The Black Art Of Multiplatform Game Programming

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MonoGame Mastery - Jarred Capellman 2020-11-10
Master the art of game creation with MonoGame—the cross-platform framework of choice for independent developers. Learn the various aspects needed to create your next game by covering MonoGame framework specifics, engine creation, graphics, patterns, and more. The MonoGame framework provides an incredible canvas for the programmer to create their next 2D game, and this book teaches you to make the most of it. You will start from the ground up, beginning with the basics of what MonoGame is, the pipeline, and then how to build a reusable game engine on top of the framework. You will deep dive into various components of each aspect of a game, including graphics, input, audio, and artificial intelligence. The importance of game tooling is also covered. By the end, you will have a mastery level of understanding of how to create a 2D game using MonoGame. With a fully functional 2D game, aspiring developers will have the ideal blueprint to tackle their next fully featured game. The material covered is applicable for almost any 2D game project ranging from side scrolling adventures to fighting games. What You Will Learn Learn to build a game with the MonoGame framework. Understand game engine architecture and how to build an engine onto the MonoGame framework. Grasp common design patterns used in game development and in fully featured engines, such as Unity. Who This Book Is For Beginner to advanced MonoGame programmer would find this book helpful. The audience is expected to have a working knowledge of C#.

Game Engine Architecture, Third Edition - Jason Gregory 2018-07-20
In this new and improved third edition of the highly popular Game Engine Architecture, Jason Gregory draws on his nearly two decades of experience at Midway, Electronic Arts and Naughty Dog to present both the theory and practice of game engine software development. In this book, the broad range of technologies and techniques used by AAA game studios are each explained in detail, and their roles within a real industrial-strength game engine are illustrated. New to the Third Edition This third edition offers the same comprehensive coverage of game engine architecture provided by previous editions, along with updated coverage of: computer and CPU hardware and memory caches, compiler optimizations, C++ language standardization, the IEEE-754 floating-point representation, 2D user interfaces, plus an entirely new chapter on hardware parallelism and concurrent programming. This book is intended to serve as an introductory text, but it also offers the experienced game programmer a useful perspective on aspects of game development technology with which they may not have deep experience. As always, copious references and citations are provided in this edition, making it an excellent jumping off point for those who wish to dig deeper into any particular aspect of the game development process. Key Features Covers both the theory and practice of game engine software development Examples are grounded in specific technologies, but discussion extends beyond any particular engine or API. Includes all mathematical background needed. Comprehensive text for beginners and also has content for senior engineers.

Programming Collective Intelligence - Toby Segaran 2007-08-16
Want to tap the power behind search rankings, product recommendations, social bookmarking, and online matchmaking? This fascinating book demonstrates how you can build Web 2.0 applications to mine the enormous amount of data created by people on the Internet. With the sophisticated algorithms in this book, you can write smart programs to access interesting datasets from other web sites, collect data from users of your own applications, and analyze and understand the data once you've found it. Programming Collective Intelligence takes you into the world of machine learning and statistics, and explains how to draw conclusions about user experience, marketing, personal tastes, and human behavior in general -- all from information that you and others collect every day. Each algorithm is described clearly and concisely with code that can immediately be used on your web site, blog, Wiki, or specialized application. This book explains: Collaborative filtering techniques that enable online retailers to recommend products or media Methods of clustering to detect groups of similar items in a large dataset Search engine features -- crawlers, indexers, query engines, and the PageRank algorithm Optimization algorithms that search millions of possible solutions to a problem and choose the best one Bayesian filtering, used in spam filters for classifying documents based on word types and other features Using decision trees not only to make predictions, but to model the way decisions are made Predicting numerical values rather than classifications to build price models Support vector machines to match people in online dating sites Non-negative matrix factorization to find the independent features in a dataset Evolving intelligence for problem solving -- how a computer develops its skill by improving its own code the more it plays a game Each chapter includes exercises for extending the algorithms to make them more powerful. Go beyond simple database-backed applications and put the wealth of Internet data to work for you. "Bravo! I cannot think of a better way for a developer to first learn these algorithms and methods, nor can I think of a better way for me (an old AI dog) to reinvigorate my knowledge of the details." -- Dan Russell, Google "Toby's book does a great job of breaking down the complex subject matter of machine-learning algorithms into practical, easy-to-understand examples that can be directly applied to analysis of social interaction across the Web today. If I had this book two years ago, it would have saved precious time going down some fruitless paths." -- Tim Wolters, CTO, Collective Intellect

