Scratch And Learn Addition

Scratch Programming in easy steps introduces readers to Scratch, a programming language that is widely used on the Raspberry Pi and in UK schools. Using Scratch's highly visual interface, you'll learn how to make games and animations. Along the way, you'll learn about some important ideas that underpin most programming languages. The book includes examples of games and techniques that readers are invited to customise and build on to make their own programs, and begins with a foreword by Mitchel Resnick, Professor of Learning Research at the MIT Media Lab, which created Scratch.

In this book, you will learn how to use OpenCV, NumPy library and other libraries to perform signal processing, image processing, object detection, and feature extraction with Python GUI (PyQt). You will learn how to filter signals, detect edges and segments, and denoise images with PyQt. You will also learn how to detect objects (face, eye, and mouth) using Haar Cascades and how to detect features on images using Harris Corner Detection, Shi-Tomasi Corner Detector, Scale-Invariant Feature Transform (SIFT), and Features from Accelerated Segment Test (FAST). In Chapter 1, you will learn: Tutorial Steps To Create A Simple GUI Application, Tutorial Steps To Use Radio Button, Tutorial Steps to Group Radio Buttons, Tutorial Steps to Use CheckBox Widget, Tutorial Steps to Use Two CheckBox Groups, Tutorial Steps to Understand Signals and Slots, Tutorial Steps to Convert Data Types, Tutorial Steps to Use Spin Box Widget, Tutorial Steps to Use ScrollBar and Slider, Tutorial Steps to Use List Widget, Tutorial Steps to Select Multiple List Items in One List Widget and Display It in Another List Widget, Tutorial Steps to Insert Item into List Widget, Tutorial Steps to Use Operations on Widget List, Tutorial Steps to Use Combo Box, Tutorial Steps to Use Calendar Widget and Date Edit, and Tutorial Steps to Use Table Widget. In Chapter 2, you will learn: Tutorial Steps To Create A Simple Line Graph, Tutorial Steps To Create A Simple Line Graph in Python GUI, Tutorial Steps To Create A Simple Line Graph in Python GUI: Part 2, Tutorial Steps To Create Two or More Graphs in the Same Axis, Tutorial Steps To Create Two Axes in One Canvas, Tutorial Steps To Use Two Widgets, Tutorial Steps To Use Two Widgets, Each of Which Has Two Axes, Tutorial Steps To Use Axes With Certain Opacity Levels, Tutorial Steps To Choose Line Color From Combo Box, Tutorial Steps To Calculate Fast Fourier Transform, Tutorial Steps To Create GUI For FFT, Tutorial Steps To Create GUI For FFT With Some Other Input Signals, Tutorial Steps To Create GUI For Noisy Signal, Tutorial Steps To Create GUI For Noisy Signal Filtering, and Tutorial Steps To Create GUI For Wav Signal Filtering. In Chapter 3, you will learn: Tutorial Steps To Convert RGB Image Into Grayscale, Tutorial Steps To Convert RGB Image Into YUV Image, Tutorial Steps To Convert RGB Image Into HSV Image, Tutorial Steps To Filter Image, Tutorial Steps To Display Image Histogram, Tutorial Steps To Display Filtered Image Histogram, Tutorial Steps To Filter Image With CheckBoxes, Tutorial Steps To Implement Image Thresholding, and Tutorial Steps To Implement Adaptive Image Thresholding. In Chapter 4, you will learn: Tutorial Steps To Generate And Display Noisy Image, Tutorial Steps To Implement Edge Detection On Image, Tutorial Steps To Implement Image Segmentation Using Multiple Thresholding and K-Means Algorithm, and Tutorial Steps To Implement Image Denoising. In Chapter 5, you will learn: Tutorial Steps To Detect Face, Eye, and Mouth Using Haar Cascades, Tutorial Steps To Detect Face Using Haar Cascades with PyQt, Tutorial Steps To Detect Eye, and Mouth Using Haar Cascades with PyQt, and Tutorial Steps To Extract Detected Objects. In Chapter 6, you will learn: Tutorial Steps To Detect Image Features Using Harris Corner Detection, Tutorial Steps To Detect Image Features Using Shi-Tomasi Corner Detection, Tutorial Steps To Detect Features Using Scale-Invariant Feature Transform (SIFT), and Tutorial Steps To Detect Features Using Features from Accelerated Segment Test (FAST).

Have fun and improve your math skills with this magic series. Solve all the problems then check your answers by scratching the silver circles with a coin. The correct solutions will appear like magic.

