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8C4SAO - DANIELA KERR

A collection of ten themed activity card sets that introduces children to computer programming fundamentals using Scratch, a visual programming language developed by the Lifelong Kindergarten Group at the MIT Media Lab.

Want to build your own robots, turn your ideas into prototypes, control devices with a computer, or make your own cell phone applications? It's a snap with this book and the Arduino open source electronic prototyping platform. Get started with six fun projects and achieve impressive results quickly. Gain the know-how and experience to invent your own cool gadgets. With Arduino, building your own embedded gadgets is easy, even for beginners. Embedded systems are everywhere—inside cars, children's toys, and mobile phones. This book will teach you the basics of embedded systems and help you build your first gadget in just a

few days. Each learn-as-you-build project that follows will add to your knowledge and skills. Experiment with Arduino, the popular microcontroller board Build robots and electronic projects with easy-to-follow instructions Turn your ideas into working physical prototypes Use Android phones as remote controls in your projects Work with an uncomplicated programming language created for artists, designers, and hobbyists Get everyone involved, with projects that even beginners can build

From our bank accounts to supermarket checkouts to the movies we watch, strings of ones and zeroes suffuse our world. Digital technology has defined modern society in numerous ways, and the vibrant digital culture that has now resulted is the subject of Charlie Gere's engaging volume. In this revised and expanded second edition, taking account of new developments such as Facebook and the iPhone, Charlie Gere charts in detail the history of

digital culture, as marked by responses to digital technology in art, music, design, film, literature and other areas. After tracing the historical development of digital culture, Gere argues that it is actually neither radically new nor technologically driven: digital culture has its roots in the eighteenth century and the digital mediascape we swim in today was originally inspired by informational needs arising from industrial capitalism, contemporary warfare and counter-cultural experimentation, among other social changes. A timely and cutting-edge investigation of our contemporary social infrastructures, Digital Culture is essential reading for all those concerned about the ever-changing future of our Digital Age. "This is an excellent book. It gives an almost complete overview of the main trends and view of what is generally called digital culture through the whole post-war period, as well as a thorough exposition of the history of the computer and its predecessors and the origins of the modern division of labor."—Journal of Visual Culture

Summary Generative Art presents both the technique and the beauty of algorithmic art. The book includes high-quality examples of generative art, along with the specific programmatic steps author and artist Matt Pearson followed to create each unique piece using the Processing programming language. About the Technology Artists have always explored new media, and computer-based artists are no exception. Generative art, a technique where the artist creates print or onscreen images by using computer algorithms, finds the artistic intersection of programming, computer graphics, and individual expression. The book includes a tutorial on Processing, an open source programming language and environment for people who want to create images, anima-

tions, and interactions. About the Book Generative Art presents both the techniques and the beauty of algorithmic art. In it, you'll find dozens of high-quality examples of generative art, along with the specific steps the author followed to create each unique piece using the Processing programming language. The book includes concise tutorials for each of the technical components required to create the book's images, and it offers countless suggestions for how you can combine and reuse the various techniques to create your own works. Purchase of the print book comes with an offer of a free PDF, ePub, and Kindle eBook from Manning. Also available is all code from the book. What's Inside The principles of algorithmic art A Processing language tutorial Using organic, pseudo-random, emergent, and fractal processes
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 ===== Table of Contents Part 1 Creative Coding Generative Art: In Theory and Practice Processing: A Programming Language for Artists Part 2 Randomness and Noise The Wrong Way to Draw A Line The Wrong Way to Draw a Circle Adding Dimensions Part 3 Complexity Emergence Autonomy Fractals