Game Graphics Programming - Allen Sherrod 2008
"Game Graphics Programming" examines the many different techniques and effects that are used to create cutting-edge graphics in today's video games and how to implement them. The book takes a detailed look at computer graphics, exploring both the theory and application of each algorithm and effect and how they are structured and executed to generate the rendered result. Detailed C++ source code and pseudocode are used as examples throughout the book to demonstrate the methods being taught, but the techniques presented can be used with any programming language or tool. You'll begin with an introduction to basic 2D and 3D game graphics tools and components including common game mathematics, colors and pixels, and computer memory, as well as ray tracing and rasterization techniques and programmable shaders. Once you've reviewed the foundations of game graphics, you'll go more in-depth with shading and surfaces, direct and global illumination, special effects, and rendering nature. After the how and why of each technique is presented, you'll also examine optimizations that can be done to improve performance and alternative methods. "Game Graphics Programming" presents you with all of the information you need to efficiently and effectively create eye-catching graphical scenes for video games.

jQuery Game Development Essentials - Selim Arsever 2013-04-25
Written as a concise yet practical guide with an explicit focus on utilizing jQuery for game development, you'll learn how to create stunning games that look great without the hassle of learning about a complex game engine in the process.Knowledge of JavaScript and jQuery as well as basic experience with frontend development is all you need to start making games in a matter of hours with this essential guide. Whilst also suitable for those who simply want to start making games with jQuery, it's specifically targeted at web developers that want to experiment with and utilize their existing skills.

Game Development Patterns with Unity 2021 - David Baron 2021-07-30
Solve your programming woes in Unity with practical design propositions Key FeaturesGain a comprehensive overview of Unity engine architecture and coding modelBuild a complete racing game using

software design patterns and understand how to implement them in UnityDownload the source code of the complete prototype demonstrating each of the software patterns usedBook Description This book is written for every game developer ready to tackle the bigger picture and start working with advanced programming techniques and design patterns in Unity. Game Development Patterns with Unity 2021 is an introduction to the core principles of reusable software patterns and how to employ them to build components efficiently. In this second edition, you'll tackle design patterns with the help of a practical example; a playable racing game prototype where you'll get to apply all your newfound knowledge. Notable updates also include a game design document (GDD), a Unity programming primer, and the downloadable source code of a complete prototype. Your journey will start by learning about overall design of the core game mechanics and systems. You'll discover tried-and-tested software patterns to code essential components of a game in a structured manner, and start using classic design patterns to utilize Unity's unique API features. As you progress, you'll also identify the negative impacts of bad architectural decisions and understand how to overcome them with simple but effective practices. By the end of this Unity book, the way you develop Unity games will change – you'll adapt a more structured, scalable, and optimized process that will help you take the next step in your career. What you will learnStructure professional Unity code using industry-standard development patternsIdentify the right patterns for implementing specific game mechanics or featuresDevelop configurable core game mechanics and ingredients that can be modified without writing a single line of codeReview practical object-oriented programming (OOP) techniques and learn how they're used in the context of a Unity projectBuild unique game development systems such as a level editorExplore ways to adapt traditional design patterns for use with the Unity APIWho this book is for This book is for Unity game developers who want to learn industry standards for building Unity games. Knowledge of the Unity game engine and programming in the C# language is a must, so if you're a beginner, try our Learning C# by Developing Games with Unity 2021 handbook instead.

SDL Game Development - Shaun Mitchell 2013-01-01
Written as a practical and engaging tutorial, SDL Game Development guides you through developing your own framework and the creation of two engaging games.If you know C]+ and you're looking to make great games from the ground up, then this book is perfect for you.

Unity 5.x Cookbook - Matt Smith 2015-10-05
Over 100 recipes exploring the new and exciting features of Unity 5 to spice up your Unity skillset About This Book Built on the solid foundation of the popular Unity 4.x Cookbook, the recipes in this edition have been completely updated for Unity 5 Features recipes for both 2D and 3D games Provides you with techniques for the new features of Unity 5, including the new UI system, 2D game development, new Standard Shaders, and the new Audio Mixer Who This Book Is For From beginners to advanced users, from artists to coders, this book is for you and everyone in your team! Programmers can explore multimedia features, and multimedia developers can try their hand at scripting. Basic knowledge and understanding of the Unity platform, game design principles, and programming knowledge in C# is essential. What You Will Learn Immerse players with great audio, utilizing Unity 5's audio features including the new Audio Mixer, ambient sound with Reverb Zones, dynamic soundtracks with Snapshots, and balanced audio via Ducking Create better materials with Unity's new, physically-based, Standard Shader Measure and control time, including pausing the game, displaying clocks and countdown timers, and even implementing "bullet time" effects Improve ambiance through the use of lights and effects such as reflection and light probes Create stylish user interfaces with the new UI system, including power-bars, clock displays, and an extensible inventory system Save and load text and media assets from local or remote sources, publish your game via Unity Cloud, and communicate with websites and their databases to create online scoreboards Discover advanced techniques, including the publisher-subscriber and state patterns, performance bottleneck identification, and methods to maximize game performance and frame rates Control 2D and 3D character movement, and use NavMeshAgents to write NPC and enemy behaviors such as seek, flee, flock, and waypoint path following In Detail Unity 5 is a flexible and intuitive multiplatform game engine that is becoming the industry's de facto standard. Learn to craft your own 2D and 3D computer games by working through core concepts such as animation, audio, shaders, GUI, lights, cameras, and scripting to create your own games with Unity 5. Completely re-written to cover the new features of Unity 5, this book is a great resource for all Unity game