This book provides a practical explanation of the backpropagation neural networks and how it can be implemented for data prediction and data classification. The discussion in this book is presented in step by step so that it will help readers understand the fundamental of the backpropagation neural networks and its steps. This book is very suitable for students, researchers, and anyone who want to learn and implement the backpropagation neural networks for data prediction and data classification using PYTHON GUI and MariaDB. The discussion in this book will provide readers deep understanding about the backpropagation neural networks architecture and its parameters. The readers will be guided to understand the steps of the backpropagation neural networks for data prediction and data classification through case examples. In addition, readers are also guided step by step to implement the backpropagation neural networks for data prediction and data classification using PYTHON GUI and MariaDB. The readers will be guided to create their own backpropagation neural networks class and build their complete applications for data prediction and data classification. This book consists of three cases which are realized into complete projects using the Python GUI and MariaDB. The three cases that will be learned in this book are as follow. 1. Sales prediction using the backpropagation neural networks. 2. Earthquake data prediction using the backpropagation neural networks. 3. Fruit quality classification using the backpropagation neural networks. Each case in this book is equipped with a mathematical calculation that will help the reader understand each step that must be taken. The cases in this book are realized into three types of applications which are command window based application, GUI based application, and database application using Python GUI and MariaDB. The final result of this book is that the readers are able to realize each step of the backpropagation neural networks for data prediction and data classification. In Addition, the readers also are able to create the backpropagation neural networks applications which consists of three types of applications which are command window based application, GUI based application, and database application using Python GUI and MariaDB.

Summary Hello, Scratch! is a how-to book that helps parents and kids work together to learn programming skills by creating new versions of old retro-style arcade games with Scratch. Purchase of the print book includes a free eBook in PDF, Kindle, and ePub formats from Manning Publications. About the Technology Can 8-year-olds write computer programs? You bet they can! In Scratch, young coders use colorful blocks and a rich graphical environment to create programs. They can easily explore ideas like input and output, looping, branching, and conditionals. Scratch is a kid-friendly language created by MIT that is a safe and fun way to begin thinking like a programmer, without the complexity of a traditional programming language. About the Book Hello Scratch! guides young readers through five exciting games to help them take their first steps in programming. They'll experiment with key ideas about how a computer program works and enjoy the satisfaction of immediate success. These carefully designed projects give readers plenty of room to explore by imagining, tinkering, and personalizing as they learn. What's Inside Learn by experimentation Learn to think like a programmer Build five exciting, retro-style games Visualize the organization of a program About the Readers Written for kids 8–14. Perfect for independent learning or working with a parent or teacher. About the Authors Kids know how kids learn. Sadie and Gabriel Ford, 12-year-old twins and a formidable art and coding team, wrote this book with editing help from their mother, author Melissa Ford! Table of Contents PART 1 – SETTING UP THE ARCADE Getting to know your way around Scratch Becoming familiar with the Art Editor Meeting Scratch's key blocks through important coding concepts PART 2 – TURNING ON THE MACHINES Designing a two-player ball-and-paddle game Using conditionals to build a two-player ball-and-paddle game PART 3 – CODING AND PLAYING GAMES Designing a fixed shooter Using conditionals to build your fixed shooter Designing a one-player ball-and-paddle game Using variables to build your one-player ball-and-paddle game Designing a simple platformer Using X and Y coordinates to make a simple platformer Making a single-screen platformer Using arrays and simulating gravity in a single-screen platformer Becoming a game maker

Parents learn what they really need, how to find or create materials and opportunities for less money, and how to organize their household for economical, happy learning.

Dive into Bitcoin technology with this hands-on guide from one of the leading teachers on Bitcoin and Bitcoin programming. Author Jimmy Song shows Python programmers and developers how to program a Bitcoin library from scratch. You'll learn how to work with the basics, including the math, blocks, network, and transactions behind this popular cryptocurrency and its blockchain payment system. By the end of the book, you'll understand how this cryptocurrency works under the hood by coding all the components necessary for a Bitcoin library. Learn how to create transactions, get the data you need from peers, and send transactions over the network. Whether you're exploring Bitcoin applications for your company or considering a new career path, this practical book will get you started. Parse, validate, and create bitcoin transactions Learn Script, the smart contract language behind bitcoin Do exercises in each chapter to build a Bitcoin library from scratch Understand how proof-of-work secures the blockchain Program Bitcoin using Python 3 Understand how simplified payment verification and light wallets work Work with public-key cryptography and cryptographic primitives

A practical approach with hands-on recipes to learn more about Scratch and its features.Scratch Cookbook is great for people who are still relatively new to programming but wish to learn more. It assumes you know the basics of computer operation. The methods of using Scratch are worked through quickly with a focus on more advanced topics, though readers can move at their own pace to learn all the techniques they need.

Active learning lessons for mastering DAX Data analysis expressions (DAX) is the formula language of PowerPivot and this book is written to give hands-on practice to anyone who wants to become competent at writing such formulas. Sample exercises that explain each concept are provided and followed by practice questions and answers to maximize learning and experience with DAX.

