This is the eBook of the printed book and may not include any media, website access codes, or print supplements that may come packaged with the bound book. Master the Newest Blender Techniques for Creating Amazing 3D Characters: From Design and Modeling to Video Compositing Now fully updated for Blender 2.78b and beyond, Learning Blender, Second Edition, walks you through every step of creating an outstanding 3D animated character with Blender, and then compositing it in a real video using a professional workflow. This edition covers the powerful new selection and modeling tools, as well as high-efficiency improvements related to other parts of the project such as texture painting, shading, rigging, rendering, and compositing. Still the only Blender tutorial to take you from preproduction to final result, this guide is perfect for both novices and those moving from other software to Blender (open source and free software). Author Oliver Villar provides full-color, hands-on chapters that cover every aspect of character creation: design, modeling, unwrapping, texturing, shading, rigging, animation, and rendering. He also walks you through integrating your animated character into a real-world video, using professional camera tracking, lighting, and compositing techniques. The rich companion website (blendtuts.com/learning-blender-files) will help you quickly master even the most complex techniques with bonus contents like video tutorials. By the time you’re done, you’ll be ready to create outstanding characters for all media—and you’ll have up-to-date skills for any 3D project, whether it involves characters or not. Learn Blender’s updated user interface, navigation, and
selection techniques Create your first scene with Blender and the Blender Render and Cycles render engines Organize an efficient, step-by-step pipeline to streamline workflow in any project Master modeling, unwrapping, and texturing Bring your character to life with materials and shading Create your character’s skeleton and make it walk Use Camera Tracking to mix 3D objects into a real-world video Transform a raw rendered scene into the final result using Blender’s compositing nodes Register your product at informit.com/register for convenient access to downloads, updates, and corrections as they become available.

A guide to completing Python projects for those ready to take their skills to the next level Python Projects is the ultimate resource for the Python programmer with basic skills who is ready to move beyond tutorials and start building projects. The preeminent guide to bridge the gap between learning and doing, this book walks readers through the "where" and "how" of real-world Python programming with practical, actionable instruction. With a focus on real-world functionality, Python Projects details the ways that Python can be used to complete daily tasks and bring efficiency to businesses and individuals alike. Python Projects is written specifically for those who know the Python syntax and lay of the land, but may still be intimidated by larger, more complex projects. The book provides a walk-through of the basic set-up for an application and the building and packaging for a library, and explains in detail the functionalities related to the projects. Topics include: *How to maximize the power of the standard library modules *Where to get third party libraries, and the best practices for utilization *Creating, packaging, and reusing libraries within and across projects *Building multi-layered functionality including networks, data, and user interfaces *Setting up development environments and using virtualenv, pip, and more Written by veteran Python trainers, the book is structured for easy navigation and logical progression that makes it ideal for individual, classroom, or corporate training. For Python developers looking to apply their skills to real-world challenges, Python Projects is a goldmine of information and expert insight.

This is a book for blender 3d users that would like to upgrade their skills in python scripting. The problem is, not all of them knew anything about programming and most of books out there tends to assume that the readers know anything about their books. This book is written by an ex beginner, so it will appeal for other beginners in blender python.This book will guide you to take your first steps in understanding how python works in blender. As you progress through the pages, your knowledge of blender python will increase, starting from how to use the user interface, to learning python, until you can create your own add on script.As I have said before, this book is written by a former newbie, this will may not make you a master of blender python, but it will be enough for any beginners to start their own
add on script. This book is not heavy on the technical terms of programming, but instead it will guide the readers through the necessary path similar to the writer's path in studying python. But it will be a simpler path than the writer have taken, and more systematic.

Introducing Character Animation with Blender, 2nd Edition is written in a friendly but professional tone, with clear descriptions and numerous illustrative screenshots. Throughout the book, tutorials focus on how to accomplish actual animation goals, while illustrating the necessary technical methods along the way. These are reinforced by clear descriptions of how each specific aspect of Blender works and fits together with the rest of the package. By following all the tutorials, the reader will gain all the skills necessary to build and animate a well-modeled, fully-rigged character of their own. The character built over the course of the tutorials is included as a .blend file on the DVD, for the reader to experiment with and learn from. Introducing Character Animation with Blender, 2nd Edition is inspiring as well as educational. A color insert includes sample characters and frames from animations by many of the Blender community's most talented artists, which help to illustrate the impressive potential of the software.

