

## Make Getting Started With Processing A Hands On Introduction To Making Interactive Graphics Make Technology On Your Time

Discover the concepts of deep learning used for natural language processing (NLP), with full-fledged examples of neural network models such as recurrent neural networks, long short-term memory networks, and sequence-2-sequence models. You'll start by covering the mathematical prerequisites and the fundamentals of deep learning and NLP with practical examples. The first three chapters cover word-vector representation before moving onto advanced algorithms. The final chapters focus entirely on implementation, and deal with sophisticated architectures such as RNN, LSTM, and Seq2Seq, using Python tools: TensorFlow, and Keras. Deep Learning for Natural Language Processing follows a progressive approach and combines all the knowledge you have gained to build a question-answer chatbot for people who want to get started in deep learning for NLP. All the code presented in the book will be available in the form of iPython notebooks and scripts, which allow you to try out the examples and extend them in interesting ways. What You Will Learn Gain the fundamentals of deep learning and its mathematical prerequisites Discover deep learning frameworks in Python Develop a classification Book for Software developers who are curious to try out deep learning with NLP. What can you do with the Raspberry Pi, a \$35 computer the size of a credit card? All sorts of things! If you're learning how to program, or looking to build new electronic projects, this hands-on guide will show you just how valuable this flexible little platform can be. This book takes you step-by-step through many fun and educational possibilities. Take advantage of several preloaded programming projects. Create internet-connected projects. Play with multimedia. With Raspberry Pi, you can do all of this and more. Get acquainted with hardware features on the Pi's board Learn enough Linux to move around the operating system Pick up the basics of Python and Scratch—and start programming Draw graphics, play sounds, and handle mouse events with the Pygame framework Use the Pi's input and output pins to connect to other devices Discover how Arduino and the Raspberry Pi complement each other Integrate USB webcams and other peripherals into your projects Create your own Pi-based web server with Python

Deep learning is often viewed as the exclusive domain of math PhDs and big tech companies. But as this hands-on guide demonstrates, programmers comfortable with Python can achieve impressive results in deep learning with little math background, small amounts of data, and minimal code. How? With fastai, the first library to provide a consistent interface to the most frequently used deep learning frameworks: TensorFlow and PyTorch. You'll also dive progressively further into deep learning theory to gain a complete understanding of the algorithms behind the scenes. Train models in computer vision, natural language processing, tabular data, and collaborative filtering Learn the latest deep learning techniques for image classification, text classification, and recommendation systems. Discover how to turn your models into web applications Implement deep learning algorithms from scratch Consider the ethical implications of your work Gain insight from the foreword by PyTorch cofounder, Soumith Chitalla

Processing opened up the world of programming to artists, designers, educators, and beginners. The ProcessingPy implementation of Processing interprets 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

track to using Python's Processing mode. Creative Coding and Computational Art Processing, second edition Think DSP I'm Glad My Mom Died A Beginner's Guide to Programming Images, Animation, and Interaction Processing 2 Creative Coding and Generative Art in Processing 2

Even as big data is turning the world upside down, the next phase of the revolution is already taking shape: real-time data analysis. This hands-on guide introduces you to Storm, a distributed, JVM-based system for processing streaming data. Through simple tutorials, sample Java code, and a complete real-world scenario, you'll learn how to build fast, fault-tolerant solutions that process results as soon as the data arrives. Discover how easy it is to set up Storm clusters for solving various problems, including continuous data computation, distributed remote procedure calls, and data stream processing. Learn how to program Storm components: spouts for data input and bolts for data transformation Discover how data is exchanged between spouts and bolts in a Storm topology Make spouts fault-tolerant with several commonly used design strategies Explore bolts—their life cycle, strategies for design, and ways to implement them Scale your solution by defining each component's level of parallelism Study a real-time web analytics system built with Node.js, a Redis server, and a Storm topology Write spouts and bolts with non-JVM languages such as Python, Ruby, and JavaScript

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 code.

