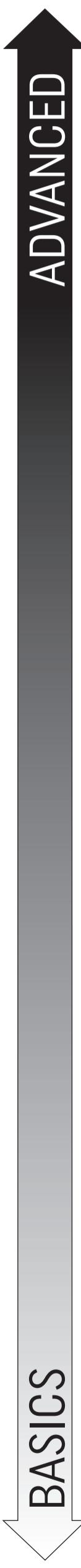# CODING
Skill Tree: Color in the Boxes

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

BASICS

(set your own goal)

(set your own goal)

(set your own goal)

(set your own goal)

(set your own goal)

(set your own goal)

Teach a class on coding skills

Learn multithreading

Learn three or more coding languages

Participate in an open source project

Fix a race condition

Write a program to accept commands over a UART from a terminal
TX RX

Write a streaming program using UDP and a custom protocol

Use a performance profiler to identify and fix hot spots

Write a concurrent program using thread synchronization

Make a recursive function nonrecursive

Learn about project management styles (e.g., waterfall vs. agile)

Write detailed documentation for your coding project

Use bitwise operators for speed improvements
10110

Collaborate on a project with others

Write functional code
JS

Earn money from coding

Test and improve your code

Teach a friend a coding skill

Use a graph data structure

Use recursion

Use a tree data structure

Write a TCP/IP server

Write object-oriented code

Write an iOS Hello World program

Write an Android Hello World program

Use a second programming language in the same project
< / >

Participate in a hackathon

Write a Windows Hello World program

Write a MacOS Hello World program

Write a Linux Hello World program using GTK+

Use a design pattern (e.g., Gang of Four)

Write a web application
WWW

Use version control

Write a quick sort algorithm

Implement a sort algorithm

Document your program

Run into circular dependency with your files

Get confused reading your own code

Convert code from floating-point math to integer/fixed-point math
3.141592

Use a linter

Use a logical shortcut in a condition
&&

Use a Git repository to share code

Spend a long time trying to find a trivial bug

Optimize the memory footprint of a program

Use an API in a project
API

Create a CLI tool with parameters

Use a keyboard shortcut to run your program

Use a set instead of a list

Use a debugger

Use a keyboard shortcut to save your code

Generate art with code

Explain your code with comments
< / >

Write a function
fx

Look up an error message on stack overflow

Complete a learn-to-code class or book

Download a code library

Iterate over a list/array with a loop

Reassign a value to a variable
5²

Adjust example code for a project

Use node-based coding

Find a bug and fix it

Write something in a markup language
< / >

Use the command line

Split your code into multiple files

Learn HTML basics

Learn core syntax for a language
< / >

Write a Hello World program

Use block-based coding

1 tile = 1 point

START ⋮ HERE

Name: _____

Total Score

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