DEV BOARDS

ARDUINO, RASPBERRY PI & MORE

Skill Tree: Color in the Boxes

Color in the boxes of anything you've already completed, visualize your skills and identify your skill gaps. Get inspired to try new things and tailor the skill tree to suit your own journey by swapping in your own goals.

ADVANCED

(set your own goal)
(set your own goal)
(set your own goal)
(set your own goal)
(set your own goal)
Do an autonomous robotics project
Design your own Arduino hat / Raspi Shield / Dev board
Release a tutorial on a project you've made
Create an FPGA Project
Use TinyML in a project (eg. Object Detection)
Make an open source project
Send data with LoraWAN, Nb-IOT or others
Teach a class on a dev board
Turn a home appliance into a smart device
Do a robotics Project
Make a gift for someone with a dev board
Make a wearable tech project with a dev board
Use encoders to measure motor rotation
Make something for gaming
Debug voltage drops
Run out of memory in a project
Reprogram the bootloader on a dev board
Make a project with a camera
Send data to an online server (eg. MQTT)
Use PWM to control the speed of a DC motor
Use sleep mode to save power
Use RFID in a project
Use MIDI files in a project
Make a project for everyday use
Send data wirelessly using BLE
Use RTOS with a dev board
Use a joystick or gamepad in a project
Use a screen in a project
Use Python in a project
Use a PID Controller
Participate in a Hackathon
Use an LED Matrix in a project
Use renewable energy in a project
Monitor your environment with a dev board
Use an interrupt in a project
Use LED strip in a project
Use a dev board to wirelessly control an IoT powerpoint
Detect a person with a sensor
Teach a friend a dev board skill
Schedule a task for Raspberry Pi or other SBC
Make a project that moves
Use the real time clock for scheduling
Use a sensor to trigger an action
Use an SBC to receive MQTT messages from a dev board
Use an Arduino shield
Use environmental sensors in a project
Use WiFi to send data from a dev board
Build your own enclosure for a project
Let the smoke out of a dev board accidentally
Get a project wrong and try again
Use a Raspberry Pi hat
Use a rotary encoder and stepper driver to move a stepper motor
Use a multimeter to measure voltage or current
Make an LED blink with Python
Use a servo motor in a project
Use the Arduino Serial Monitor
Learn to solder and soldering safety
Print 'Hello World' on Raspberry Pi
Use TinkerCAD to code and simulate an Arduino project
Use a multimeter to measure circuit continuity
Use Raspberry Pi command line for the first time
Use a button or a switch in a circuit
Alter example Arduino code
Use Ohm's Law to select a resistor for an LED
Set up a Raspberry Pi for the first time
Blink an LED
Learn to use a breadboard
Select and flash a Raspberry Pi OS on an SD Card

BASICS

START HERE

1 tile = 1 point

Total Score

Name: _____

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