If you want to experiment with radio frequency identification (RFID), this book is the perfect place to start. All you need is some experience with Arduino and Processing, the ability to connect basic circuits on a breadboard with jumper wire—and you're good to go. You'll be guided through three hands-on projects that let you experience RFID in action. RFID is used in various applications, such as identifying store items or accessing a toll road with an EZPass system. After you build each of the book's projects in succession, you'll have the knowledge to pursue RFID applications of your own. Use Processing to get a sense of how RFID readers behave Connect Arduino to an RFID reader and discover how to use RFID tags as keys Automate your office or home, using RFID to turn on systems when you're present, and turn them off when you leave Get a complete list of materials you need, along with code samples and helpful illustrations Tackle each project with easy-to-follow explanations of how the code works

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

A Hands-On Introduction to Making Interactive Graphics With C and GNU Development Tools Analyzing Text with the Natural Language Toolkit Natural Language Processing with Spark NLP A Proven Method to Organize Your Digital Life and Unlock Your Creative Potential

### Programming Embedded Systems

**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 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**

**Knowledge of Cascading Style Sheets (CSS) is essential for developing modern, attractive websites, but many beginners are put off by the need to learn about unfamiliar concepts, such as selectors, properties, and classes, before they can achieve anything. Getting StartED with CSS takes a practical approach by showing you how to use CSS in simple stages, starting by changing the default appearance of HTML tags to improve the look of text and links. It assumes no prior knowledge of CSS and avoids bombarding you with unnecessary technical details. At the same time, it explains all the main points and acts as a reference that you can come back to when you need to refresh your memory. The book is designed for the end user of the book you'll have a solid understanding of all the main aspects of CSS. Particular attention is paid to avoiding the common pitfalls of beginners, enabling you to create websites that not only look good, but also are easy to maintain. Requires no previous knowledge of CSS Instant results—starts off by showing how improve the look of a website stage by stage Doesn't bombard you with endless rules and jargon**

**Presents an introduction to the open-source electronics prototyping platform. 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 and vegetables -Record, and sample audio to create your own soundtrack -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.**

### The Nature of Code

**Processing Deep Learning for Coders with fastai and PyTorch Making Interactive Graphics with Processing's Python Mode Creating Neural Networks with Python Getting Started with P5.js Getting Started with Storm**

*Processing: Creative Coding and Generative Art in Processing 2 is a fun and creative approach to learning programming. Using the easy to learn Processing programming language, you will quickly learn how to draw with code, and from there move to animating in 2D and 3D. These basics will then open up a whole world of graphics and computer entertainment. If you've been curious about coding, but the thought of it also makes you nervous, this book is for you; if you consider yourself a creative person, maybe worried programming is too non-creative, this book is also for you; if you want to learn about the latest Processing 2.0 language release and also start making beautiful code art, this book is also definitely for you. You will learn how to develop interactive simulations, create beautiful visualizations, and even code image-manipulation applications. All this is taught using hands-on creative coding projects. Processing 2.0 is the latest release of the open-source Processing language, and includes exciting new features, such as OpenGL 3 support for enhanced 3D graphics performance. Processing: Creative Coding and Generative Art in Processing 2 is designed for independently learning and also as a primary text for an introductory computing class. Based on research funded by the National Science Foundation, this book brings together some of the most engaging and successful approaches from the digital arts and computer science classrooms. Teaches you how to program using a fun and creative approach. Covers the latest release of the Processing 2.0 language. Presents a research based approach to learning computing.*

*Processing opened up the world of programming to artists, designers, educators, and beginners. 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, Getting Started with Processing shows you how easy it is to make software and systems with interactive graphics. If you're an artist looking to develop interactive graphics programs or a programmer on your way to becoming an artist, this book will take you where you want to go. Updated with new material on graphics manipulation, data, and for the latest version of Processing.*

*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 and interactions. About the Book Generative Art presents both the technique 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 ===== Table of Contents Part 1 Creative Coding Generative Art: In Theory and Practice Processing: A Programming Language for ArtistsPart 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*

*If you want to build an enterprise-quality application that uses natural language text but aren't sure where to begin or what tools to use, this practical guide will help get you started. Alex Thomas, principal data scientist at Wisecube, shows software engineers and data scientists how to build scalable natural language processing (NLP) applications using deep learning and the Apache Spark NLP library. Through concrete examples, practical and theoretical explanations, and hands-on exercises for using NLP on the Spark processing framework, this book teaches you everything from basic linguistics and writing systems to sentiment analysis and search engines. You'll also explore special concerns for developing text-based applications, such as performance, and interactions. About the Book Generative Art presents both the technique 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 ===== Table of Contents Part 1 Creative Coding Generative Art: In Theory and Practice Processing: A Programming Language for ArtistsPart 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*

*Linux-Powered Electronic Projects With Python and JavaScript Pro Processing for Images and Computer Vision with OpenCV Getting Started with Raspberry Pi Natural Language Processing with Python A practical guide using Processing*