developers, from those who have recently started using Unity right up to Unity professionals. The first half of the book focuses on core concepts of 2D game design while the second half focuses on developing 3D game development skills. In the first half, you will discover the new GUI system, the new Audio Mixer, external files, and animating 2D characters in 2D game development. As you progress further, you will familiarize yourself with the new Standard Shaders, the Mecanim system, Cameras, and the new Lighting features to hone your skills towards building 3D games to perfection. Finally, you will learn non-player character control and explore Unity 5's extra features to enhance your 3D game development skills. Style and approach Each chapter first introduces the topic area and explains how the techniques covered can enhance your games. Every recipe provides step-by-step instructions, followed by an explanation of how it all works, and useful additional refinements or alternative approaches. Every required resource and C# script (fully commented) is available to download, enabling you to follow each recipe yourself.

The Art of Wolfenstein - MachineGames 2014
Provides an in-depth look at the art of the video game, detailing the character designs, settings, and technology of the alternate world where the Nazis won World War II.

What Video Games Have to Teach Us About Learning and Literacy. Second Edition - James Paul Gee 2007-12-26
Argues that video games go beyond entertainment and examines the principles that make these games valuable tools of learning and literacy.

Mastering Unity Scripting - Alan Thorn 2015-01-29
Mastering Unity Scripting is an advanced book intended for students, educators, and professionals familiar with the Unity basics as well as the basics of scripting. Whether you've been using Unity for a short time or are an experienced user, this book has something important and valuable to offer to help you improve your game development workflow.

Beginning 3D Game Development with Unity 4 - Sue Blackman 2013-08-27
Beginning 3D Game Development with Unity 4 is perfect for those who would like to come to grips with programming Unity. You may be an artist who has learned 3D tools such as 3ds Max, Maya, or Cinema 4D, or you may come from 2D tools such as Photoshop and Illustrator. On the other hand, you may just want to familiarize yourself with programming games and the latest ideas in game production. This book introduces key game production concepts in an artist-friendly way, and rapidly teaches the basic scripting skills you'll need with Unity. It goes on to show how you, as an independent game artist, can create interactive games, ideal in scope for today's casual and mobile markets, while also giving you a firm foundation in game logic and design. The first part of the book explains the logic involved in game interaction, and soon has you creating game assets through simple examples that you can build upon and gradually expand. In the second part, you'll build the foundations of a point-and-click style first-person adventure game—including reusable state management scripts, dialogue trees for character interaction, load/save functionality, a robust inventory system, and a bonus feature: a dynamically configured maze and mini-map. With the help of the provided 2D and 3D content, you'll learn to evaluate and deal with challenges in bite-sized pieces as the project progresses, gaining valuable problem-solving skills in interactive design. By the end of the book, you will be able to actively use the Unity 3D game engine, having learned the necessary workflows to utilize your own assets. You will also have an assortment of reusable scripts and art assets with which to build future games. What you'll learn How to build interactive games that work on a variety of platforms Take the tour around Unity user interface fundamentals, scripting and more Create a test environment and gain control over functionality, cursor control, action objects, state management, object metadata, message text and more What is inventory logic and how to manage it How to handle 3D object visibility, effects and other special cases How to handle variety of menus and levels in your games development How to handle characters, scrollers, and more How to create or integrate a story/walkthrough How to use the new Mecanim animation Who this book is for Students or artists familiar with tools such as 3ds Max or Maya who want to create games for mobile platforms, computers, or consoles, but with little or no experience in scripting or the logic behind games development. Table of Contents 01. Introduction to Game Development 02. Unity UI basics 03. Introduction to Scripting 04. Terrain Generation and Environment 05. Exploring Navigation 06. Cursor Control and Interaction 07. Importing Assets 08. Action Objects 09. Managing State 10. Exploring Transitions 11. Physics and Special Effects 12. Message Text and HUD 13. Inventory Logic 14.