Rocco is no ordinary pet hamster. Tired of being kicked around in a plastic ball, he's certain of his true destiny: to become a great leader among rodents. Through a mind-boggling mix of debatable genius and happy accident, he mounts a daring escape, heads for the Big City ... and joins a fearsome gang of restaurant-raiding sewer rats. Now all that remains is to lead his fellow rodents into greatness - and become the gang's next Big Cheese! All with a little help from his new best friends, Nev the mouse and his martial arts-obsessed sister, Tina. When Rocco discovers that the rats'

arch-enemies, the flea-bitten alley cats, are planning an attack, it seems that his moment to shine has arrived. But as he lands himself, his fellow gangsters and his new-found friends in ever-hotter water, he begins to realise that being a superstar action hamster isn't quite as straightforward as he thought! Get ready for furious foxes, crazy killer cooks and a double-crossing pigeon named Francis. Just some of the colourful characters in a tale of big dreams, bigger blunders – and refusing to let others make you feel small. A funny, action-packed and unexpectedly heart-warming story for readers aged 8+.

A classic that just keeps getting better, *The Little SAS Book* is essential for anyone learning SAS programming. Lora Delwiche and Susan Slaughter offer a user-friendly approach so that readers can quickly and easily learn the most commonly used features of the SAS language. Each topic is presented in a self-contained, two-page layout complete with examples and graphics. Nearly every section has been revised to ensure that the sixth edition is fully up-to-date. This edition is also interface-independent, written for all SAS programmers whether they use SAS Studio, SAS Enterprise Guide, or the SAS windowing environment. New sections have been added covering PROC SQL, iterative DO loops, DO WHILE and DO UNTIL statements, %DO statements, using variable names with special characters, the ODS EXCEL destination, and the XLSX LIBNAME engine. This title belongs on every SAS programmer's bookshelf. It's a resource not just to get you started, but one you will return to as you continue to improve your programming skills. Learn more about the updates to *The Little SAS Book, Sixth Edition* here. Reviews for *The Little SAS Book, Sixth Edition* can be read here.

Highly effective thinking is an art that engineers and scientists can be taught to develop. By presenting actual experiences and analyzing them as they are described, the author conveys the developmental thought processes employed and shows a style of thinking that leads to successful results is something that can be learned. Along with spectacular successes, the author also conveys how failures contributed to shaping the thought processes. Provides the reader with a style of thinking that will enhance a person's ability to function as a problem-solver of complex technical issues. Consists of a collection of stories about the author's participation in significant discoveries, relating how those discoveries came about and, most importantly, provides analysis about the thought processes and reasoning that took place as the author and his associates progressed through engineering problems.

First Processing book on the market Processing is a nascent technology rapidly increasing in popularity Links with the creators of Processing will help sell the book

The new edition of an introduction to computer programming within the context of the visual arts, using the open-source programming language Processing; thoroughly updated throughout. The visual arts are rapidly changing as media moves into the web, mobile devices, and architecture. When designers and artists learn the basics of writing software, they develop a new form of literacy that enables them to create new media for the present, and to imagine future media that are beyond the capacities of current software tools. This book introduces this new literacy by teaching computer programming within the context of the

visual arts. It offers a comprehensive reference and text for Processing (www.processing.org), an open-source programming language that can be used by students, artists, designers, architects, researchers, and anyone who wants to program images, animation, and interactivity. Written by Processing's cofounders, the book offers a definitive reference for students and professionals. Tutorial chapters make up the bulk of the book; advanced professional projects from such domains as animation, performance, and installation are discussed in interviews with their creators. This second edition has been thoroughly updated. It is the first book to offer in-depth coverage of Processing 2.0 and 3.0, and all examples have been updated for the new syntax. Every chapter has been revised, and new chapters introduce new ways to work with data and geometry. New “synthesis” chapters offer discussion and worked examples of such topics as sketching with code, modularity, and algorithms. New interviews have been added that cover a wider range of projects. “Extension” chapters are now offered online so they can be updated to keep pace with technological developments in such fields as computer vision and electronics. Interviews SUE.C, Larry Cuba, Mark Hansen, Lynn Her- shman Leeson, Jürg Lehni, LettError, Golan Levin and Zachary Lieberman, Benjamin Maus, Manfred Mohr, Ash Nehru, Josh On, Bob Sabiston, Jennifer Steinkamp, Jared Tarbell, Steph Thirion, Robert Winter

Processing opened up the world of programming to artists, designers, educators, and beginners. The Processing.py Python implementation of Processing reinterprets it for today's web. This short book gently introduces the core concepts of computer programming and working with Processing. Written by the co-founders of

the Processing project, Reas and Fry, along with co-author Allison Parrish, *Getting Started with Processing.py* is your fast track to using Python's Processing mode.

