

# THE SPARKFUN GUIDE TO PROCESSING

CREATE INTERACTIVE ART WITH CODE

DEREK RUNBERG



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# The Sparkfun Guide To Processing Derek Runberg

**Marcel A. Müller**



## **The Sparkfun Guide To Processing Derek Runberg:**

**The SparkFun Guide to Processing** Derek Runberg, 2015-08-01 Processing is a free beginner friendly programming language designed to help non programmers create interactive art with code The SparkFun Guide to Processing the first in the SparkFun Electronics series will show you how to craft digital artwork and even combine that artwork with hardware so that it reacts to the world around you Start with the basics of programming and animation as you draw colorful shapes and make them bounce around the screen Then move on to a series of hands on step by step projects that will show you how to Make detailed pixel art and scale it to epic proportions Write a maze game and build a MaKey MaKey controller with fruit buttons Play record and sample audio to create your own soundboard Fetch weather data from the Web and build a custom weather dashboard Create visualizations that change based on sound light and temperature readings With a little imagination and Processing as your paintbrush you ll be on your way to coding your own gallery of digital art in no time Put on your artist s hat and begin your DIY journey by learning some basic programming and making your first masterpiece with The SparkFun Guide to Processing The code in this book is compatible with Processing 2 and Processing 3 *SparkFun Guide to Processing* Derek Runberg, 2015

**The Maker's Guide to the Zombie Apocalypse** Simon Monk, 2015-10-01 Where will you be when the zombie apocalypse hits Trapping yourself in the basement Roasting the family pet Beheading reanimated neighbors No way You ll be building fortresses setting traps and hoarding supplies because you savvy survivor have snatched up your copy of The Maker s Guide to the Zombie Apocalypse before it s too late This indispensable guide to survival after Z day written by hardware hacker and zombie anthropologist Simon Monk will teach you how to generate your own electricity salvage parts craft essential electronics and out survive the undead p Take charge of your environment Monitor zombie movement with trip wires and motion sensors Keep vigilant watch over your compound with Arduino and Raspberry Pi surveillance systems Power zombie defense devices with car batteries bicycle generators and solar power Escape imminent danger Repurpose old disposable cameras for zombie distracting flashbangs Open doors remotely for a successful sprint home Forestall subplot disasters with fire and smoke detectors Communicate with other survivors Hail nearby humans using Morse code Pass silent messages with two way vibration walkie talkies Fervently scan the airwaves with a frequency hopper For anyone from the budding maker to the keen hobbyist The Maker s Guide to the Zombie Apocalypse is an essential survival tool Uses the Arduino Uno board and Raspberry Pi Model B or Model 2 [Junkyard Jam Band](#) David Erik Nelson, 2015-10-01 Making music doesn t have to be about dropping big bucks in the guitar shop or endlessly fiddling with expensive software You can make good noise out of bits of wood and wire plastic and steel When you build your own instruments creating your own sound comes naturally Junkyard Jam Band is a step by step guide to making a full array of complete musical projects no previous carpentry or electronics experience required Each build includes tips on how to coax the best sounds out of the instrument and encourages you to mod the project to fit your own style Learn how to

Bust up your old tape decks for a handheld old skool Scratchbox Give your voice a robotic makeover with the Droid Voicebox Circuit bend unsuspecting childhood toys into mutant glitching jazz punk machines Transform cigar boxes into thumb pianos and electric ukuleles Build a crackling multifunction Mud n Sizzle Preamp to attach to any electric music machine Along the way you ll explore the physics behind wind instruments discover how harmonics work and get your feet wet with some music theory To top it all off the back of the book includes a soldering primer for total beginners along with extra circuits to customize your instruments even further Build your own band your way *An Artist's Guide to Programming* Jim Parker,2022-06-07 Learn to program with visual examples Programs increase in complexity as you progress from drawing a circle to 3D graphics animations and simulations A Graphical Introduction to Programming teaches computer programming with the aid of 100 example programs each of which integrates graphical or sound output The Processing language based examples range from drawing a circle and animating bouncing balls to 3D graphics audio visualization and interactive games Readers learn core programming concepts like conditions loops arrays strings and functions as well as how to use Processing to draw lines shapes and 3D objects They ll learn key computer graphics concepts like manipulating images animating text mapping textures onto objects and working with video Advanced examples include sound effects and audio visualization network communication 3D geometry and animation simulations of snow and smoke predator prey populations and interactive games **The Official Raspberry Pi Projects Book Volume 2** The Makers of The MagPi magazine,2016-11-01 The Official Raspberry Pi projects book returns with inspirational projects detailed step by step guides and product reviews based around the phenomenon that is the Raspberry Pi See why educators and makers adore the credit card sized computer that can be used to make robots retro games consoles and even art In this volume of The Official Raspberry Pi Projects Book you ll Get involved with the amazing and very active Raspberry Pi community Be inspired by incredible projects made by other people Learn how to make with your Raspberry Pi with our tutorials Find out about the top kits and accessories for your Pi projects And much much more If this is your first time using a Raspberry Pi you ll also find some very helpful guides to get you started with your Raspberry Pi journey With millions of Raspberry Pi boards out in the wild that s millions more people getting into digital making and turning their dreams into a Pi powered reality Being so spoiled for choice though means that we ve managed to compile an incredible list of projects guides and reviews for you This book was written using an earlier version of Raspberry Pi OS Please use Raspberry Pi OS Legacy for full compatibility See [magpi cc legacy](#) for more information [Python Playground](#) Mahesh Venkitachalam,2015-10-01 Python is a powerful programming language that s easy to learn and fun to play with But once you ve gotten a handle on the basics what do you do next Python Playground is a collection of imaginative programming projects that will inspire you to use Python to make art and music build simulations of real world phenomena and interact with hardware like the Arduino and Raspberry Pi You ll learn to use common Python tools and libraries like numpy matplotlib and pygame to do things like Generate Spirograph like patterns using parametric

equations and the turtle module Create music on your computer by simulating frequency overtones Translate graphical images into ASCII art Write an autostereogram program that produces 3D images hidden beneath random patterns Make realistic animations with OpenGL shaders by exploring particle systems transparency and billboard techniques Construct 3D visualizations using data from CT and MRI scans Build a laser show that responds to music by hooking up your computer to an Arduino Programming shouldn't be a chore Have some solid geeky fun with Python Playground The projects in this book are compatible with both Python 2 and 3

## **The Sparkfun Guide To Processing Derek Runberg** Book Review: Unveiling the Magic of Language

In a digital era where connections and knowledge reign supreme, the enchanting power of language has become much more apparent than ever. Its ability to stir emotions, provoke thought, and instigate transformation is really remarkable. This extraordinary book, aptly titled "**The Sparkfun Guide To Processing Derek Runberg**," compiled by a highly acclaimed author, immerses readers in a captivating exploration of the significance of language and its profound effect on our existence. Throughout this critique, we will delve into the book's central themes, evaluate its unique writing style, and assess its overall influence on its readership.

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