLow | [Raspberry Pi TensorFlow Tutorial - How to Install Machine Learning Software TensorFlow on Raspberry Pi (circuitdigest.com)](https://circuitdigest.com/microcontroller-projects/intalling-machine-learning-software-tensorflow-on-raspberry-pi) |
| Minecraft | [Raspberry Pi Minecraft Server: Set Up Your Own Minecraft Server on a Pi (circuitdigest.com)](https://circuitdigest.com/microcontroller-projects/raspberry-pi-minecraft-server-set-up) |
| Install Android | [How to install Android on Raspberry Pi (circuitdigest.com)](https://circuitdigest.com/microcontroller-projects/how-to-install-android-on-raspberry-pi) |
| DaetPi, Debian OS light | [How to setup DietPi on Raspberry Pi (circuitdigest.com)](https://circuitdigest.com/microcontroller-projects/how-to-install-diet-pi-on-raspberry-pi) |
| Instalar Blynk en RPi para usarla como web server | [How to Install a Blynk Local Server on Raspberry Pi (circuitdigest.com)](https://circuitdigest.com/microcontroller-projects/how-to-install-a-blynk-local-server-on-raspberry-pi) |
| TeamViewer | [How to Quickly Setup TeamViewer on Raspberry Pi (circuitdigest.com)](https://circuitdigest.com/microcontroller-projects/how-to-setup-teamviewer-on-raspberry-pi) |
| Windows 10 | [How to install Windows 10 IoT Core on Raspberry Pi (circuitdigest.com)](https://circuitdigest.com/microcontroller-projects/how-to-install-windows-10-iot-core-on-raspberry-pi) |
| Spotify | [How to run Spotify on Raspberry Pi using Mopidy Music Server (circuitdigest.com)](https://circuitdigest.com/microcontroller-projects/how-to-run-spotify-on-raspberry-pi-using-mopidy-music-server) |
| Instalar OpenCV con CMake | [How to install the Python OpenCV on Raspberry Pi using CMake (circuitdigest.com)](https://circuitdigest.com/microcontroller-projects/how-to-install-python-opencv-on-raspberry-pi) |
| Consola juego retropi | https://circuitdigest.com/microcontroller-projects/raspberry-pi-retropie-gaming-console |
| Streaming Amazon Prime | [Streaming Amazon Prime Video on Raspberry Pi (circuitdigest.com)](https://circuitdigest.com/microcontroller-projects/streaming-amazon-prime-on-raspberry-pi) |
| Configure Netflix | [How to Watch Netflix on Raspberry Pi (circuitdigest.com)](https://circuitdigest.com/microcontroller-projects/how-to-watch-netflix-on-raspberry-pi) |

COMMUNICACION

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| Bluetooth beacon and Broadcast an URL | [Turn Your Raspberry Pi into a Bluetooth Beacon and Broadcast an URL using Eddystone BLE Beacon (circuitdigest.com)](https://circuitdigest.com/microcontroller-projects/turn-your-raspberry-pi-into-bluetooth-beacon-using-eddystone-ble-beacon) |
| Send and Receive WhatsApp | [How to install WhatsApp on Raspberry Pi to Send and Receive Messages (circuitdigest.com)](https://circuitdigest.com/microcontroller-projects/how-to-install-whatsapp-on-raspberry-pi) |
| Escuchar audio con Bluetooth | [Raspberry Pi Bluetooth Speaker: Play Audio Wirelessly using Raspberry Pi (circuitdigest.com)](https://circuitdigest.com/microcontroller-projects/diy-raspberry-pi-bluetooth-speaker) |
| Comunicacion RF con nRF24L01 | [Wireless RF Communication between Raspberry Pi and Arduino UNO using nRF24L01 Module (circuitdigest.com)](https://circuitdigest.com/microcontroller-projects/wireless-rf-communication-between-arduino-and-raspberry-pi-using-nrf24l01) |
| WhatsApp con RPi (free) | [WhatsApp Automation using Python on Raspberry Pi – A Personalized WhatsApp bot for Home Automation (circuitdigest.com)](https://circuitdigest.com/microcontroller-projects/whatsapp-automation-using-python-on-raspberry-pi-a-personalized-whatsapp-bot-for-home-automation) |
| Serial communication with converter between RPi and Arduino RS485 | [RS-485 Serial Communication between Raspberry Pi and Arduino UNO (circuitdigest.com)](https://circuitdigest.com/microcontroller-projects/rs485-serial-communication-between-arduino-and-raspberry-pi) |
| XBee con RPi | [How to Interface XBee Module with Raspberry Pi (circuitdigest.com)](https://circuitdigest.com/microcontroller-projects/raspberry-pi-xbee-module-interfacing) |

RADIO

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| LoRa | [DIY Raspberry Pi LoRa HAT - LoRa Communication between Raspberry Pi and Arduino (circuitdigest.com)](https://circuitdigest.com/microcontroller-projects/diy-raspberry-pi-lora-hat-for-lora-communication-between-raspberry-pi-and-arduino) |
| FM transmisor | [​How to Build a Raspberry Pi FM Radio Transmitter (circuitdigest.com)](https://circuitdigest.com/microcontroller-projects/raspberry-pi-fm-transmitter) |
| LoRa RPi con Arduino | [LoRa with Raspberry Pi – Peer to Peer Communication with Arduino (circuitdigest.com)](https://circuitdigest.com/microcontroller-projects/raspberry-pi-with-lora-peer-to-peer-communication-with-arduino) |
| Internet radio | [DIY Raspberry Pi Internet Radio and Streaming Station (circuitdigest.com)](https://circuitdigest.com/microcontroller-projects/raspberry-pi-internet-radio-and-streaming-station) |