Managing Inventory 15. Dialogue Trees 16. Mecanim 17. Game Environment 18. Setting up the Game 19. Menus and Levels

Developing 2D Games with Unity - Jared Halpern 2018-11-28
Follow a walkthrough of the Unity Engine and learn important 2D-centric lessons in scripting, working with image assets, animations, cameras, collision detection, and state management. In addition to the fundamentals, you'll learn best practices, helpful game-architectural patterns, and how to customize Unity to suit your needs, all in the context of building a working 2D game. While many books focus on 3D game creation with Unity, the easiest market for an independent developer to thrive in is 2D games. 2D games are generally cheaper to produce, more feasible for small teams, and more likely to be completed. If you live and breathe games and want to create them then 2D games are a great place to start. By focusing exclusively on 2D games and Unity's ever-expanding 2D workflow, this book gives aspiring independent game developers the tools they need to thrive. Various real-world examples of independent games are used to teach fundamental concepts of developing 2D games in Unity, using the very latest tools in Unity's updated 2D workflow. New all-digital channels for distribution, such as Nintendo eShop, XBox Live Marketplace, the Playstation Store, the App Store, Google Play, itch.io, Steam, and GOG.com have made it easier than ever to discover, buy, and sell games. The golden age of independent gaming is upon us, and there has never been a better time to get creative, roll up your sleeves, and build that game you've always dreamed about. Developing 2D Games with Unity can show you the way. What You'll Learn Delve deeply into useful 2D topics, such as sprites, tile slicing, and the brand new Tilemap feature. Build a working 2D RPG-style game as you learn.Construct a flexible and extensible game architecture using Unity-specific tools like Scriptable Objects, Cinemachine, and Prefabs.Take advantage of the streamlined 2D workflow provided by the Unity environment. Deploy games to desktop Who This Book Is For Hobbyists with some knowledge of programming, as well as seasoned programmers interested in learning to make games independent of a major studio.

Serialization in Popular Culture - Rob Allen 2014-05-23
From prime-time television shows and graphic novels to the development of computer game expansion packs, the recent explosion of popular serials has provoked renewed interest in the history and economics of serialization, as well as the impact of this cultural form on readers, viewers, and gamers. In this volume, contributors—literary scholars, media theorists, and specialists in comics, graphic novels, and digital culture—examine the economic, narratological, and social effects of serials from the nineteenth to the twenty-first century and offer some predictions of where the form will go from here.

Lua Game Development Cookbook - Mário Kašuba 2015-07-28
The Lua language allows developers to create everything from simple to advanced applications and to create the games they want. Creating a good game is an art, and using the right tools and knowledge is essential in making game development easier. This book will guide you through each part of building your game engine and will help you understand how computer games are built. The book starts with simple game concepts used mainly in 2D side-scroller games, and moves on to advanced 3D games. Plus, the scripting capabilities of the Lua language give you full control over game. By the end of this book, you will have learned all about the components that go into a game, created a game, and solved the problems that may arise along the way.

Learning by Playing - Fran Blumberg 2014
There is a growing recognition in the learning sciences that video games can no longer be seen as impediments to education, but rather, they can be developed to enhance learning. Educational and developmental psychologists, education researchers, media psychologists, and cognitive psychologists are now joining game designers and developers in seeking out new ways to use video game play in the classroom. In Learning by Playing, a diverse group of contributors provide perspectives on the most current thinking concerning the ramifications of leisure video game play for academic classroom learning. The first section of the text provides foundational understanding of the cognitive skills and content knowledge that children and adolescents acquire and refine during video game play. The second section explores game features that captivate and promote skills development among game players. The subsequent sections discuss children and adolescents' learning in the context of different types of games and the factors that contribute to transfer of learning from video game play to the classroom. These chapters then form the basis for the concluding section of the text: a specification of the most appropriate research agenda to investigate the academic potential of video game

play, particularly using those games that child and adolescent players find most compelling. Contributors include researchers in education, learning sciences, and cognitive and developmental psychology, as well as instructional design researchers.

Introduction to Game Design, Prototyping, and Development - Jeremy Gibson 2015
This hands-on guide covers both game development and design, and both Unity and C♯. This guide illuminates the basic tenets of game design and presents a detailed, project-based introduction to game prototyping and development, using both paper and the Unity game engine.