* * * * * GoLearningBus: A quality product from WAG Mobile Inc !!! * * * * * More than 4 million paying customers from 175 countries. GoLearningBus brings you a simple, crisp and to-the-point eBook for learning "Learn Scratch Programming by GoLearningBus". The eBook provides: 1. Snack sized chapters for easy learning. 2. Bite sized flashcards to memorize key concepts. 3. Simple and easy quizzes for self-assessment. Designed for both students and adults. This eBook provides a quick summary of Scratch Programming by following snack sized chapters: Introduction to Scratch, Installing Scratch, Scratch Basics I, Scratch Basics II, Getting Started with Scratch, My First Scratch Project, How to Add Effects and Animations, How to Create Games, How to Make Stories, Sharing Your Scratch Projects. Why GoLearningBus eBooks: 1) Beautifully simple, Amazingly easy, Massive selection of eBooks. 2) Enjoyable, Entertaining and Exciting eBooks. An incredible value for money. Lifetime of free updates! GoLearningBus Vision : simpleNeasy eBooks for a lifetime of on-the-go learning * * * GoLearningBus Mission : To make education enjoyable, entertaining, and exciting for everyone. * * * Visit us : www.GoLearningBus.com Please write to us at Team@WAGmob.com. We would love to improve this eBook.

In this book, you will learn how to use NumPy, Pandas, OpenCV, Scikit-Learn and other libraries to how to plot graph and to process digital image. Then, you will learn how to classify features using Perceptron, Adaline, Logistic Regression (LR), Support Vector Machine (SVM), Decision Tree (DT), Random Forest (RF), and K-Nearest Neighbor (KNN) models. You will also learn how to extract features using Principal Component Analysis (PCA), Linear Discriminant Analysis (LDA), Kernel Principal Component Analysis (KPCA) algorithms and use them in machine learning. In Chapter 1, you will learn: Tutorial Steps To Create A Simple GUI Application, Tutorial Steps To Use Radio Button, Tutorial Steps to Group Radio Buttons, Tutorial Steps to Use CheckBox Widget, Tutorial Steps to Use Two CheckBox Groups, Tutorial Steps to Understand Signals and Slots, Tutorial Steps to Convert Data Types, Tutorial Steps to Use Spin Box Widget, Tutorial Steps to Use ScrollBar and Slider, Tutorial Steps to Use List Widget, Tutorial Steps to Select Multiple List Items in One List Widget and Display It in Another List Widget, Tutorial Steps to Insert Item into List Widget, Tutorial Steps to Use Operations on Widget List, Tutorial Steps to Use Combo Box, Tutorial Steps to Use Calendar Widget and Date Edit, and Tutorial Steps to Use Table Widget. 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You will also learn: Tutorial Steps To Generate And Display Noisy Image, Tutorial Steps To Implement Edge Detection On Image, Tutorial Steps To Implement Image Segmentation Using Multiple Thresholding and K-Means Algorithm, Tutorial Steps To Implement Image Denoising, Tutorial Steps To Detect Face, Eye, and Mouth Using Haar Cascades, Tutorial Steps To Detect Face Using Haar Cascades with PyQt, Tutorial Steps To Detect Eye, and Mouth Using Haar Cascades with PyQt, Tutorial Steps To Extract Detected Objects, Tutorial Steps To Detect Image Features Using Harris Corner Detection, Tutorial Steps To Detect Image Features Using Shi-Tomasi Corner Detection, Tutorial Steps To Detect Features Using Scale-Invariant Feature Transform (SIFT), and Tutorial Steps To Detect Features Using Features from Accelerated Segment Test (FAST). In Chapter 4, in this tutorial, you will learn how to use Pandas, NumPy and other libraries to perform simple classification using perceptron and Adaline (adaptive linear neuron). The dataset used is Iris dataset directly from the UCI Machine Learning Repository. You will learn: Tutorial Steps To Implement Perceptron, Tutorial Steps To Implement Perceptron with PyQt, Tutorial Steps To Implement Adaline (ADAptive LInear NEuron), and Tutorial Steps To Implement Adaline with PyQt. In Chapter 5, you will learn how to use the scikit-learn machine learning library, which provides a wide variety of machine learning algorithms via a user-friendly Python API and to perform classification using perceptron, Adaline (adaptive linear neuron), and other models. The dataset used is Iris dataset directly from the UCI Machine Learning Repository. You will learn: Tutorial Steps To