Provides information on the methods of visualizing data on the Web, along with example projects and code.

Generative design, once known only to insiders as a revolutionary method of creating artwork, models, and animations with programmed algorithms, has in recent years become a popular tool for designers. By using simple languages such as JavaScript in p5.js, artists and makers can create everything from interactive typography and textiles to 3D-printed furniture to complex and elegant infographics. This updated volume gives a jump-start on coding strategies, with step-by-step tutorials for creating visual experiments that explore the possibilities of color, form, typography, and images. *Generative Design* includes a gallery of all-new artwork from a range of international designers—fine art projects as well as commercial ones for Nike, Monotype, Dolby Laboratories, the musician Bjork, and others.

Learn coding from scratch in a highly engaging and visual manner using the vastly popular JavaScript with the programming library p5.js. The skills you will acquire from this book are highly transferable to a myriad of industries and can be used towards building web applications, programmable robots, or generative art. You'll gain the proper context so that you can build a strong foundation for programming. This book won't hinder your momentum with irrelevant technical or theoretical points. The aim is to build a strong, but not overly excessive knowledge to get you up and running with coding. If you want to program creative visuals

and bring that skill set to a field of your your choice, then Learn JavaScript with p5.js is the book for you. What You'll Learn Code from scratch and create computer graphics with JavaScript and the p5.js library Gain the necessary skills to move into your own creative projects Create graphics and interactive experiences using Processing Program using JavaScript and p5.js and secondarily in creating visuals Who This Book is For Artists or a visual designers. Also, those who want to learn the fundamentals of programming through visual examples.

A Gentle Introduction to Creative Coding with P5js. A fun step-by-step gentle introduction to creating digital art with computers, designed especially for: artists new to coding art, design and digital media students, technologists wanted to explore their creativity teachers and parents seeking more visual and exciting approaches to teaching computer science Starting from the very basics, we'll learn to: understand how computers create digital images code with a popular computer language designed for artists, called Processing, enabled for the web with p5js develop and appreciate algorithms, mathematical recipes, which can create surprisingly beautiful art easily share your code and art on the web, potentially reaching an audience of billions of internet users We'll discover and practice basic computer graphics techniques, explore simple algorithms that create interesting visual forms, and work through example projects to experience the process of developing algorithmic art from inspiration, through problem solving, to final refinement. By the end of the course, you will be coding confidently, appreciating the beauty of mathematics and wanting to explore more advanced ideas and methods.

The text and images in this book are in grayscale. A hardback col-

or version is available. Search for ISBN 9781680922929. Principles of Accounting is designed to meet the scope and sequence requirements of a two-semester accounting course that covers the fundamentals of financial and managerial accounting. This book is specifically designed to appeal to both accounting and non-accounting majors, exposing students to the core concepts of accounting in familiar ways to build a strong foundation that can be applied across business fields. Each chapter opens with a relatable real-life scenario for today's college student. Thoughtfully designed examples are presented throughout each chapter, allowing students to build on emerging accounting knowledge. Concepts are further reinforced through applicable connections to more detailed business processes. Students are immersed in the "why" as well as the "how" aspects of accounting in order to reinforce concepts and promote comprehension over rote memorization.