*A Hands-On Guide to Making Electrical and Mechanical Connections Perform Fast Analytics on Fast Data Essential Natural Language Processing is a hands-on guide filled with everything you need to get started with NLP in a friendly, understandable tutorial. Full of Python code and hands-on projects, each chapter provides a concrete example with practical techniques that you can put into practice right away. By following the numerous Python-based examples and real-world case studies, you'll apply NLP to search applications, extracting meaning from text, sentiment analysis, user profiling, and more. When you're done, you'll have a solid grounding in NLP that will serve as a foundation for further learning. Purchase of the print book includes a free eBook in PDF, Kindle, and ePub formats from Manning Publications.*

*Getting Started with ProcessingA Hands-On Introduction to Making Interactive GraphicsMaker Media, Inc. Fast data ingestion, serving, and analytics in the Hadoop ecosystem have forced developers and architects to choose solutions using the least common denominator—either fast analytics at the cost of slow data ingestion or fast data ingestion at the cost of slow analytics. There is an answer to this problem. With the Apache Kudu column-oriented data store, you can easily perform fast analytics on fast data. This practical guide shows you how. Begun as an internal project at Cloudera, Kudu is an open source solution compatible with many data processing frameworks in the Hadoop environment. In this book, current and former solutions professionals from Cloudera provide use cases, examples, best practices, and sample code to help you get up to speed with Kudu. Explore Kudu's high-level design, including how it spreads data across servers Fully administer a Kudu cluster, enable security, and add or remove nodes Learn Kudu's client-side APIs, including how to integrate Apache Impala, Spark, and other frameworks for data manipulation Examine Kudu's schema design, including basic concepts and primitives necessary to make your project successful Explore case studies for using Kudu for real-time IoT analytics, predictive modeling, and in combination with another storage engine*

*Exploiting and Explaining Data with the Processing Environment MAKE*

*Identify Objects in the Physical World with Arduino Getting Started with Processing, 2nd Edition Making Interactive Graphics With Python's Processing Mode The SparkFun Guide to Processing Creative Programming Cookbook*

### Over 100 highly-effective recipes to help unleash your creativity with interactive art, graphics, computer vision, 3D, and more

**A guide to creating computer applications using Microsoft Kinect features instructions on using the device with different operating systems, using 3D scanning technology, and building robot arms, all using open source programming language.**

**Apply the Processing language to tasks involved in computer vision—tasks such as edge and corner detection, recognition of motion between frames in a video, recognition of objects, matching of feature points and shapes in different frames for tracking purposes, and more. You will manipulate images through creative effects, geometric transformation, blending of multiple images, and so forth. Examples are provided. Pro Processing for Images and Computer Vision with OpenCV is a step-by-step training tool that guides you through a series of worked examples in linear order. Each chapter begins with a basic demonstration, including the code to recreate it on your own system. Then comes a creative challenge by which to engage and develop mastery of the chapter's topic. The book also includes hints and tips relating to visual arts, interaction design, and industrial best practices. This book is intended for any developer of artistic and otherwise visual applications, such as in augmented reality and digital effects, with a need to manipulate images, and to recognize and manipulate objects within those images. The book is specifically targeted at those making use of the Processing language that is common in artistic fields, and to Java programmers because of Processing's easy integration into the Java programming environment. What You'll Learn Make use of OpenCV, the open source library for computer vision in the Processing environment Capture live video streams and examine them frame-by-frame for objects in motion Recognize shapes and objects through techniques of detecting lines, edges, corners, and more Transform images by scaling, translating, rotating, and additionally through various distortion effects Apply techniques such as background subtraction to isolate motion of objects in live video streams Detect and track human faces and other objects by matching feature points in different images or video frames Who This Book Is For Media artists, designers, and creative coders**

**Getting Started with Soldering not only teaches new makers and experimenters the core principles of soldering, it also functions as an excellent reference and resource for beginners and more advanced makers alike. The book guides readers through the fundamentals of soldering, explains the tools and materials, demonstrates proper techniques, and shows how to fix mistakes or broken connections. It even includes guidance on more advanced techniques such as surface-mount soldering for electronics. From choosing the right soldering iron to making perfect connections, readers will acquire the knowledge and skills needed to form a strong foundation for a lifetime of making. Soldering is a core concept in making, electronics prototyping, and home repairs. The many different types of soldering -- requiring different materials and tools -- are explained with easy-to-follow instructions Full-color photographs and illustrations throughout create a visually engaging format for learning Pricing and technical considerations help readers select the best tools for their budgets and needs Troubleshooting guidelines show how to repair solder connections that have failed from improper technique or from age**