Implement Perceptron Using Scikit-Learn, Tutorial Steps To Implement Perceptron Using Scikit-Learn with PyQt, Tutorial Steps To Implement Logistic Regression Model, Tutorial Steps To Implement Logistic Regression Model Using Scikit-Learn, Tutorial Steps To Implement Logistic Regression Model with PyQt, Tutorial Steps To Implement Logistic Regression Model Using Scikit-Learn with PyQt, Tutorial Steps To Implement Support Vector Machine (SVM) Using Scikit-Learn, Tutorial Steps To Implement Decision Tree (DT) Using Scikit-Learn, Tutorial Steps To Implement Random Forest (RF) Using Scikit-Learn, and Tutorial Steps To Implement K-Nearest Neighbor (KNN) Using Scikit-Learn. In Chapter 6, you will learn how to use Pandas, NumPy, Scikit-Learn, and other libraries to implement different approaches for reducing the dimensionality of a dataset using different feature selection techniques. You will learn about three fundamental techniques that will help us to summarize the information content of a dataset by transforming it onto a new feature subspace of lower dimensionality than the original one. Data compression is an important topic in machine learning, and it helps us to store and analyze the increasing amounts of data that are produced and collected in the modern age of technology. You will learn the following topics: Principal Component Analysis (PCA) for unsupervised data compression, Linear Discriminant Analysis (LDA) as a supervised dimensionality reduction technique for maximizing class separability, Nonlinear dimensionality reduction via Kernel Principal Component Analysis (KPCA). You will learn: 6.1 Tutorial Steps To Implement Principal Component Analysis (PCA), Tutorial Steps To Implement Principal Component Analysis (PCA) Using Scikit-Learn, Tutorial Steps To Implement Principal Component Analysis (PCA) Using Scikit-Learn with PyQt, Tutorial Steps To Implement Linear Discriminant Analysis (LDA), Tutorial Steps To Implement Linear Discriminant Analysis (LDA) Using Scikit-Learn with PyQt, Tutorial Steps To Implement Kernel Principal Component Analysis (KPCA) Using Scikit-Learn, and Tutorial Steps To Implement Kernel Principal Component Analysis (KPCA) Using Scikit-Learn with PyQt. In Chapter 7, you will learn how to use Keras, Scikit-Learn, Pandas, NumPy and other libraries to perform prediction on handwritten digits using MNIST dataset. You will learn: Tutorial Steps To Load MNIST Dataset, Tutorial Steps To Load MNIST Dataset with PyQt, Tutorial Steps To Implement Perceptron With PCA Feature Extractor on MNIST Dataset Using PyQt, Tutorial Steps To Implement Perceptron With LDA Feature Extractor on MNIST Dataset Using PyQt, Tutorial Steps To Implement Perceptron With KPCA Feature Extractor on MNIST Dataset Using PyQt, Tutorial Steps To Implement Logistic Regression (LR) Model With PCA Feature Extractor on MNIST Dataset Using PyQt, Tutorial Steps To Implement Logistic Regression (LR) Model With LDA Feature Extractor on MNIST Dataset Using PyQt, Tutorial Steps To Implement Logistic Regression (LR) Model With KPCA Feature Extractor on MNIST Dataset Using PyQt, Tutorial Steps To Implement , Tutorial Steps To Implement Support Vector Machine (SVM) Model With LDA Feature Extractor on MNIST Dataset Using PyQt, Tutorial Steps To Implement Support Vector Machine (SVM) Model With KPCA Feature Extractor on MNIST Dataset Using PyQt, Tutorial Steps To Implement Decision Tree (DT) Model With PCA Feature Extractor on MNIST Dataset Using PyQt, Tutorial Steps To Implement Decision Tree (DT) Model With LDA Feature Extractor on MNIST Dataset Using PyQt, Tutorial Steps To Implement Decision Tree (DT) Model With KPCA Feature Extractor on MNIST Dataset Using PyQt, Tutorial Steps To Implement Random Forest (RF) Model With PCA Feature Extractor on MNIST Dataset Using PyQt, Tutorial Steps To Implement Random Forest (RF) Model With LDA Feature Extractor on MNIST Dataset Using PyQt, Tutorial Steps To Implement Random Forest (RF) Model With KPCA Feature Extractor on MNIST Dataset Using PyQt, Tutorial Steps To Implement K-Nearest Neighbor (KNN) Model With PCA Feature Extractor on MNIST Dataset Using PyQt, Tutorial Steps To Implement K-Nearest Neighbor (KNN) Model With LDA Feature Extractor on MNIST Dataset Using PyQt, and Tutorial Steps To Implement K-Nearest Neighbor (KNN) Model With KPCA Feature Extractor on MNIST Dataset Using PyQt.