Generative design is a revolutionary new method of creating artwork, models, and animations from sets of rules, or algorithms. By using accessible programming languages such as Processing, artists and designers are producing extravagant, crystalline structures that can form the basis of anything from patterned textiles and typography to lighting, scientific diagrams, sculptures, films, and even fantastical buildings. Opening with a gallery of thirty-five illustrated case studies, Generative Design takes users through specific, practical instructions on how to create their own visual experiments by combining simple-to-use programming codes with basic design principles. A detailed handbook of advanced strategies provides visual artists with all the tools to achieve proficiency. Both a how-to manual and a showcase for re-

cent work in this exciting new field, Generative Design is the definitive study and reference book that designers have been waiting for.

Python for Everybody is designed to introduce students to programming and software development through the lens of exploring data. You can think of the Python programming language as your tool to solve data problems that are beyond the capability of a spreadsheet. Python is an easy to use and easy to learn programming language that is freely available on Macintosh, Windows, or Linux computers. So once you learn Python you can use it for the rest of your career without needing to purchase any software. This book uses the Python 3 language. The earlier Python 2 version of this book is titled "Python for Informatics: Exploring Information". There are free downloadable electronic copies of this book in various formats and supporting materials for the book at www.pythonlearn.com. The course materials are available to you under a Creative Commons License so you can adapt them to teach your own Python course.

Learning Processing, Second Edition, is a friendly start-up guide to Processing, a free, open-source alternative to expensive software and daunting programming languages. Requiring no previous experience, this book is for the true programming beginner. It teaches the basic building blocks of programming needed to create cutting-edge graphics applications including interactive art, live video processing, and data visualization. Step-by-step examples, thorough explanations, hands-on exercises, and sample code, supports your learning curve. A unique lab-style manual, the book gives graphic and web designers, artists, and illustrators

of all stripes a jumpstart on working with the Processing programming environment by providing instruction on the basic principles of the language, followed by careful explanations of select advanced techniques. The book has been developed with a supportive learning experience at its core. From algorithms and data mining to rendering and debugging, it teaches object-oriented programming from the ground up within the fascinating context of interactive visual media. This book is ideal for graphic designers and visual artists without programming background who want to learn programming. It will also appeal to students taking college and graduate courses in interactive media or visual computing, and for self-study. A friendly start-up guide to Processing, a free, open-source alternative to expensive software and daunting programming languages No previous experience required—this book is for the true programming beginner! Step-by-step examples, thorough explanations, hands-on exercises, and sample code supports your learning curve

An essential guide for teaching and learning computational art and design: exercises, assignments, interviews, and more than 170 illustrations of creative work. This book is an essential resource for art educators and practitioners who want to explore code as a creative medium, and serves as a guide for computer scientists transitioning from STEM to STEAM in their syllabi or practice. It provides a collection of classic creative coding prompts and assignments, accompanied by annotated examples of both classic and contemporary projects, and more than 170 illustrations of creative work, and features a set of interviews with leading educators. Picking up where standard programming guides leave off, the authors highlight alternative programming

pedagogies suitable for the art- and design-oriented classroom, including teaching approaches, resources, and community support structures.

Creating Procedural Artworks with Processing - A Holistic Guide, is for those seeking to learn computer programming from the very basics to the more advanced concepts. It uses the Processing language (processing.org) to visualise the concepts through the production of computer graphics that illustrate the coding principles while being artworks in their own right. This book started as a set of tutorials for university level multimedia students to introduce them to computer programming through the development of artworks. It's therefore presented in a non-threatening way that will ease the reader into programming. This book has been written for absolute beginners who want to learn to program. It approaches coding through a unique combination of teaching programming while keeping in mind the principles of design and mathematics. All these elements are essential in a global economy filled with electronic interactive experiences and virtual reality. The chapters are organised to weave together programming functionality and design principles presenting one concept at a time, with multiple hands on exercises in each chapter. Special features include:

- * 10 chapters building on each other one concept at a time.
- * 20 practical laboratories for exploring digital art and programming concepts.
- * Over 35 detailed step by step hands on activities.
- * Over 95 questions to test your understanding.
- * Answers to all exercises and questions.