Unity Game Development in 24 Hours, Sams Teach Yourself - Ben Tristem 2015-11-16
In just 24 lessons of one hour or less, Sams Teach Yourself Unity Game Development in 24 Hours will help you master the Unity 5 game engine at the heart of Hearthstone: Heroes of Warcraft, Kerbal Space Program, and many other sizzling-hot games! This book's straightforward, step-by-step approach teaches you everything from the absolute basics through sophisticated game physics, animation, and mobile device deployment techniques. Every lesson builds on what you've already learned, giving you a rock-solid foundation for real-world success. Step-by-step instructions carefully walk you through the most common Unity game development tasks. Practical, hands-on examples show you how to apply what you learn. Quizzes and exercises help you test your knowledge and stretch your skills. Notes and tips point out shortcuts and solutions.

Game Programming in C++ - Sanjay Madhav 2018-03-06
Program 3D Games in C++: The #1 Language at Top Game Studios Worldwide C++ remains the key language at many leading game development studios. Since it's used throughout their enormous code bases, studios use it to maintain and improve their games, and look for it constantly when hiring new developers. Game Programming in C++ is a practical, hands-on approach to programming 3D video games in C++. Modeled on Sanjay Madhav's game programming courses at USC, it's fun, easy, practical, hands-on, and complete. Step by step, you'll learn to use C++ in all facets of real-world game programming, including 2D and 3D graphics, physics, AI, audio, user interfaces, and much more. You'll hone real-world skills through practical exercises, and deepen your expertise through start-to-finish projects that grow in complexity as you build your skills. Throughout, Madhav pays special attention to demystifying the math that all professional game developers need to know. Set up your C++ development tools quickly, and get started Implement basic 2D graphics, game updates, vectors, and game physics Build more intelligent games with widely used AI algorithms Implement 3D graphics with OpenGL, shaders, matrices, and transformations Integrate and mix audio, including 3D positional audio Detect collisions of objects in a 3D environment Efficiently respond to player input Build user interfaces, including Head-Up Displays (HUDs) Improve graphics quality with anisotropic filtering and deferred shading Load and save levels and binary game data Whether you're a working developer or a student with prior knowledge of C++ and data structures, Game Programming in C++ will prepare you to solve real problems with C++ in roles throughout the game development lifecycle. You'll master the language that top studios are hiring for—and that's a proven route to success.

Black Art of Java Game Programming - Joel Fan 1996
This book covers techniques for creating multi-user games and environments over the World Wide Web by using Java's networking capabilities. This is one of the first books to cover these techniques. The Game Gallery section gives in-depth information on some of the hottest Java games around, describing the game, how it works, and how it utilizes the features of Java. The CD contains complete Java source and byte codes to the class libraries and games developed in the book.

Game Development with Unity - Michelle Menard 2012
Provides information on using the Unity game engine to build games for any platform, including the Web, the Wii, and on smartphones.

Game Development with Unity - Michelle Menard 2012

The Black Art of Multiplatform Game Programming - Jazon Yamamoto 2014-04-02
THE BLACK ART OF MULTIPLATFORM GAME PROGRAMMING covers all the skills necessary to create amazing games. It will take you all the way from pixel plotting to full-blown game development. Written with beginners in mind, this book assumes no prior knowledge of game programming--anyone can learn how to program exciting video games using this book. Inside you'll find an introduction to game development on multiple platforms using SDL, extensive coverage of coding techniques used by programming gurus, a complete guide to game engine design and implementation, a modern approach to software

architecture, and advanced programming procedures and optimizations. Downloadable files include all the source code used in this book, video tutorials for each chapter, standard tools used for game development, and the SDL standard development library.

Beginner's Guide to Code Algorithms - Deepankar Maitra 2022
"This book takes you on a problem-solving journey to expand your mind and increase your willingness to experiment with code"--

Unity in Action - Joe Hocking 2015-05-01
A lot goes into publishing a successful game: amazing artwork, advanced programming techniques, creative story and gameplay, and highly-collaborative teamwork—not to mention flawless rendering and smooth performance on platforms ranging from game consoles to mobile phones. The Unity game development platform combines a powerful rendering engine with the professional code and art workflow tools needed to bring games to life. Unity in Action focuses on the programming part of game development (as opposed to art or design) and teaches readers to create projects in multiple game genres. Building on existing programming experience, readers will work through examples using the Unity toolset, adding the skills needed to go from application coder to game developer. They will leave the book with a well-rounded understanding of how to create graphically driven 2D and 3D applications. Purchase of the print book includes a free eBook in PDF, Kindle, and ePub formats from Manning Publications.