This book constitutes the refereed proceedings of the 9th International Conference on Virtual, Augmented and Mixed Reality, VAMR 2017, held as part of HCI International 2017 in Vancouver, BC, Canada. HCII 2017 received a total of 4340 submissions, of which 1228 papers were accepted for publication after a careful reviewing process. The 45 papers presented in this volume were organized in topical sections named: developing virtual and augmented environments; interaction techniques in VAMR; VAMR in education and training; virtual worlds and games; user experience in VAMR; and health issues in VR.

See Why Blender Is Right for Your Studio's Pipeline Blender for Animation and Film-Based Production explores why Blender is ideal for animation films. It demonstrates Blender's capability to do the job in each production department. Whether you are a beginner or more advanced user, you'll see why Blender should be taken into consideration in animati

The two-volume set LNCS 7066 and LNCS 7067 constitutes the proceedings of the Second International Visual Informatics Conference, IVIC 2011, held in Selangor, Malaysia, during November 9-11, 2011. The 71 revised papers presented were carefully reviewed and selected for inclusion in these proceedings.
They are organized in topical sections named computer vision and simulation; virtual image processing and engineering; visual computing; and visualization and social computing. In addition the first volume contains two keynote speeches in full paper length, and one keynote abstract.

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, animations, 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

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

Blender is a vast and customizable 3D-modeling application used by many artists across creative industries, from television to games. This newest book, in Alan Thorn's How to Cheat series, offers insightful and bite-sized power-tips to help you develop Blender mastery. More than five hundred figures illustrate interesting shortcuts and clever ways to improve your Blender workflow. A companion website at http://www.alanthorn.net provides bonus content, including videos and resources to help sharpen your skills further. How to Cheat in Blender 2.7x is for Blender users of all levels, offering time-saving tips and powerful techniques to increase your productivity. Key Features Bite-sized tips and tricks that can be read in any order Illustrated examples and step-by-step guides for improving your workflow Explores practical applications and real-world contexts Demonstrates "lesser-known" and
unconventional tips Improves your efficiency and workflow

Blender is only one of many 3D graphics applications. Before we can take a look at Blender and its alternatives, however, let's talk about 3D computer graphics in general. What is 3D? 3D software is used to create a virtual representation of anything. Even things that don't exist. Essentially, you take something from your imagination and make the idea more real than has ever been possible in the history of the world. Sound awesome? It totally is! Imaginary environments, sexy concept cars, absurdly realistic portraits, goofy character designs, epic posters, and emotional animations are just a few examples of what's possible to make with 3D software. Not easy, mind you, but definitely possible. In This Book u Will Learn Basics And Advanced Concepts Of Blender 3D This Book Contains RENDERING AND COMPOSITING RENDER ASRENDER SETTINGS COMPOSITING CREATE EDIT OBJECT MATERIAL TEXTURE LIGHTING CAMERA RENDERING GRAY TRACING ANIMATION BASICS 3D TEXTURE NURBS AND METASHAPES MODIFIERS PARTICLE SYSTEMS CONSTRAINTS ARMATURES FLUID SIMULATION NODES GAME ENGINE VIDEO SEQUENCE EDITING THE PROCESS OF 3D CHARACTER CREATION And Many More Blender is an all-in-one 3D software that can be used to model, sculpt, texture, animate, camera track, render, and composite awesome looking graphics from start to finish So Buy This Book Now

GPU Pro3, the third volume in the GPU Pro book series, offers practical tips and techniques for creating real-time graphics that are useful to beginners and seasoned game and graphics programmers alike. Section editors Wolfgang Engel, Christopher Oat, Carsten Dachsbacher, Wessam Bahnassi, and Sebastien St-Laurent have once again brought together a high-quality collection of cutting-edge techniques for advanced GPU programming. With contributions by more than 50 experts, GPU Pro3: Advanced Rendering Techniques covers battle-tested tips and tricks for creating interesting geometry, realistic shading, real-time global illumination, and high-quality shadows, for optimizing 3D engines, and for taking advantage of the advanced power of the GPGPU. Sample programs and source code are available for download on the book’s CRC Press web page.