For more information visit: <http://holistic3d.com/creating-procedural-artworks/> Experience Processing in action at <http://holistic3d.com/processing>

Finally, a book on creative programming, written directly for artists and designers! Rather than following a computer science curriculum, this book is aimed at creatives who are working in the intersection of design, art, and education. In this book you'll learn to apply computation into the creative process by following a four-step process, and through this, land in the cross section of coding and art, with a focus on practical examples and relevant work structures. You'll follow a real-world use case of computation art and see how it relates back to the four key pillars, and addresses potential pitfalls and challenges in the creative process. All code examples are presented in a fully integrated Processing example library, making it easy for readers to get started. This unique and finely balanced approach between skill acquisition and the creative process and development makes Coding Art a functional reference book for both creative programming and the creative process for professors and students alike. You will:

- Review ideas and approaches from creative programming to different professional domains
- Work with computational tools like the Processing language
- Understand the skills needed to move from static elements to animation to interaction
- Use interactivity as input to bring creative concepts closer to refinement and depth
- Simplify and extend the design of aesthetics, rhythms, and smoothness with data structures
- Leverage the diversity of art code on other platforms like the web or mobile applications
- Understand the end-to-end process of computation art through real world use cases
- Study best practices, common pitfalls, and challenges of the creative process.

Presents an introduction to the open-source electronics prototyping platform.

How can we capture the unpredictable evolutionary and emergent properties of nature in software? How can understanding the mathematical principles behind our physical world help us to create digital worlds? This book focuses on a range of programming strategies and techniques behind computer simulations of natural systems, from elementary concepts in mathematics and physics to more advanced algorithms that enable sophisticated visual results. Readers will progress from building a basic physics engine to creating intelligent moving objects and complex systems, setting the foundation for further experiments in generative design. Subjects covered include forces, trigonometry, fractals, cellular automata, self-organization, and genetic algorithms. The book's examples are written in Processing, an open-source language and development environment built on top of the Java programming language. On the book's website (<http://www.natureofcode.com>), the examples run in the browser via Processing's JavaScript mode.

The book explores the technical as well as cultural imaginaries of programming from its insides, demonstrating the reflexive practice of aesthetic programming, to understand and question existing technological objects and paradigms.

Get up and running quickly with the new Jumpstarting ebook series from Make:. The Arduino 101 is a low-power board that includes not only Bluetooth LE capabilities but an on-board 6-axis accelerometer/gyroscope for exciting real-world-connected projects.

This book is intended to help candidates prepare for entrance examinations in mathematics and scientific subjects, including STEP

(Sixth Term Examination Paper). STEP is an examination used by Cambridge colleges as the basis for conditional offers. They are also used by Warwick University, and many other mathematics departments recommend that their applicants practice on the past papers even if they do not take the examination. Advanced Problems in Mathematics is recommended as preparation for any undergraduate mathematics course, even for students who do not plan to take the Sixth Term Examination Paper. The questions analysed in this book are all based on recent STEP questions selected to address the syllabus for Papers I and II, which is the A-level core (i.e. C1 to C4) with a few additions. Each question is followed by a comment and a full solution. The comments direct the reader's attention to key points and put the question in its true mathematical context. The solutions point students to the methodology required to address advanced mathematical problems critically and independently. This book is a must read for any student wishing to apply to scientific subjects at university level and for anybody interested in advanced mathematics.