Mind-Melding Unity and Blender for 3D Game Development - Spencer Grey 2021-12-31
Add Blender to your Unity game development projects to unlock new possibilities and decrease your dependency on third-party creators Key FeaturesDiscover how you can enhance your games with BlenderLearn how to implement Blender in real-world scenariosCreate new or modify existing assets in Blender and import them into your Unity gameBook Description Blender is an incredibly powerful, free computer graphics program that provides a world-class, open-source graphics toolset for creating amazing assets in 3D. With Mind-Melding Unity and Blender for 3D Game Development, you'll discover how adding Blender to Unity can help you unlock unlimited new possibilities and reduce your reliance on third parties for creating your game assets. This game development book will broaden your knowledge of Unity and help you to get to grips with Blender's core capabilities for enhancing your games. You'll become familiar with creating new assets and modifying existing assets in Blender as the book shows you how to use the Asset Store and Package Manager to download assets in Unity and then export them to Blender for modification. You'll also learn how to modify existing and create new sci-fi-themed assets for a minigame project. As you advance, the book will guide you through creating 3D model props, scenery, and characters and demonstrate UV mapping and texturing. Additionally, you'll get hands-on with rigging, animation, and C# scripting. By the end of this Unity book, you'll have developed a simple yet exciting mini game with audio and visual effects, and a GUI. More importantly, you'll be ready to apply everything you've learned to your Unity game projects. What you will learnTransform your imagination into 3D scenery, props, and characters using BlenderGet to grips with UV unwrapping and texture models in BlenderUnderstand how to rig and animate models in BlenderAnimate and script models in Unity for top-down, FPS, and other types of gamesFind out how you can roundtrip custom assets from Blender to Unity and backBecome familiar with the basics of ProBuilder, Timeline, and Cinemachine in UnityWho this book is for This book is for game developers looking to add more skills to their arsenal by learning Blender from the ground up. Beginner-level Unity scene and scripting skills are necessary to get started.

Beginning 3D Game Development with Unity - Sue Blackman 2011-08-18
Beginning 3D Game Development with Unity is perfect for those who would like to come to grips with programming Unity. You may be an artist who has learned 3D tools such as 3ds Max, Maya, or Cinema 4D, or you may come from 2D tools such as Photoshop and Illustrator. On the other hand, you may just want to familiarize yourself with programming games and the latest ideas in game production. This book introduces key game production concepts in an artist-friendly way, and rapidly teaches the basic scripting skills you'll need with Unity. It goes on to show how you, as an independent game artist, can create casual interactive adventure games in the style of Telltale's Tales of Monkey Island, while also giving you a firm foundation in game logic and design. The first part of the book explains the logic involved in game interaction, and soon has you creating game assets through simple examples that you can build upon and gradually expand. In the second part, you'll build the foundations of a point-and-click style first-person adventure

game—including reusable state management scripts, load/save functionality, a robust inventory system, and a bonus feature: a dynamically configured maze and mini-map. With the help of the provided 2D and 3D content, you'll learn to evaluate and deal with challenges in bite-sized pieces as the project progresses, gaining valuable problem-solving skills in interactive design. By the end of the book, you will be able to actively use the Unity 3D game engine, having learned the necessary workflows to utilize your own assets. You will also have an assortment of reusable scripts and art assets with which to build future games.

Black Art of 3D Game Programming - André LaMothe 1995
Explains the complex technical aspects of video game programming in comprehensive language, covering such areas as 3-D graphics, "voxel graphics," digitized sound and music, modem communications, and game assembly. Original. (Intermediate).

Unity in Action - Joseph Hocking 2018-03-27
Summary Manning's bestselling and highly recommended Unity book has been fully revised! Unity in Action, Second Edition teaches you to write and deploy games with the Unity game development platform. You'll master the Unity toolset from the ground up, adding the skills you need to go from application coder to game developer. Foreword by Jesse Schell, author of The Art of Game Design Purchase of the print book includes a free eBook in PDF, Kindle, and ePub formats from Manning Publications. About the Technology Build your next game without sweating the low-level details. The Unity game development platform handles the heavy lifting, so you can focus on game play, graphics, and user experience. With support for C# programming, a huge ecosystem of production-quality prebuilt assets, and a strong dev community, Unity can get your next great game idea off the drawing board and onto the screen! About the Book Unity in Action, Second Edition teaches you to write and deploy games with Unity. As you explore the many interesting examples, you'll get hands-on practice with Unity's intuitive workflow tools and state-of-the-art rendering engine. This practical guide exposes every aspect of the game dev process, from the initial groundwork to creating custom AI scripts and building easy-to-read UIs. And because you asked for it, this totally revised Second Edition includes a new chapter on building 2D platformers with Unity's expanded 2D toolkit. What's Inside Revised for new best practices, updates, and more! 2D and 3D games Characters that run, jump, and bump into things Connect your games to the internet About the Reader You need to know C# or a similar language. No game development knowledge is assumed. About the Author Joe Hocking is a software engineer and Unity expert specializing in interactive media development. Table of Contents PART 1 - First steps Getting to know Unity Building a demo that puts you in 3D space Adding enemies and projectiles to the 3D game Developing graphics for your game PART 2 - Getting comfortable Building a Memory game using Unity's 2D functionality Creating a basic 2D Platformer Putting a GUI onto a game Creating a third-person 3D game: player movement and animation Adding interactive devices and items within the game PART 3 - Strong finish Connecting your game to the internet Playing audio: sound effects and music Putting the parts together into a complete game Deploying your game to players' devices