If you are an engineer, a researcher, or a hobbyist, and you are interested in robotics and want to build your own robot, this book is for you. Readers are assumed to be new to robotics but should have experience with Python.

Understand Blender's Python API to allow for precision 3D modeling and add-on development. Follow detailed guidance on how to create precise geometries, complex texture mappings, optimized renderings, and much more. This book is a detailed, user-friendly guide to understanding and using Blender’s Python...
API for programmers and 3D artists. Blender is a popular open source 3D modeling software used in advertising, animation, data visualization, physics simulation, photorealistic rendering, and more. Programmers can produce extremely complex and precise models that would be impossible to replicate by hand, while artists enjoy numerous new community-built add-ons. The Blender Python API is an unparalleled programmable visualization environment. Using the API is made difficult due to its complex object hierarchy and vast documentation. Understanding the Blender Python API clearly explains the interface. You will become familiar with data structures and low-level concepts in both modeling and rendering with special attention given to optimizing procedurally generated models. In addition, the book: Discusses modules of the API as analogs to human input modes in Blender Reviews low-level and data-level manipulation of 3D objects in Blender Python Details how to deploy and extend projects with external libraries Provides organized utilities of novel and mature API abstractions for general use in add-on development What You’ll Learn Generate 3D data visualizations in Blender to better understand multivariate data and mathematical patterns. Create precision object models in Blender of architectural models, procedurally generated landscapes, atomic models, etc. Develop and distribute a Blender add-on, with special consideration given to careful development practices Pick apart Blender’s 3D viewport and Python source code to learn about API behaviors Develop a practical knowledge of 3D modeling and rendering concepts Have a practical reference to an already powerful and vast API Who This Book Is For Python programmers with an interest in data science, game development, procedural generation, and open-source programming as well as programmers of all types with a need to generate precise 3D models. Also for 3D artists with an interest in programming or with programming experience and Blender artists regardless of programming experience.

Master efficient parallel programming to build powerful applications using Python About This Book Design and implement efficient parallel software Master new programming techniques to address and solve complex programming problems Explore the world of parallel programming with this book, which is a go-to resource for different kinds of parallel computing tasks in Python, using examples and topics covered in great depth Who This Book Is For Python Parallel Programming Cookbook is intended for software developers who are well versed with Python and want to use parallel programming techniques to write powerful and efficient code. This book will help you master the basics and the advanced of parallel computing. What You Will Learn Synchronize multiple threads and processes to manage parallel tasks Implement message passing communication between processes to build parallel applications Program your own GPU cards to address complex problems Manage computing entities to execute distributed computational tasks Write efficient programs by adopting the event-driven programming model Explore the cloud technology with DJango and Google App Engine Apply parallel programming techniques that can lead
to performance improvements. In detail, parallel programming techniques are required for a developer to get the best use of all the computational resources available today and to build efficient software systems. From multi-core to GPU systems up to the distributed architectures, the high computation of programs throughout requires the use of programming tools and software libraries. Because of this, it is becoming increasingly important to know what the parallel programming techniques are. Python is commonly used as even non-experts can easily deal with its concepts. This book will teach you parallel programming techniques using examples in Python and will help you explore the many ways in which you can write code that allows more than one process to happen at once. Starting with introducing you to the world of parallel computing, it moves on to cover the fundamentals in Python. This is followed by exploring the thread-based parallelism model using the Python threading module by synchronizing threads and using locks, mutex, semaphores queues, GIL, and the thread pool. Next you will be taught about process-based parallelism where you will synchronize processes using message passing along with learning about the performance of MPI Python Modules. You will then go on to learn the asynchronous parallel programming model using the Python asyncio module along with handling exceptions. Moving on, you will discover distributed computing with Python, and learn how to install a broker, use Celery Python Module, and create a worker. You will also understand the StarCluster framework, Pycsp, Scoop, and Disco modules in Python. Further on, you will learn GPU programming with Python using the PyCUDA module along with evaluating performance limitations. Next you will get acquainted with the cloud computing concepts in Python, using Google App Engine (GAE), and building your first application with GAE. Lastly, you will learn about grid computing concepts in Python and using PyGlobus toolkit, GFTP and GASS COPY to transfer files, and service monitoring in PyGlobus. Style and approach A step-by-step guide to parallel programming using Python, with recipes accompanied by one or more programming examples. It is a practically oriented book and has all the necessary underlying parallel computing concepts.