With p5.js, you can think of your entire Web browser as your canvas for sketching with code! Learn programming the fun way--by sketching with interactive computer graphics! Getting Started with p5.js contains techniques that can be applied to creating games, animations, and interfaces. p5.js is a new interpretation of Processing written in JavaScript that makes it easy to interact with HTML5 objects, including text, input, video, webcam, and sound. Like its older sibling Processing, p5.js makes coding accessible for artists, designers, educators, and beginners. Written by the lead p5.js developer and the founders of Processing, this book provides an introduction to the creative possibilities of today's

Web, using JavaScript and HTML. With Getting Started with p5.js, you'll: Quickly learn programming basics, from variables to objects Understand the fundamentals of computer graphics Create interactive graphics with easy-to-follow projects Learn to apply data visualization techniques Capture and manipulate webcam audio and video feeds in the browser

What if your clothing could change color to complement your skin tone, respond to your racing heartbeat, or connect you with a loved one from afar? Welcome to the world of shoes that can dynamically shift your height, jackets that display when the next bus is coming, and neckties that can nudge your business partner from across the room. Whether it be for fashion, function, or human connectedness, wearable electronics can be used to design interactive systems that are intimate and engaging. *Make: Wearable Electronics* is intended for those with an interest in physical computing who are looking to create interfaces or systems that live on the body. Perfect for makers new to wearable tech, this book introduces you to the tools, materials, and techniques for creating interactive electronic circuits and embedding them in clothing and other things you can wear. Each chapter features experiments to get you comfortable with the technology and then invites you to build upon that knowledge with your own projects. Fully illustrated with step-by-step instructions and images of amazing creations made by artists and professional designers, this book offers a concrete understanding of electronic circuits and how you can use them to bring your wearable projects from concept to prototype.

The first title in the *Dragonology Chronicles*, steps into the the

world of the Secret and Ancient Society of Dragonologists. Join twelve-year-old Daniel Cook and his sister Beatrice as they begin their dragonological apprenticeship under the eye of the eccentric Dr. Drake. Suddenly, a crisis interrupts their studies - can they find the fabled Dragon's Eye gem? And most importantly, can it be saved from falling into the hands of the evil Ignatius Crook? The future of all dragons rests in their hands.

This companion book to *MakerShed's Ultimate Arduino Microcontroller Pack* provides 26 clearly explained projects that you can build with this top-selling kit right away--including multicolor flashing lights, timers, tools for testing circuits, sound effects, motor control, and sensor devices. With the *Ultimate Arduino Microcontroller Pack*, you'll find everything from common components such as resistors and capacitors to specialized sensors and actuators like force-sensing resistors and motors. The kit also features the *Arduino Uno Microcontroller* and a *MakerShield*, the definitive prototyping shield for *Arduino*. Build 26 cool mini *Arduino* projects and gadgets Work on projects that are both instructive and have practical application Get circuit diagrams and detailed instructions for building each project Understand circuit design and simulation with easy-to-use tools

Developed from celebrated Harvard statistics lectures, *Introduction to Probability* provides essential language and tools for understanding statistics, randomness, and uncertainty. The book explores a wide variety of applications and examples, ranging from coincidences and paradoxes to Google PageRank and Markov chain Monte Carlo (MCMC). Additional application areas explored include genetics, medicine, computer science, and information theory. The print book version includes a code that provides free

access to an eBook version. The authors present the material in an accessible style and motivate concepts using real-world examples. Throughout, they use stories to uncover connections between the fundamental distributions in statistics and conditioning to reduce complicated problems to manageable pieces. The book includes many intuitive explanations, diagrams, and practice problems. Each chapter ends with a section showing how to perform relevant simulations and calculations in R, a free statistical software environment.

Helen has absolutely no interest in becoming a vet like her mother. So she isn't best pleased when asked to help an injured horse. Only this horse isn't entirely normal . . . and nor are his friends. Without warning, Helen is thrust into an extraordinary world full of magical rituals, fantastical creatures and a dangerous, powerful beast known as the Master, who would destroy it all. Everything hinges on finding the lost Book of Wisdom before the Winter Solstice. Can Helen work out the riddles and help her new friends to make amends for a foolish prank? This is a wonderful mixture of fable and fiction, woven together into an exciting race through Scotland's diverse landscapes, accompanied by an array of creatures from mythology and folklore.