Elementary math students will enjoy full-color photographs of adorable puppies and kittens as they learn the basics of addition and master adding numbers 1 through 10. This book supports the Common Core Mathematical Standards Basic by helping students develop strategies for solving equations within 20, such as counting on or applying the commutative property of addition. Number lines, fact boxes, and activities enhance the math concepts. The 'Words to Know' section in the front of the book primes students for new vocabulary before encountering it in the text.

Computational technologies have been impacting human life for years. Teaching methods must adapt accordingly to provide the next generation with the necessary knowledge to further advance these human-assistive technologies. Teaching Computational Thinking in Primary Education is a crucial resource that examines the impact that instructing with a computational focus can have on future learners. Highlighting relevant topics that include multifaceted skillsets, coding, programming methods, and digital games, this scholarly publication is ideal for educators, academicians, students, and researchers who are interested in discovering how the future of education is being shaped.

With a no-nonsense approach and easy to follow directions, Janet Evans shares his experience (and recipes) for creating soaps from scratch safely and easily . Janet takes the reader step by step through the process of making natural soaps for family, friends, and for profit. Easy to understand and master. Soap Making Reloaded : How to Make a Soap from Scratch Quickly & Safely: A Simple Guide for Beginners & Beyond includes extended directions for first time soap makers, new recipes, how to make soap in small and large batches It also Includes tips and advice for how to cut and cure soap, how to sell your soaps, packaging and labeling, and how to set up at a craft fair or market.

Today, technology is increasingly developed and applied in every area of life, from office work, education, entertainment, restaurants, supermarkets, or even devices in your family. Understanding how machines work will be essential. Therefore, the subject "Programming" has been developed and become a basic skill like reading and writing in this 4.0 era. "Coding with Scratch 3.0" is an indispensable book for students entering the era of 4.0 - the era of artificial intelligence and robots. The book has five chapters and the appendix: The first chapter will introduce Scratch 3.0 Programming Environment, the next four chapters are four projects with knowledge from easy to difficult, guided by step-by-step practice. Finally, the appendix briefly introduces the circuit simulation project, translation software and adds

knowledge about functions and lists in programming

Scratch is a fun, free, beginner-friendly programming environment where you connect blocks of code to build programs. While most famously used to introduce kids to programming, Scratch can make computer science approachable for people of any age. Rather than type countless lines of code in a cryptic programming language, why not use colorful command blocks and cartoon sprites to create powerful scripts? In Learn to Program with Scratch, author Majed Marji uses Scratch to explain the concepts essential to solving real-world programming problems. The labeled, color-coded blocks plainly show each logical step in a given script, and with a single click, you can even test any part of your script to check your logic. You'll learn how to: –Harness the power of repeat loops and recursion –Use if/else statements and logical operators to make decisions –Store data in variables and lists to use later in your program –Read, store, and manipulate user input –Implement key computer science algorithms like a linear search and bubble sort Hands-on projects will challenge you to create an Ohm's law simulator, draw intricate patterns, program sprites to mimic line-following robots, create arcade-style games, and more! Each chapter is packed with detailed explanations, annotated illustrations, guided examples, lots of color, and plenty of exercises to help the lessons stick. Learn to Program with Scratch is the perfect place to start your computer science journey, painlessly. Uses Scratch 2

A project-filled introduction to coding that shows kids how to build programs by making cool games. Scratch, the colorful drag-and-drop programming language, is used by millions of first-time learners worldwide. Scratch 3 features an updated interface, new programming blocks, and the ability to run on tablets and smartphones, so you can learn how to code on the go. In Scratch 3 Programming Playground, you'll learn to code by making cool games. Get ready to destroy asteroids, shoot hoops, and slice and dice fruit! Each game includes easy-to-follow instructions with full-color images, review questions, and creative coding challenges to make the game your own. Want to add more levels or a cheat code? No problem, just write some code. You'll learn to make games like: • Maze Runner: escape the maze! • Snaaaaaake: gobble apples and avoid your own tail • Asteroid Breaker: smash space rocks • Fruit Slicer: a Fruit Ninja clone • Brick Breaker: a remake of Breakout, the brick-breaking classic • Platformer: a game inspired by Super Mario Bros Learning how to program shouldn't be dry and dreary. With Scratch 3 Programming Playground, you'll make a game of it! Covers: Scratch 3

Data science libraries, frameworks, modules, and toolkits are great for doing data science, but they're also a good way to dive into the discipline without actually understanding data science. In this book, you'll learn how many of the most fundamental data science tools and algorithms work by implementing them from scratch. If you have an aptitude for mathematics and some programming skills, author Joel Grus will help you get comfortable with the math and statistics at the core of data science, and with hacking skills you need to get started as a data scientist. Today's messy glut of data holds answers to questions no one's even thought to ask. This book provides you with the know-how to dig those answers out. Get a crash course in Python Learn the basics of linear algebra, statistics, and probability—and understand how and when they're used in data science Collect, explore, clean, munge, and manipulate data Dive into the fundamentals of machine learning Implement models such as k-nearest Neighbors, Naive Bayes, linear and logistic regression, decision trees, neural networks, and clustering Explore recommender systems, natural language processing, network analysis, MapReduce, and databases

This book follows the previous book 'A New Invention: Cyclic Addition '. It contrasts the weaknesses of current day Number with the strengths of Cyclic Addition Number.

Numerical ability is an essential skill for everyone studying thebiological sciences but many students are frightened by the'perceived' difficulty of mathematics, and are nervous aboutapplying mathematical skills in their chosen field of study. Havingtaught introductory maths and statistics for many years, Alan Cannunderstands these challenges and just how invaluable an accessible,confidence building textbook could be to the fearful student.Unable to find a book pitched at the right level, that concentratedon why numerical skills are useful to biologists, he wrote his own.The result is Maths from Scratch for Biologists , a highlyinstructive, informal text that explains step by step how and whyyou need to tackle maths within the biological sciences. Features: * An accessible, jargon-busting approach to help readers masterbasic mathematical, statistical and data handling techniques inbiology * Numerous end of chapter problems to reinforce key concepts andencourage students to test their newly acquired skills throughpractise * A handy, time-saving glossary * A supplementary website with numerous problems and self-testexercises

You must understand algorithms to get good at machine learning. The problem is that they are only ever explained using Math. No longer. In this Ebook, finally cut through the math and learn exactly how machine learning algorithms work. Using clear explanations, simple pure Python code (no libraries!) and step-by-step tutorials you will discover how to load and prepare data, evaluate model skill, and implement a suite of linear, nonlinear and ensemble machine learning algorithms from scratch.