More physicists today are taking on the role of software developer as part of their research, but software development isn’t always easy or obvious, even for physicists. This practical book teaches essential software development skills to help you automate and accomplish nearly any aspect of research in a physics-based field. Written by two PhDs in nuclear engineering, this book includes practical examples drawn from a working knowledge of physics concepts. You’ll learn how to use the Python programming language to perform everything from collecting and analyzing data to building software and publishing your results. In four parts, this book includes: Getting Started: Jump into Python, the command line, data containers, functions, flow control and logic, and classes and objects.
Learn about regular expressions, analysis and visualization, NumPy, storing data in files and HDF5, important data structures in physics, computing in parallel, and deploying software. Getting It Right: Build pipelines and software, learn to use local and remote version control, and debug and test your code. Getting It Out There: Document your code, process and publish your findings, and collaborate efficiently; dive into software licenses, ownership, and copyright procedures.

Understand Blender's Python API to allow for precision 3D modeling and add-on development. Follow detailed guidance on how to create precise geometries, complex texture mappings, optimized renderings, and much more. This book is a detailed, user-friendly guide to understanding and using Blender's Python API for programmers and 3D artists. Blender is a popular open source 3D modeling software used in advertising, animation, data visualization, physics simulation, photorealistic rendering, and more. Programmers can produce extremely complex and precise models that would be impossible to replicate by hand, while artists enjoy numerous new community-built add-ons. The Blender Python API is an unparalleled programmable visualization environment. Using the API is made difficult due to its complex object hierarchy and vast documentation. Understanding the Blender Python API clearly explains the interface. You will become familiar with data structures and low-level concepts in both modeling and rendering with special attention given to optimizing procedurally generated models. In addition, the book: Discusses modules of the API as analogs to human input modes in Blender Reviews low-level and data-level manipulation of 3D objects in Blender Python Details how to deploy and extend projects with external libraries Provides organized utilities of novel and mature API abstractions for general use in add-on development What You’ll Learn Generate 3D data visualizations in Blender to better understand multivariate data and mathematical patterns. Create precision object models in Blender of architectural models, procedurally generated landscapes, atomic models, etc. Develop and distribute a Blender add-on, with special consideration given to careful development practices Pick apart Blender’s 3D viewport and Python source code to learn about API behaviors Develop a practical knowledge of 3D modeling and rendering concepts Have a practical reference to an already powerful and vast API Who This Book Is For Python programmers with an interest in data science, game development, procedural generation, and open-source programming as well as programmers of all types with a need to generate precise 3D models. Also for 3D artists with an interest in programming or with programming experience and Blender artists regardless of programming experience.

An accessible guide to developing custom scripts and add-ons to streamline and automate your workflow, as well as tricks on how to procedurally generate game level and character geometry. Once you've
reviewed the Blender API and learned how to load and run scripts in Blender, you’ll learn how to automate tasks related to virtual reality, mesh modelling, sculpting, retopology, UV mapping, texture painting, rigging, animation, rendering, map baking, lighting, and more. You'll also learn to create impressive demos of your add-ons and automation projects and how to package them for distribution.