Learn how to render lists of items without repeating your code structure and how to work with conditional rendering items and event handling. Containing all you need to know to get started with Vue.js, this book will take you through using build tools (transpile to ES5), creating custom components, state management, and routers. With Getting to Know Vue.js, you'll see how to combine reusable code with custom components, allowing you to cre-

ate snippets of reusable code to suit your specific business needs. You'll also explore how to use Single File Components and the Vue.js Command Line Interface (CLI) to build components in a single file and add in build tools as you see fit. Getting started with a new Single Page Application (SPA) JavaScript framework can be an overwhelming task, but Vue.js makes this daunting task simple and easy to learn, allowing you to start implementing business needs with just a script reference to the library and the custom JavaScript required for your use case. Starting with a little reference and a handful of lines of custom JavaScript, you will have a complete Single Page Application before you know it. What You'll Learn Examine Vue.js templating syntax Work with binding methods Manage the state of your app by comparing your options of building a data store Adapt the more robust options compatible with Vue.js Review different router options, including creating your own router, using the Vue-router and using Page.js. Who This Book Is For Software developers with an understanding of HTML, CSS and JavaScript; prior understanding of a Single Page Application framework would be useful but not essential. "Brian Overland makes programming simple. . . . To my amazement, his books explain complicated code clearly enough for anyone to understand." —Art Sedighi, PhD Tapping into the full power of Python doesn't have to be difficult. Supercharged Python is written for people who've learned the fundamentals of the language but want to take their skills to the next level. After a quick review of Python, the book covers: advanced list and string techniques; all the ways to handle text and binary files; financial applications; advanced techniques for writing classes; generators and decorators; and how to master packages such as Numpy (Numer-

ic Python) to supercharge your applications! Use profilers and “magic methods” to code like a pro Harness the power of regular expressions to process text quickly with a single statement Take advantage of 22 coding shortcuts, along with performance tips, to save time and optimize your code Create really useful classes and objects, for games, simulations, money, mathematics, and more Use multiple modules to build powerful apps while avoiding the “gotchas” Import packages to dramatically speed up statistical operations—by as much as 100 times! Refer to the five-part language reference to look up fine points of the language Supercharged Python demonstrates techniques that allow you to write faster and more powerful code, whether you’re manipulating large amounts of data or building sophisticated applications. Register your book for convenient access to downloads, updates, and/or corrections as they become available. See inside book for details.

JavaScript Robotics is on the rise. Rick Waldron, the lead author of this book and creator of the Johnny-Five platform, is at the forefront of this movement. Johnny-Five is an open source JavaScript Arduino programming framework for robotics. This book brings together fifteen innovative programmers, each creating a unique Johnny-Five robot step-by-step, and offering tips and tricks along the way. Experience with JavaScript is a prerequisite.

Learn how to use the Processing programming language and environment to create Android applications with ease. This book covers the basics of the Processing language, allowing users to effec-

tively program interactive graphics in 2D and 3D. It also details the application of these techniques to different types of Android devices (smartphones, tablets, wearables and smartwatches). Processing for Android walks you through the steps of taking an initial idea to a final app. With this book, you will be able to write engaging apps with interactive visuals driven by motion and location information obtained from the device’s sensors; including health data from the wearer, like step count and heart rate. An advantage of Processing for Android over more complex programming environments is the ability for users to focus on the interactions and visual output of their code rather than in the implementation details of the Android platform. This book goes through a comprehensive series of hand-on projects, ranging from simple sketches to more complex projects involving sensors and integration with larger apps. It also covers important aspects such as exporting your Processing projects as signed apps are ready to upload to the Google Play store and be share with the world! What You'll Learn Write apps and live wallpapers for smartphones and tablets Design and implement interactive watch faces Create Virtual Reality experiences for Cardboard devices Integrate Processing sketches into larger apps and Android Studio Export projects as completed apps ready to distribute through Google Play Store Who This Book Is For Artists, designers, students, researchers, and hobbyists who are not necessarily Android experts, but are looking to write mobile apps that make creative use of interactive graphics, sensor data, and virtual reality.