As the second title in the Machine Learning for Beginners series, this book teaches beginners to code basic machine learning models using Python. The book is designed for beginners with basic background knowledge of machine learning, including common algorithms such as logistic regression and decision trees. If this doesn't describe your experience or if you need a refresher, key concepts from machine learning in the opening chapter and there are overviews of specific algorithms dispersed throughout this book. For a gentle and more detailed explanation of machine learning theory minus the code, I suggest reading the first book in this series Machine Learning for Absolute Beginners (Second Edition), which is written for a more general audience. In this step-by-step guide you will learn: - To code practical machine learning prediction models using a range of supervised learning algorithms including logistic regression, gradient boosting, and decision trees- Clean and inspect your data using free machine learning libraries- Visualize relationships in your dataset including Heatmaps and Pairplots using just a few lines of simple code- Develop your expertise in managing data using Python

Learning to solve sequential decision-making tasks is difficult. Humans take years exploring the environment essentially in a random way until they are able to reason, solve difficult tasks, and collaborate with other humans towards a common goal. Artificial Intelligent agents are like humans in this aspect. Reinforcement Learning (RL) is a well-known technique to train autonomous agents through interactions with the environment. Unfortunately, the learning process has a high sample complexity to infer an effective actuation policy, especially when multiple agents are simultaneously actuating in the environment. However, previous knowledge can be leveraged to accelerate learning and enable solving harder tasks. In the same way humans build skills and reuse them by relating different tasks, RL agents might reuse knowledge from previously solved tasks and from the exchange of knowledge with other agents in the environment. In fact, virtually all of the most challenging tasks currently solved by RL rely on embedded knowledge reuse techniques, such as Imitation Learning, Learning from Demonstration, and Curriculum Learning. This book surveys the literature on knowledge reuse in multiagent RL. The authors define a unifying taxonomy of state-of-the-art solutions for reusing knowledge, providing a comprehensive discussion of recent progress in the area. In this book, readers will find a comprehensive discussion of the many ways in which knowledge can be reused in multiagent sequential decision-making tasks, as well as in which scenarios each of the approaches is more efficient. The authors also provide their view of the current low-hanging fruit developments of the area, as well as the still-open big questions that could result in breakthrough developments. Finally, the book provides resources to researchers who intend to join this area or leverage those techniques, including a list of conferences, journals, and implementation tools. This book will be useful for a wide audience; and will hopefully promote new dialogues across communities and novel developments in the area.

Helping students create interactive and animated stories about positive change in their communities. Script Changers shows the ways that stories offer a lens for seeing the world as a series of systems. It provides opportunities for students to create interactive and animated stories about creating positive change in their communities. These projects utilize the Scratch visual programming environment.

Jesus was uniquely adept in the art of "reading" people. He fit his approach to the precise needs and interests of the person with whom he was dealing, and he spoke the cultural language of that individual. In this book, Robert Perry takes what Jesus and others have done intuitively-niche marketing-and provides a framework for applying those principles in everyday practice. Convinced that congregations can learn from the wisdom of secular disciplines and apply that wisdom to congregational life without damaging the integrity of the Christian faith, Perry offers a detailed process for using sound marketing principles to identify a congregation's strengths and the needs of its community, and to develop strategies for effective ministry.

The ability to code will become an essential skill in a fast-changing future. Coding education is a part of the national curriculum in many countries, such as the UK, Finland, Japan, and China. Students are able to acquire computational thinking skills, which can help them to analyze and solve problems logically. CodingTime is a coding education academy located in Seoul, South Korea. For many years, we have helped students achieve their educational goals. This book will help students to excel in programming. Students will learn how to use the Scratch program to code in a fun and easy way. They can make algorithms and get a glimpse of mathematics and science principles used in programming, while building their own project.

Teach kids the concepts of coding in easy-to-understand language and help them develop games of their own with The Everything Kids' Scratch Coding Book! Understanding computer science is becoming a necessity in the modern age. As our world shifts towards becoming increasingly more technical and automated, the ability to code and understand computers has become one of the most valuable skills any child can have on the road to a successful life. More and more schools are recognizing this importance and have started to implement computer science and coding as core elements in their curriculums, right alongside math and history. The Everything Kids' Scratch Coding Book helps children get a head start on this new essential skill, with Scratch coding—a language designed by MIT specifically to help a younger audience learn to code. In no time, children will learn basic coding concepts, build fun games, and get a competitive edge on their classmates. This book encourages children to think analytically and problem-solve, while helping them develop an essential skill that will last them a lifetime.