If you need help writing programs in Python 3, or want to update older Python 2 code, this book is just the ticket. Packed with practical recipes written and tested with Python 3.3, this unique cookbook is for experienced Python programmers who want to focus on modern tools and idioms. Inside, you’ll find complete recipes for more than a dozen topics, covering the core Python language as well as tasks common to a wide variety of application domains. Each recipe contains code samples you can use in your projects right away, along with a discussion about how and why the solution works. Topics include: Data Structures and Algorithms Strings and Text Numbers, Dates, and Times Iterators and Generators Files and I/O Data Encoding and Processing Functions Classes and Objects Concurrency Utility Scripting and System Administration Testing, Debugging, and Exceptions C Extensions

GAME DEVELOPMENT WITH BLENDER is the complete guide to the Blender game engine. More than two years in the making, the book spans topics ranging from logic brick and physics to graphics, animation, scripting, and more. Each chapter covers in detail a different aspect of the Blender game engine, with tutorials, extensive documentation, and valuable advice on when to use the tools—all distilled from the authors' 20 years of combined Blender experience. Blender is a free, open-source 3D content-creation suite, a powerful and flexible platform that allows you to build games and interactive applications such as architecture walk-throughs, science visualizations, experimental projects, and much more. In this comprehensive guide, you will learn how to design a complete game from beginning to end, create games without writing a single line of code, bring your 3D characters to life with animations, unleash the power of material creation with nodes, have fun making JELL-O bounce with the physics engine, program in Python like a pro, make your games run faster using lightmaps and normal maps, publish your games for Windows, Mac, and Linux, and improve your games by learning from 10 real-world projects. This book has been prepared for the release of Blender 2.66a, ensuring that you have the most up-to-date information in your hands. Whether you are new to Blender or a seasoned Blenderhead, GAME DEVELOPMENT WITH BLENDER will help you create the games you've always wanted. Purchasing this book also gives you access to more than 100 online companion files, which include
tutorials, sample files, and extra demos that will help you get the most out of the Blender game engine.

Learn the essential source code of Blender and its unique build system. This book provides the inner workings of the Blender C-based source code, and will be indispensable for those wanting to contribute to this important open-source project. Blender is an open-source 3D modeling and rendering software package used in the production of assets for animated projects, 3D printing, games, and even scientific visualization. This book goes in depth and discusses the primary modules related to the GUI and the geometric modeling work. You'll start by learning how to reverse engineer geometric operators, and from there move on to the main features of the source code and how to apply them. When done, you'll have the necessary foundation for exploration in other modules of the Blender source code. Lack of software engineering knowledge, such as experience with large cross-platform code base, remains insurmountable for many new developers. While the Blender site includes much useful information, it is not detailed enough. Core Blender Development breaks down the barriers to entry for open-source development in 3-D modeling. What You’ll Learn Find the code for various functions and editors in Blender Track down bugs, and contribute new functionality to the Blender code base Examine the .blend file and how it stores Blender state Understand the Blender core code base beyond the community website documentation Review the explicit code traces and source files of descriptions of the code base Who This Book Is For Primarily for novice to intermediate level developers and programmers with an interest in Blender, graphics, and visualization, who likely don’t have experience of reverse engineering a large code base.

Machine learning (ML) is changing virtually every aspect of our lives. Today ML algorithms accomplish tasks that until recently only expert humans could perform. As it relates to finance, this is the most exciting time to adopt a disruptive technology that will transform how everyone invests for generations. Readers will learn how to structure Big data in a way that is amenable to ML algorithms; how to conduct research with ML algorithms on that data; how to use supercomputing methods; how to backtest your discoveries while avoiding false positives. The book addresses real-life problems faced by practitioners on a daily basis, and explains scientifically sound solutions using math, supported by code and examples. Readers become active users who can test the proposed solutions in their particular setting. Written by a recognized expert and portfolio manager, this book will equip investment professionals with the groundbreaking tools needed to succeed in modern finance.