**A Programming Handbook for Visual Designers and Artists Getting StartED with CSS Learning Processing Visualizing Data Build Rich, Sensor-Based Applications with Processing Generative Art**

**Getting Started With Processing.py A revolutionary approach to enhancing productivity, creating flow, and vastly increasing your ability to capture, remember, and benefit from the unprecedented amount of information all around us. For the first time in history, we have instantaneous access to the world's knowledge. There has never been a better time to create than now. Yet, rather than feeling empowered, we are often left feeling overwhelmed by this constant influx of information. The very knowledge that was supposed to set us free has instead led to the paralyzing stress of believing we'll never know or remember enough. Now, this eye-opening and accessible guide shows how you can easily create your own personal system for knowledge management, otherwise known as a Second Brain. As a trusted and organized digital repository of your most valued ideas, notes, and creative work synced across all your devices and platforms, a Second Brain gives you the confidence to tackle your most important projects and ambitious goals. Discover the full potential of your ideas and translate what you know into more powerful, more meaningful improvements in your work and life by Building a Second Brain.**

**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](http://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 wide range of examples and projects 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 Hershman 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**

**The official book on the Rust programming language, written by the Rust development team at the Mozilla Foundation, fully updated for Rust 2018. The Rust Programming Language is the official book on Rust: an open source systems programming language that helps you write faster, more reliable software. Rust offers control over low-level details (such as memory usage) in combination with high-level ergonomics, eliminating the hassle traditionally associated with low-level languages. The authors of The Rust Programming Language, members of the Rust Core Team, share their knowledge and experience to show you how to take full advantage of Rust's features—from installation to creating robust and scalable programs. You'll begin with basics like creating functions, choosing data types, and binding variables, and then move on to more advanced concepts, such as: • Ownership and borrowing, lifetimes, and traits • Using Rust's memory safety guarantees to build fast, safe programs • Testing, error handling, and effective refactoring • Generics, smart pointers, multithreading, trait objects, and advanced pattern matching • Using Cargo, Rust's built-in package manager, to build, test, and document your code and manage dependencies • How best to use Rust's advanced compiler with compiler-led programming techniques You'll find plenty of code examples throughout the book, as well as three chapters dedicated to building complete projects to test your learning: a number guessing game, a Rust implementation of a command line tool, and a multithreaded server. New to this edition: An extended section on Rust macros, an expanded chapter on modules, and appendices on Rust development tools and editions.**

**Many people think of Linux as a computer operating system, running on users' desktops and powering servers. But Linux can also be found inside many consumer electronics devices. Whether they're the brains of a cell phone, cable box, or exercise bike, embedded Linux systems blur the distinction between computer and device. Many makers love microcontroller platforms such as Arduino, but as the complexity increases in their projects, they need more power for applications, such as computer vision. The BeagleBone is an embedded Linux board for makers. It's got built-in networking, many inputs and outputs, and a fast processor to handle demanding tasks. This book introduces you to both the original BeagleBone and the new BeagleBone Black and gets you started with projects that take advantage of the board's processing power and its ability to interface with the outside world.**

**Getting Started with BeagleBone Learning to Understand Text at Scale Getting Started with Soldering Deep Learning For Natural Language Processing Getting Started with Processing Getting Started with Arduino Getting Started with Kudu**

**A heartbreaking and hilarious memoir by iCarly and Sam & Cat star Jennette McCurdy about her struggles as a former child actor—including eating disorders, addiction, and a complicated relationship with her overbearing mother—and how she retook control of her life. Jennette McCurdy was six years old when she had her first acting audition. Her mother's dream was for her only daughter to become a star, and Jennette would do anything to make her mother happy. So she went along with what Mom called "calorie restriction," eating little and weighing herself five times a day. She endured extensive at-home makeovers while Mom chided, "Your eyelashes are invisible, okay? You think Dakota Fanning doesn't tint hers?" She was even showered by Mom until age sixteen while sharing her diaries, email, and all her income. In I'm Glad My Mom Died, Jennette recounts all this in unflinching detail—just as she chronicles what happens when the dream finally comes true. Cast in a new Nickelodeon series called iCarly, she is thrust into fame. Though Mom is ecstatic, emailing fan club moderators and getting on a first-name basis with the paparazzi ("Hi Gales!"), Jennette is riddled with anxiety, shame, and self-loathing, which manifest into eating disorders, addiction, and a series of unhealthy relationships. These issues only get worse when, soon after taking the lead in the iCarly spinoff Sam & Cat alongside Ariana Grande, her mother dies of cancer. Finally, after discovering therapy and quitting acting, Jennette embarks on recovery and decides for the first time in her life what she really wants. Told with refreshing candor and dark humor, I'm Glad My Mom Died is an inspiring story of resilience, independence, and the joy of shampooing your own hair.**