Cases on 3D Technology Application and Integration in Education highlights the use of 3D technologies in the educational environment and the future prospects of adaption and evolution beyond the traditional methods of teaching. This comprehensive collection of research aims to provide instructors and researchers with a solid foundation of information on 3D technology.

Data science libraries, frameworks, modules, and toolkits are great for doing data science, but they're also a good way to dive into the discipline without actually understanding data science. With this updated second edition, you'll learn how many of the most fundamental data science tools and algorithms work by implementing them from scratch. If you have an aptitude for mathematics and some programming skills, author Joel Grus will help you get comfortable with the math and statistics at the core of data science, and with hacking skills you need to get started as a data scientist. Today's messy glut of data holds answers to questions no one's even thought to ask. This book provides you with the know-how to dig those answers out.

Who this book is perfect for:This book is perfect for anybody. In addition to learning a lot of Computer Science concepts, you will do a series of interesting projects and programming activities. You will work on a few big projects, and you will also write many small "practice programs". You will learn and apply concepts of computer programming and computer science when you write these programs. Scratch programming language:The choice of programming language is critical to achieve the intended objectives of teaching CS to beginners. In this book we use the Scratch programming language. Scratch is an entertaining and powerful language, and yet it is easy to learn. It is known as a "low floor and high ceiling" language - it allows the learner to build his/her vocabulary without getting mired in the complexities of syntax and grammar.There is a lot of material on Scratch Programming on the Internet, including videos, online courses, Scratch projects, and so on. This book is meant to offer a more organized and tutorial-like treatment to learning Scratch. It is also focused more on learning CS concepts rather than Scratch itself.Why learn programming:The idea of using computer programming as a medium for learning is rapidly gaining acceptance. The benefits of learning programming and computer science concepts well before college - even in elementary grades - are well-understood. Here is a list of some of the amazing things that happen when children engage in computer programming:- Children become active and creative learners, because they explore ideas through a hands-on activity with an infinitely powerful tool.- They learn to think about and analyze their own thinking, because that is the only way to program computers.- They learn a new way of thinking (called "computational" thinking).- In the world of programming, answers are not simply "right" or "wrong"; this prepares a child's mindset for real-life problems.- Children's learning processes are transformed from acquiring facts to thinking creatively and analytically.How the book is organized:The book is organized as a series of units - each containing a bunch of CS concepts and associated programming activities. Typically, each unit also includes a major programming project that helps you practice all the concepts learnt till then. At the end, an appendix lists answers to all "review questions" and another appendix provides links to working programs for most of the programming exercises in the book. Author's background:Abhay's area of interest is "teaching Computer Programming as a medium for learning" and he has been teaching Scratch regularly to elementary, middle, and high school students since 2008. In 2011 Abhay co-authored (with Sandesh Gaikwad) two books on Logo Programming and in early 2016 he authored "Advanced Scratch Programming". Abhay has been associated with the Software Industry since 1988 as a programmer, developer, entrepreneur, and teacher. After getting an MS in Computer Engineering from Syracuse University (USA), he worked as a programmer for product companies that developed operating systems, network protocols, and secure software. In 1997, Abhay co-founded Disha Technologies, a successful software services organization.

Computer games represent a significant software application domain for innovative research in software engineering techniques and technologies. Game developers, whether focusing on entertainment-market opportunities or game-based applications in non-entertainment domains, thus share a common interest with software engineers and developers on how to best engineer game software. Featuring contributions from leading experts in software engineering, the book provides a comprehensive introduction to computer game software development that includes its history as well as emerging research on the interaction between these two traditionally distinct fields. An ideal reference for software engineers, developers, and researchers, this book explores game programming and development from a software engineering perspective. It introduces the latest research in computer game software engineering (CGSE) and covers topics such as HALO (Highly Addictive, sociaLly Optimized) software engineering, multi-player outdoor smartphone games, gamifying sports software, and artificial intelligence in games. The book explores the use of games in software engineering education extensively. It also covers game software requirements engineering, game software architecture and design approaches, game software testing and usability assessment, game development frameworks and reusability techniques, and game scalability infrastructure, including support for mobile devices and web-based services.

This book is written simply for readers to understand the various terminologies and working process of the financial markets. If you are looking to understand and enter the stock markets but don't know where to start, then this book is for you. The basic concepts are the same for Indian and overseas markets so it will help you understand both. It will help you as a reference guide for investing in stock markets. This comprehensive book touches upon every aspect of the stock market investment. A fantastic starting point for anyone aspiring to enter into the unknown world of the share market. Even for investors who are already in the market, this book can serve as a guide. DISCLAIMER: The content in this book is purely for educational purposes. This is not SEBI registered. You will be solely responsible for your own money and your decision. The book is written in the vision of the author. Hence we are not responsible for one's profit/loss.

