Free reading An extensible state machine pattern for interactive (PDF)

Game Programming Patterns Practical UML Statecharts in C/C++ Design Patterns Design Patterns by Tutorials Practical Statecharts in C/C++ Spring 5 Design Patterns Agile Principles, Patterns, and Practices in C# Android Cookbook Handbook of Finite State Based Models and Applications Pattern-oriented Analysis and Design ActionScript 3.0 Design Patterns Applied Akka Patterns Code That Fits in Your Head Design Patterns for Embedded Systems in C Transactions on Pattern Languages of Programming I Java Design Patterns Finite State Machines in Hardware Pattern Classifiers and Trainable Machines Constructing the User Interface with Statecharts State Machines using VHDL Advances in Artificial Life Applied Cryptography and Network Security Test Driven Development for Embedded C Programming Game AI by Example Mastering Python Design Patterns Data Analysis, Machine Learning and Applications Domain-driven Design Pattern-Oriented Software Architecture, A Pattern Language for Distributed Computing Java Cookbook Design Patterns in C# A Pattern Language Java Design Patterns Practical Game AI Programming System Design, Modeling, and Simulation Deep Learning for Coders with fastai and PyTorch Mastering Python Design Patterns Game Development Patterns and Best Practices ECOOP 2008 - Object-Oriented Programming Cloud Native Infrastructure Official Gazette of the United States Patent and Trademark Office

Game Programming Patterns

2014-11-03

the biggest challenge facing many game programmers is completing their game most game projects fizzle out overwhelmed by the complexity of their own code game programming patterns tackles that exact problem based on years of experience in shipped aaa titles this book collects proven patterns to untangle and optimize your game organized as independent recipes so you can pick just the patterns you need you will learn how to write a robust game loop how to organize your entities using components and take advantage of the cpus cache to improve your performance you ll dive deep into how scripting engines encode behavior how quadtrees and other spatial partitions optimize your engine and how other classic design patterns can be used in games

Practical UML Statecharts in C/C++

2008-10-03

practical uml statecharts in c c second edition bridges the gap between high level abstract concepts of the unified modeling language uml and the actual programming aspects of modern hierarchical state machines uml statecharts the book describes a lightweight open source event driven infrastructure called qp that enables direct manual coding uml statecharts and concurrent event driven applications in c or c without big tools this book is presented in two parts in part i you get a practical description of the relevant state machine concepts starting from traditional finite state automata to modern uml state machines followed by state machine coding techniques and state machine design patterns all illustrated with executable examples in part ii you find a detailed design study of a generic real time framework indispensable for combining concurrent event driven state machines into robust applications part ii begins with a clear explanation of the key event driven programming concepts such as inversion of control hollywood principle blocking versus non blocking code run to completion rtc execution semantics the importance of event queues dealing with time and the role of state machines to maintain the context from one event to the next this background is designed to help software developers in making the transition from the traditional sequential to the modern event driven programming which can be one of the trickiest paradigm shifts the lightweight qp event driven infrastructure goes several steps beyond the traditional real time operating system rtos in the simplest configuration qp runs on bare metal microprocessor microcontroller or dsp completely replacing the rtos qp can also work with almost any os rtos to take advantage of the existing device drivers communication stacks and other middleware the accompanying website to this book contains complete open source code for qp ports to popular processors and operating systems including 80x86 arm cortex m3 msp430 and linux as well as all examples described in the book

Design Patterns

1995

software software engineering

Design Patterns by Tutorials

2018-07-17

learn ios design patterns design patterns are reusable solutions to common development problems they aren t project specific so you can adapt and use them in countless apps by learning design patterns you ll become a better developer save time and work less design patterns by tutorials is here to help this book is the easiest and fastest way to get hands on experience with the ios design patterns you need to know who this book is for whether you re a beginner intermediate or advanced ios developer this book is for you you can either read this book from cover to cover or skip around to just the patterns you want to learn topics covered in design patterns by tutorials getting started you ll first learn about how design patterns work and how they can help you build better cleaner apps fundamental patterns you ll progress onto fundamental design patterns such as mvc delegation and strategy which you re likely to use on every ios app intermediate patterns you ll then learn about intermediate design patterns such as mvvm factory and adapter which are less common than fundamental patterns but still very useful for most apps you ll finish off by learning about advanced design patterns including flyweight mediator and command you likely won t use these on every app but they may be just what you need to solve a difficult problem one thing you can count on after reading this book you ll be well prepared to use design patterns in your own apps