**Author'd by two of the leading authorities in the field, this guide offers readers the knowledge and skills needed to achieve proficiency with embedded software. Provides information on the methods of visualizing data on the Web, along with example projects and code.**

**Getting Started with CNC is the definitive introduction to working with affordable desktop and benchtop CNCs, written by the creator of the popular open hardware CNC, the Shapeoko. Accessible 3D printing introduced the masses to computer-controlled additive fabrication. But the flip side of that is subtractive fabrication: instead of adding material to create a shape like a 3D printer does, a CNC starts with a solid piece of material and takes away from it. Although inexpensive 3D printers can make great things with plastic, a CNC can carve highly durable pieces out of a block of aluminum, wood, and other materials. This book covers the fundamentals of designing for—and working with—affordable (\$500-\$3000) CNCs.**

**The Rust Programming Language (Covers Rust 2018) Getting Started with CNC Continuous Streaming Computation with Twitter's Cluster Technology Building a Second Brain Making Things Set**

**Create Interactive Art with Code Personal Digital Fabrication with Shapeoko and Other Computer-Controlled Routers Create mobile apps for Android phones and tablets using Processing, the free graphics-savvy language and development environment.**

**If you understand basic mathematics and know how to program with Python, you're ready to dive into signal processing. While most resources start with theory to teach this complex subject, this practical book introduces techniques by showing you how they're applied in the real world. In the first chapter alone, you'll be able to decompose a sound into its harmonics, modify the harmonics, and generate new sounds. Author Allen Downey explains techniques such as spectral decomposition, filtering, convolution, and the Fast Fourier Transform. This book also provides exercises and code examples to help you understand the material. You'll explore: Periodic signals and their spectrums Harmonic structure of simple waveforms Chirps and other sounds whose spectrum changes over time Noise signals and natural sources of noise The autocorrelation function for estimating pitch The discrete cosine transform (DCT) for compression The Fast Fourier Transform for spectral analysis Relating operations in time to filters in the frequency domain Linear time-invariant (LTI) system theory Amplitude modulation (AM) used in radio Other books in this series include Think Stats and Think Bayes, also by Allen Downey.**

**Learn computer programming the easy way with Processing, a simple language that lets you use code to create drawings, animation, and interactive graphics. Programming courses usually start with theory, but this book lets you jump right into creative and fun projects. It's ideal for anyone who wants to learn basic programming, and serves as an introduction to graphics for people with some programming skills. Written by the founders of Processing, this book takes you through the learning process one step at a time to help you grasp core programming concepts. You'll learn how to sketch with code -- creating a program with one a line of code, observing the result, and then adding to it. Join the thousands of hobbyists, students, and professionals who have discovered this free and educational community platform. Quickly learn programming basics, from variables to objects Understand the fundamentals of computer graphics Get acquainted with the Processing software development environment Create interactive graphics with easy-to-follow projects Use the Arduino open source prototyping platform to control your Processing graphics**

**This book offers a highly accessible introduction to natural language processing, the field that supports a variety of language technologies, from predictive text and email filtering to automatic summarization and translation. With it, you'll learn how to write Python programs that work with large collections of unstructured text. You'll access richly annotated datasets using a comprehensive range of linguistic data structures, and you'll understand the main algorithms for analyzing the content and structure of written communication. Packed with examples and exercises, Natural Language Processing with Python will help you: Extract information from unstructured text, either to guess the topic or identify "named entities" Analyze linguistic structure in text, including parsing and semantic analysis Access popular linguistic databases, including WordNet and treebanks Integrate techniques drawn from fields as diverse as linguistics and artificial intelligence This book will help you gain practical skills in natural language processing using the Python programming language and the Natural Language Toolkit (NLTK) open source library. If you're interested in developing web applications, analyzing multilingual news sources, or documenting endangered languages -- or if you're simply curious to have a programmer's perspective on how human language works -- you'll find Natural Language Processing with Python both fascinating and immensely useful.**

**Solutions for Media Artists and Creative Coders Getting Started with RFID Make**

**3D Vision with Kinect, Processing, Arduino, and MakerBot A friendly introduction using Python Essential Natural Language Processing Digital Signal Processing in Python**