First Principles with Python

This is a Packt Beginners Guide, which means it focuses on practical examples and has a friendly approach, with the opportunity to learn by experiment and play. We work through the project tutorials one block of code at a time, and we periodically pause to reflect on the relationship between our code blocks, our project, and Scratch programming in general. As you work through the book, you are encouraged to experiment with the concepts presented. As each chapter in the book progresses, the topics get increasingly more complex. Scratch is a teaching language, so it's ideal for people who want to learn how to program or teach others how to program. Educators and parents will learn how to program using Scratch, so they can use Scratch to teach the latest learning skills to their students and children. No previous computer programming knowledge is required. You only need to know how to perform basic tasks on a computer and this book will teach the rest. You can then use it as a platform to learn more advanced programming languages. Parents, stuck with a child who wants to play video games all night? Make a new rule. He can only play a video game if he programs the game first.

Power BI is a powerful self-service (and enterprise) business intelligence (BI) tool that was first made generally available by Microsoft in July 2015. Power BI is a complete BI package that covers the end to end BI process including data acquisition (get data), data modelling (prepare/model the data) and data visualisation (analyse the data). And there is a lot of good news about this tool including the fact that the skills needed to succeed with Power BI are fully transferable to Microsoft Excel. There are 3 learning areas required to master everything Power BI Desktop has to offer.1. The M Language – used for data acquisition2. The DAX Language – used to prepare and model data3. Visualisation and analysis – used to present data in a compelling wayPower BI is probably the first commercial grade software product that brings all of these areas into a single software package that is completely accessible to a business user (you don't need to be an IT pro). This book focuses on number 2 above, the DAX language (Data Analysis Expressions). Super Charge Power BI Desktop is the second book written by Matt Allington and is a sister book to his first book Learn to Write DAX (first released Dec 2015). Super Charge Power BI Desktop uses the same learning and practice exercise framework as used in Learn to Write DAX however the entire book is written using the Power BI Desktop user interface. Unfortunately simply reading a book is normally not enough for Excel users wanting to get the most out of Power BI Desktop and to learn the DAX language – most people will also need some practice. Super Charge Power BI Desktop is different to other books – it is written in such a way to clearly explain the concepts of Power BI data modelling while at the same time giving hands-on practice to deeply engage the reader to help the new knowledge and concepts stick. The book first presents the theory, then provides worked through sample exercises demonstrating each of the concepts, and finally it provides the reader with practice exercises and answers to maximize learning retention.

With the resurgence of neural networks in the 2010s, deep learning has become essential for machine learning practitioners and even many software engineers. This book provides a comprehensive introduction for data scientists and software engineers with machine learning experience. You'll start with deep learning basics and move quickly to the details of important advanced architectures, implementing everything from scratch along the way. Author Seth Weidman shows you how neural networks work using a first principles approach. You'll learn how to apply multilayer neural networks, convolutional neural networks, and recurrent neural networks from the ground up. With a thorough understanding of how neural networks work mathematically, computationally, and conceptually, you'll be set up for success on all future deep learning projects. This book provides: Extremely clear and thorough mental models—accompanied by working code examples and mathematical explanations—for understanding neural networks Methods for implementing multilayer neural networks from scratch, using an easy-to-understand object-oriented framework Working implementations and clear-cut explanations of convolutional and recurrent neural networks Implementation of these neural network concepts using the popular PyTorch framework

Companies and organisations are increasingly using machine translation to improve efficiency and cost-effectiveness, and then edit the machine translated output to create a fluent text that adheres to given text conventions. This procedure is known as post-editing. Translation and post-editing can often be categorised as problem-solving activities. When the translation of a source text unit is not immediately obvious to the translator, or in other words, if there is a hurdle between the source item and the target item, the translation process can be considered problematic. Conversely, if there is no hurdle between the source and target texts, the translation process can be considered a task-solving activity and not a problem-solving activity. This study investigates whether machine translated output influences problem-solving effort in internet research, syntax, and other problem indicators and whether the effort can be linked to expertise. A total of 24 translators (twelve professionals and twelve semi-professionals) produced translations from scratch from English into German, and (monolingually) post-edited machine translation output for this study. The study is part of the CRITT TPR-DB database. The translation and (monolingual) post-editing sessions were recorded with an eye-tracker and a keylogging program. The participants were all given the same six texts (two texts per task). Different approaches were used to identify problematic translation units. First, internet research behaviour was considered as research is a distinct indicator of problematic translation units. Then, the focus was placed on syntactical structures in the MT output that do not adhere to the rules of the target language, as I assumed that they would cause problems in the (monolingual) post-editing tasks that would not occur in the translation from scratch task. Finally, problem indicators were identified via different parameters like Munit, which indicates how often the participants created and modified one translation unit, or the inefficiency (InEff) value of translation units, i.e. the number of produced and deleted tokens divided by the final length of the translation. Finally, the study highlights how these parameters can be used to identify problems in the translation process data using mere keylogging data.