A new world of creative possibilities is opened by Blender, the most popular and powerful open source 3D and animation tool. Blender is not just free software; it is also an important professional tool
used in animated shorts, television commercials, and shows, as well as in production for films like Spiderman 2. Lance Flavell's Beginning Blender will give you the skills to start shaping new worlds and virtual characters, and perhaps lead you down a new professional path. Beginning Blender covers the Blender 2.5 release in-depth. The book starts with the creation of simple figures using basic modeling and sculpting. It then teaches you how to bridge from modeling to animation, and from scene setup to texture creation and rendering, lighting, rigging, and ultimately, full animation. You will create and mix your own movie scenes, and you will even learn the basics of games logic and how to deal with games physics. Whether you are new to modeling, animation, and game design, or whether you are simply new to Blender, this book will show you everything you need to know to get your 3D projects underway.

This short book is born with the intent of providing people a solid understanding of the basic knowledge necessary to use proficiently Sverchok, Blender's node-based parametric design add-on. Parametric design is getting more and more popular, yet most of the tools dedicated to this field are part of highly priced software packages like Rhino/Grasshopper. Sverchok offers a valid alternative for students, small businesses and hobbyists that are interested in this fascinating field. The fact that Sverchok comes as an add-on to Blender, with direct access to all its powerful Python API makes things even more exciting. At the end of the read you will have what it takes to start exploring Sverchok independently and to start using it to realize your amazing ideas.

Description
This book is designed to give you on insight of the art and science of Computers. the book does not need any special background to comprehend the subject matter. The book covers the entire course contents of Computer Science with Python Language for Class XI prescribed by Central Board of Secondary Education (C.B.S.E.) according to new Syllabus 2018-2019 onwards) in a clear and simple English language. It discusses Programming and Computational Thinking. Computer Systems and Organisation Concepts in very comprehensive manner to build a strong foundation. The Programming methodology and Introduction to Python language are described in easy-to-understand language. Different topics such as Control structures, Strings, Lists, Dictionaries and Tuples are explained in a very easy to understand language. Programming with Python language is explained with maximum number of examples. It presents a detailed discussion of topics such as Database Concepts, SQL, Relational Algebra, MongoDB and CyberSafety. Features: Ample number of diagrams are used to illustrate the subject matter for easy understanding. Solved Exercises are added at the end of each chapter so that the readers can evaluate their progress by comparing their answers with the answers given in the book. Summary and Glossary related to particular chapter are given at the end of each chapter. A Lab Exercise is added at the end of each chapter. Contents Unit-1 Programming and Computational Thinking Programming Concepts, Problem
This book will teach you how to create the model shown on its cover. It assumes that you may know nothing about the 3D modeling software, and starts this course from the very basics. In subsequent chapters the author gradually introduces new methods and tools, on the example of building a model of the P-40B fighter. Every step of this workflow is presented in numerous illustrations. The goal of this book is to encourage all the "plastic modelers" for this new branch of their hobby. To make this hobby more affordable, this course uses solely the free (Open Source) software. This publication may also be interesting to all who would like to master the powerful Blender 3D package. "Virtual Airplane" contains so many illustrations (over 2400) that it is readable to some extent even in a foreign language. If you want to skim all of its contents, search the Google Books for its free version (ISBN: 9788394141752, it is a Polish translation), or visit airplanes3d.net.

This is the first book written on using Blender (an open-source visualization suite widely used in the entertainment and gaming industries) for scientific visualization. It is a practical and interesting introduction to Blender for understanding key parts

Presents a guide to the 3D design tool which uses three representative models to demonstrate such techniques as object manipulation, texture mapping, lighting, rendering, sculpting, and compositing.