[​](https://circuitdigest.com/microcontroller-projects/raspberry-pi-fm-transmitter)RECONOCER IMAGENES

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| Reconocer placa de auto | [Car License Plate Recognition using Raspberry Pi and OpenCV (circuitdigest.com)](https://circuitdigest.com/microcontroller-projects/license-plate-recognition-using-raspberry-pi-and-opencv) |
| Reconocer senal de mano | [Hand Gesture Recognition using Raspberry Pi and OpenCV (circuitdigest.com)](https://circuitdigest.com/microcontroller-projects/hand-gesture-recognition-using-raspberry-pi-and-opencv) |
| Reconocer emocion de cara | [Raspberry Pi Based Emotion Recognition System Using OpenCV, TensorFlow, and Keras (circuitdigest.com)](https://circuitdigest.com/microcontroller-projects/raspberry-pi-based-emotion-recognition-using-opencv-tensorflow-and-keras) |
| Clasificar objetos | [Object Classification using Edge Impulse TinyML on Raspberry Pi (circuitdigest.com)](https://circuitdigest.com/microcontroller-projects/object-classification-using-edge-impulse-tinyml-on-raspberry-pi) |
| Reconocer edad y genero | [Age and Gender Classification using OpenCV and Deep Learning on Raspberry Pi (circuitdigest.com)](https://circuitdigest.com/microcontroller-projects/age-and-gender-classification-using-opencv-and-deep-learning-on-raspberry-pi) |
| Camara termal | [Build your own Thermal Camera with Raspberry Pi and CJMCU-8833 Thermal Image Array Temperature Sensor (circuitdigest.com)](https://circuitdigest.com/microcontroller-projects/thermal-camera-with-raspberry-pi-and-cjmcu-8833-thermal-image-array-temperature-sensor) |
| Detectar si lleva mascarilla | [Face Mask Detection using Raspberry Pi and OpenCV (circuitdigest.com)](https://circuitdigest.com/microcontroller-projects/face-mask-detection-using-raspberry-pi-and-opencv) |
| Social distance detector | [Social Distancing Detector Using OpenCV and Raspberry Pi (circuitdigest.com)](https://circuitdigest.com/microcontroller-projects/social-distancing-detector-using-opencv-and-raspberry-pi) |
| Detectar ojos, boca, nariz | [Raspberry Pi OpenCV Facial Landmark Detection (Eyes, Nose, Jaw, Mouth, etc.) using Python (circuitdigest.com)](https://circuitdigest.com/microcontroller-projects/facial-landmark-detection-using-raspberry-pi-opencv) |
| Estimar cuantas personas | [Crowd Size Estimation Using OpenCV and Raspberry Pi (circuitdigest.com)](https://circuitdigest.com/microcontroller-projects/crowd-size-estimation-using-opencv-and-raspberry-pi) |
| Reconocedor facial | [Real Time Face Recognition with Raspberry Pi and OpenCV (circuitdigest.com)](https://circuitdigest.com/microcontroller-projects/raspberry-pi-and-opencv-based-face-recognition-system) |
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VIDEO

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| Detect with camara motion with OpenCV | [CCTV Motion Detection with Alarm using OpenCV on Raspberry Pi (circuitdigest.com)](https://circuitdigest.com/microcontroller-projects/cctv-motion-detection-with-alarm-using-opencv-on-raspberry-pi) |
| Stream video | https://circuitdigest.com/microcontroller-projects/stream-cctv-video-from-dvr-to-raspberry-pi-using-python-and-opencv |
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SCREEN

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| Pantalla LCD con RPi | [DIY Raspberry Pi RGB LCD HAT (circuitdigest.com)](https://circuitdigest.com/microcontroller-projects/diy-raspberry-pi-rgb-lcd-hat) |
| OCR | [Optical Character Recognition (OCR) using Tesseract on Raspberry Pi (circuitdigest.com)](https://circuitdigest.com/microcontroller-projects/optical-character-recognition-ocr-using-tesseract-on-raspberry-pi) |
| Using 5” HTDMI touchscreen | [Interfacing 5 inch HDMI Touchscreen Display with Raspberry Pi (circuitdigest.com)](https://circuitdigest.com/microcontroller-projects/interfacing-5-inch-hdmi-touchscreen-display-with-raspberry-pi) |
| Using 3.5” Touchscreen | [Interfacing 3.5 inch Touch Screen TFT LCD with Raspberry Pi (circuitdigest.com)](https://circuitdigest.com/microcontroller-projects/interfacing-3.5-inch-touchscreen-tft-lcd-with-raspberry-pi) |
| OLED display | [Interfacing SSD1306 OLED Display with Raspberry Pi (circuitdigest.com)](https://circuitdigest.com/microcontroller-projects/ssd1306-oled-display-with-raspberry-pi) |

CONSUMO ENERGIA

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| Monitor de consumo de energia | [IoT Based Raspberry Pi Smart Energy Monitor (circuitdigest.com)](https://circuitdigest.com/microcontroller-projects/iot-based-raspberry-pi-smart-energy-meter) |
| UPS for Rpi | https://circuitdigest.com/microcontroller-projects/diy-raspberry-pi-ups-hat-an-uninterrupted-power-supply-to-keep-your-pi-safe-during-power-failure |

ROBOTS

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| Controlador de robot auto | [DIY Raspberry Pi Motor Driver HAT (circuitdigest.com)](https://circuitdigest.com/microcontroller-projects/diy-raspberry-pi-motor-driver-hat) |