Game Engine Architecture - Jason Gregory 2017-03-27
Hailed as a "must-have textbook" (CHOICE, January 2010), the first edition of Game Engine Architecture provided readers with a complete guide to the theory and practice of game engine software development. Updating the content to match today's landscape of game engine architecture, this second edition continues to thoroughly cover the major components that make up a typical commercial game engine. New to the Second Edition Information on new topics, including the latest variant of the C++ programming language, C++11, and the architecture of the eighth generation of gaming consoles, the Xbox One and PlayStation 4 New chapter on audio technology covering the fundamentals of the physics, mathematics, and technology that go into creating an AAA game audio engine Updated sections on multicore programming, pipelined CPU architecture and optimization, localization, pseudovectors and Grassman algebra, dual quaternions, SIMD vector math, memory alignment, and anti-aliasing Insight into the making of Naughty Dog's latest hit, The Last of Us The book presents the theory underlying various subsystems that comprise a commercial game engine as well as the data structures, algorithms, and software interfaces that are typically used to implement them. It primarily focuses on the engine itself, including a host of low-level foundation systems, the rendering engine, the collision system, the physics simulation, character animation, and audio. An in-depth discussion on the "gameplay foundation layer" delves

into the game's object model, world editor, event system, and scripting system. The text also touches on some aspects of gameplay programming, including player mechanics, cameras, and AI. An awareness-building tool and a jumping-off point for further learning, Game Engine Architecture, Second Edition gives readers a solid understanding of both the theory and common practices employed within each of the engineering disciplines covered. The book will help readers on their journey through this fascinating and multifaceted field.

Game Coding Complete - Mike McShaffry 2005
Takes programmers through the complete process of developing a professional quality game, covering a range of topics such as the key "gotcha" issues that could trip up even a veteran programmer, game interface design, game audio, and game engine technolog

Unity Game Development - Kathleen Peterson 2020-05
If you don't know anything about programming in general, writing code, writing scripts, or have no idea where to even begin, then this book is perfect for you. If you want to make games and need to learn how to write C# scripts or code, then this book is ideal for you.Unity is a cross-platform development platform initially created for developing games but is now used for a wide range of things such as: architecture, art, children's apps, information management, education, entertainment, marketing, medical, military, physical installations, simulations, training, and many more.Unity takes a lot of the complexities of developing games and similar interactive experiences and looks after them behind the scenes so people can get on with designing and developing their games. These complexities include graphics rendering, world physics and compiling. More advanced users can interact and adapt them as needed but for beginners they need not worry about it.Games in Unity are developed in two halves; the first half -within the Unity editor, and the second half -using code, specifically C#. Unity is bundled with MonoDevelopor Visual Studio 2015 Communityfor writing C#.

Challenges for Game Designers - Brenda Brathwaite 2009
Welcome to a book written to challenge you, improve your brainstorming abilities, and sharpen your game design skills! Challenges for Game Designers: Non-Digital Exercises for Video Game Designers is filled with enjoyable, interesting, and challenging exercises to help you become a better video game designer, whether you are a professional or aspire to be. Each chapter covers a different topic important to game designers, and was taken from actual industry experience. After a brief overview of the topic, there are five challenges that each take less than two hours and allow you to apply the material, explore the topic, and expand your knowledge in that area. Each chapter also includes 10 "non-digital shorts" to further hone your skills. None of the challenges in the book require any programming or a computer, but many of the topics feature challenges that can be made into fully functioning games. The book is useful for professional designers, aspiring designers, and instructors who teach game design courses, and the challenges are great for both practice and homework assignments. The book can be worked through chapter by chapter, or you can skip around and do only the challenges that interest you. As with anything else, making great games takes practice and Challenges for Game Designers provides you with a collection of fun, thoughtprovoking, and of course, challenging activities that will help you hone vital skills and become the best game designer you can be.