Get up and running with Blender 3D through a series of practical projects that will help you learn core concepts of 3D design like modeling, sculpting, materials, textures, lighting, and rigging using the latest features of Blender 2.83. Key Features: Learn the basics of 3D design and navigate your way around the Blender interface. Understand how 3D components work and how to create 3D content for your games. Familiarize yourself with 3D Modeling, Texturing, Lighting, Rendering, and Sculpting with Blender. Book Description: Blender is a powerful 3D creation package that supports every aspect of the 3D pipeline. With this book, you'll learn about modeling, rigging, animation, rendering, and much more with the help of some interesting projects. This practical guide, based on the Blender 2.83 LTS version, starts by
helping you brush up on your basic Blender skills and getting you acquainted with the software toolset. You’ll use basic modeling tools to understand the simplest 3D workflow by customizing a Viking themed scene. You'll get a chance to see the 3D modeling process from start to finish by building a time machine based on provided concept art. You will design your first 2D character while exploring the capabilities of the new Grease Pencil tools. The book then guides you in creating a sleek modern kitchen scene using EEVEE, Blender's new state-of-the-art rendering engine. As you advance, you'll explore a variety of 3D design techniques, such as sculpting, retopologizing, unwrapping, baking, painting, rigging, and animating to bring a baby dragon to life. By the end of this book, you'll have learned how to work with Blender to create impressive computer graphics, art, design, and architecture, and you'll be able to use robust Blender tools for your design projects and video games. What you will learn: Explore core 3D modeling tools in Blender such as extrude, bevel, and loop cut Understand Blender's Outliner hierarchy, collections, and modifiers Find solutions to common problems in modeling 3D characters and designs Implement lighting and probes to liven up an architectural scene using EEVEE Produce a final rendered image complete with lighting and post-processing effects Learn character concept art workflows and how to use the basics of Grease Pencil Learn how to use Blender's built-in texture painting tools Who this book is for Whether you're completely new to Blender, or an animation veteran enticed by Blender's newest features, this book will have something for you.

This book provides an overview of the latest developments in the fast growing field of tangible user interfaces. It presents a new type of modeling environment where the users interact with geospatial data and simulations using 3D physical landscape model coupled with 3D rendering engine. Multiple users can modify the physical model, while it is being scanned, providing input for geospatial analysis and simulations. The results are then visualized by projecting images or animations back on the physical model while photorealistic renderings of human views are displayed on a computer screen or in a virtual reality headset. New techniques and software which couple the hardware set-up with open source GRASS GIS and Blender rendering engine, make the system instantly applicable to a wide range of applications in geoscience education, landscape design, computer games, stakeholder engagement, and many others. This second edition introduces a new more powerful version of the tangible modeling environment with multiple types of interaction, including polymeric sand molding, placement of markers, and delineation of areas using colored felt patches. Chapters on coupling tangible interaction with 3D rendering engine and immersive virtual environment, and a case study integrating the tools presented throughout this book, demonstrate the second generation of the system - Immersive Tangible Landscape - that enhances the modeling and design process through interactive rendering of modeled landscape. This book explains main components of Immersive Tangible Landscape System, and provides the basic workflows for running
the applications. The fundamentals of the system are followed by series of example applications in
geomorphometry, hydrology, coastal and fluvial flooding, fire spread, landscape and park design, solar
energy, trail planning, and others. Graduate and undergraduate students and educators in geospatial
science, earth science, landscape architecture, computer graphics and games, natural resources and many
others disciplines, will find this book useful as a reference or secondary textbook. Researchers who
want to build and further develop the system will most likely be the core audience, but also anybody
interested in geospatial modeling applications (hazard risk management, hydrology, solar energy,
coastal and fluvial flooding, fire spread, landscape and park design) will want to purchase this book.

The exciting new book on the exciting new Blender 2.5! If you want to design 3D animation, here's your
chance to jump in with both feet, free software, and a friendly guide at your side! Blender For
Dummies, 2nd Edition is the perfect introduction to the popular, open-source, Blender 3D animation
software, specifically the revolutionary new Blender 2.5. Find out what all the buzz is about with this
easy-access guide. Even if you're just beginning, you'll learn all the Blender 2.5 ropes, get the
latest tips, and soon start creating 3D animation that dazzles. Walks you through what you need to know
to start creating eye-catching 3D animations with Blender 2.5, the latest update to the top open-source
3D animation program Shows you how to get the very most out of Blender 2.5's new multi-window
unblocking interface, new event system, and other exciting new features Covers how to create 3D objects
with meshes, curves, surfaces, and 3D text; add color, texture, shades, reflections and transparency;
set your objects in motion with animations and rigging; render your objects and animations; and create
scenes with lighting and cameras If you want to start creating your own 3D animations with Blender,
Blender For Dummies, 2nd Edition is where you need to start!

Learn to trade algorithmically with your existing brokerage, from data management, to strategy
optimization, to order execution, using free and publicly available data. Connect to your brokerage’s
API, and the source code is plug-and-play. Automated Trading with R explains automated trading,
starting with its mathematics and moving to its computation and execution. You will gain a unique
insight into the mechanics and computational considerations taken in building a back-tester, strategy
optimizer, and fully functional trading platform. The platform built in this book can serve as a
complete replacement for commercially available platforms used by retail traders and small funds.
Software components are strictly decoupled and easily scalable, providing opportunity to substitute any
data source, trading algorithm, or brokerage. This book will: Provide a flexible alternative to common
strategy automation frameworks, like Tradestation, Metatrader, and CQG, to small funds and retail
traders Offer an understanding of the internal mechanisms of an automated trading system Standardize
discussion and notation of real-world strategy optimization problems. What you will learn: Understand machine-learning criteria for statistical validity in the context of time-series. Optimize strategies, generate real-time trading decisions, and minimize computation time while programming an automated strategy in R and using its package library. Best simulate strategy performance in its specific use case to derive accurate performance estimates. Understand critical real-world variables pertaining to portfolio management and performance assessment, including latency, drawdowns, varying trade size, portfolio growth, and penalization of unused capital. Who this book is for: Traders/practitioners at the retail or small fund level with at least an undergraduate background in finance or computer science; graduate level finance or data science students.

Blender is a powerful and free 3D graphics tool used by artists and designers worldwide. But even experienced designers can find it challenging to turn an idea into a polished piece. For those who have struggled to create professional-quality projects in Blender, author Ben Simonds offers this peek inside his studio. You'll learn how to create 3D models as you explore the creative process that he uses to model three example projects: a muscular bat creature, a futuristic robotic spider, and ancient temple ruins. Along the way, you'll master the Blender interface and learn how to create and refine your own models. You'll also learn how to: -Work with reference and concept art in Blender and GIMP to make starting projects easier -Block in models with simple geometry and build up more complex forms -Use Blender’s powerful sculpting brushes to create detailed organic models -Paint textures with Blender and GIMP and map them onto your 3D artwork -Light, render, and composite your models to create striking images. Each chapter walks you through a piece of the modeling process and offers detailed explanations of the tools and concepts used. Filled with full-color artwork and real-world tips, Blender Master Class gives you the foundation you need to create your own stunning masterpieces. Covers Blender 2.6x.

This new edition of the successful calendars book is being published at the turn of the millennium and expands the treatment of the previous edition to new calendars and variants. As interest grows in the impact of seemingly arbitrary calendrical systems upon our daily lives, this book frames the world in a completely algorithmic form. The book gives a description of twenty-five calendars and how they relate to one another: the Gregorian (current civil), ISO (International Organization for Standardization), Egyptian (and nearly identical Armenian), Julian (old civil), Coptic, Ethiopic, Islamic (Moslem), modern Persian (both astronomical and arithmetic forms), Baha'i (both present and future forms), Hebrew (Jewish), Mayan (long count, haab, and tzolkin), Balinese Pawukon, French Revolutionary (both astronomical and arithmetic forms), Chinese (and nearly identical Japanese), old Hindu (solar and...
lunisolar), and modern Hindu (solar and lunisolar). Easy conversion among these calendars is a by-
product of the approach, as is the determination of secular and religious holidays. Calendrical
Calculations makes accurate calendrical algorithms readily available for computer use with LISP,
Mathematica, and Java code for all the algorithms included on the CD, and updates are available on the
Web. This book will be a valuable resource for working programmers as well as a fount of useful
algorithmic tools for computer scientists. In addition, the lay reader will find the historical setting
and general calendar descriptions of great interest.

Maya Python for Games and Film is the first book to focus exclusively on how to implement Python with
Maya. Written by trusted authorities in the field, this in-depth guide will help you master Maya
Python, whether you're a seasoned technical artist looking to make the transition from MEL to Python or
an aspiring artist not wanting to scramble for information.

Copyright code: fadd1914e89831375c7a51951ce45fe2