Book of the Dead (TombQuest, Book 1) - Michael Northrop 2015-01-27
From the team that brought you The 39 Clues and Spirit Animals comes a brand new epic Egyptian adventure! Nothing can save Alex Sennefer's life. That's what all the doctors say, but his mother knows it's not true. She knows that the Lost Spells of the Egyptian Book of the Dead can crack open a door to the afterlife and pull her son back from the brink. But when she uses the spells, five evil ancients--the Death Walkers--are also brought back to life. An ancient evil has been unleashed. Mummies are awakening. New York is overrun with scorpions. And worst of all for Alex, his mom and the Lost Spells have both disappeared. He and his best friend, Ren, will do anything to find his mom and save the world . . . even if that means going head-to-head with a Death Walker who has been plotting his revenge for 3,000 years. Read the book, then continue the adventure online! Build an Egyptian tomb of your own, hide treasure and protect it with traps, then challenge your friends to play through! Michael Northrop is the New York Times bestselling author of TombQuest, an epic book and game adventure series featuring the magic of ancient Egypt. He is also the author of Trapped, an Indie Next List Selection, and Plunked, a New York Public Library best book of the year

and an NPR Backseat Book Club selection. An editor at Sports Illustrated Kids for many years, he now writes full-time from his home in New York City. Learn more at www.michaelnorthrop.net.

Libgdx Cross-platform Game Development Cookbook - David Saltares Márquez 2014-10-29
If you want to make cross-platform games without the hassle and dangers of writing platform-specific code, or If you are a game programmer who may have some experience with Java and you want to learn everything you need to know about Libgdx to produce awesome work, this is the book for you. To take full advantage of the recipes in this book, you are expected to be familiar with java with good game programming knowledge.

Dungeons & Dragons Art & Arcana - Michael Witwer 2018-10-23
An illustrated guide to the history and evolution of the beloved role-playing game told through the paintings, sketches, illustrations, and visual ephemera behind its creation, growth, and continued popularity. FINALIST FOR THE HUGO AWARD • FINALIST FOR THE LOCUS AWARD • NOMINATED FOR THE DIANA JONES AWARD From one of the most iconic game brands in the world, this official DUNGEONS & DRAGONS illustrated history provides an unprecedented look at the visual evolution of the brand, showing its continued influence on the worlds of pop culture and fantasy. Inside the book, you'll find more than seven hundred pieces of artwork—from each edition of the core role-playing books, supplements, and adventures; as well as Forgotten Realms and Dragonlance novels; decades of Dragon and Dungeon magazines; and classic advertisements and merchandise; plus never-before-seen sketches, large-format canvases, rare photographs, one-of-a-kind drafts, and more from the now-famous designers and artists associated with DUNGEONS & DRAGONS. The superstar author team gained unparalleled access to the archives of Wizards of the Coast and the personal collections of top collectors, as well as the designers and illustrators who created the distinctive characters, concepts, and visuals that have defined fantasy art and gameplay for generations. This is the most comprehensive collection of D&D imagery ever assembled, making this the ultimate collectible for the game's millions of fans around the world.

Tricks of the Game-programming Gurus - André LaMothe 1994
Outlines the basic and advanced principles involved in creating interactive games, including flight simulators, three-dimensional walk-through games, and various multimedia utilities, with an accompanying CD that includes shareware games and commercial demos. Original. (All Users).

2D Graphics Programming for Games - John Pile Jr. 2016-04-19
The success of Angry Birds, Peggle, and Fruit Ninja has proven that fun and immersive game experiences can be created in two dimensions. Furthermore, 2D graphics enable developers to quickly prototype ideas and mechanics using fewer resources than 3D.2D Graphics Programming for Games provides an in-depth single source on creating 2D graphics that c

Mastering Unity 2D Game Development - Simon Jackson 2014-08-26
If you have C# knowledge but now want to become truly confident in creating fully functional 2D RPG games with Unity, then this book will show you everything you need to know.

Creating Games with Unity and Maya - Adam Watkins 2012-10-12
Unity brings you ever closer to the "author once, deploy anywhere" dream. With its multiplatform capabilities, you can target desktop, web, mobile devices, and consoles using a single development engine. Little wonder that Unity has quickly become the #1 game engine out there. Mastering Unity is absolutely essential in an increasingly competitive games market where agility is expected, yet until now practical tutorials were nearly impossible to find. Creating Games with Unity and Maya gives you with an end-to-end solution for Unity game development with Maya. Written by a twelve-year veteran of the 3D animation and games industry and professor of 3D animation, this book takes you step-by-step through the process of developing an entire game from scratch-including coding, art, production, and deployment. This accessible guide provides a "non-programmer" entry point to the world of game creation. Aspiring developers with little or no coding experience will learn character development in Maya, scripts, GUI interface, and first- and third-person interactions.

Game Architecture and Design - Andrew Rollings 2004
A guide to computer game design, architecture, and management explores the application of design principles, shares the experiences of game programmers, and offers an overview of game development software.