Practical Statecharts in C/C++

2002-01-07

downright revolutionary the title is a major understatement quantum programming may ultimately change the way embedded software is designed michael barr editor in chief embedded systems programming magazine click here

Spring 5 Design Patterns

2017-10-06

learn various design patterns and best practices in spring 5 and use them to solve common design problems about this book explore best practices for designing an application manage your code easily with spring s dependency injection pattern understand the benefits that the right design patterns can offer your toolkit who this book is for this book is for developers who would like to use design patterns to address common problems while designing an app using the spring framework and reactive programming approach a basic knowledge of the spring framework and java is assumed what you will learn develop applications using dependency injection patterns learn best practices to design enterprise applications explore aspect oriented programming relating to transactions security and caching build web applications using traditional spring mvc patterns learn to configure spring using xml annotations and java implement caching to improve application performance understand concurrency and handle multiple connections inside a web server utilizing reactive programming pattern to build reactive web applications in detail design patterns help speed up the development process by offering well tested and proven solutions to common problems these patterns coupled with the spring framework offer tremendous improvements in the development process the book begins with an overview of spring framework 5 0 and design patterns you will understand the dependency injection pattern which is the main principle behind the decoupling process that spring performs thus making it easier to manage your code you will learn how gof patterns can be used in application design you will then learn to use proxy patterns in aspect oriented programming and remoting moving on you will understand the jdbc template patterns and their use in abstracting database access then you will be introduced to mvc patterns to build reactive web applications finally you will move on to more advanced topics such as reactive streams and concurrency at the end of this book you will be well equipped to develop efficient enterprise applications using spring 5 with common design patterns style and approach the book takes a pragmatic approach showing various design patterns and best practice considerations including the reactive programming approach with the spring 5 framework and ways to solve common development and design problems for enterprise applications

Agile Principles, Patterns, and Practices in C#

2006-07-20

with the award winning book agile software development principles patterns and practices robert c martin helped bring agile principles to tens of thousands of java and c programmers now net programmers have a definitive guide to agile methods with this completely updated volume from robert c martin and micah martin agile principles patterns and practices in c this book

presents a series of case studies illustrating the fundamentals of agile development and agile design and moves quickly from uml models to real c code the introductory chapters lay out the basics of the agile movement while the later chapters show proven techniques in action the book includes many source code examples that are also available for download from the authors site readers will come away from this book understanding agile principles and the fourteen practices of extreme programming spiking splitting velocity and planning iterations and releases test driven development test first design and acceptance testing refactoring with unit testing pair programming agile design and design smells the five types of uml diagrams and how to use them effectively object oriented package design and design patterns how to put all of it together for a real world project whether you are a c programmer or a visual basic or java programmer learning c a software development manager or a business analyst agile principles patterns and practices in c is the first book you should read to understand agile software and how it applies to programming in the net framework

Android Cookbook

2012-04-20

jump in and build working android apps with the help of over 200 tested recipes contributed by more than three dozen developers

Handbook of Finite State Based Models and Applications

2016-04-19

applicable to any problem that requires a finite number of solutions finite state based models also called finite state machines or finite state automata have found wide use in various areas of computer science and engineering handbook of finite state based models and applications provides a complete collection of introductory materials on fini

Pattern-oriented Analysis and Design

2004

exploit the significant power of design patterns and make better design decisions with the proven poad methodology improve software quality and reliability while reducing costs and maintenance efforts practical case studies and illustrative examples help the reader manage the complexity of software development

ActionScript 3.0 Design Patterns

2007-07-16

now that actionscript is reengineered from top to bottom as a true object oriented programming oop language reusable design patterns are an ideal way to solve common problems in flash and flex applications if you re an experienced flash or flex developer ready to tackle sophisticated programming techniques with actionscript 3 0 this hands on introduction to design patterns is the book you need actionscript 3 0 design patterns takes you step by step through the process first by explaining how design patterns provide a clear road map for structuring code that actually makes oop languages easier to learn and use you then learn about various types of design patterns and construct small abstract examples before trying your hand at building full fledged working applications outlined in the book topics in actionscript 3 0 design patterns include key features of actionscript 3 0 and why it became an oop language oop characteristics such as classes abstraction inheritance and polymorphism the benefits of using design patterns creational patterns including factory and singleton patterns structural patterns including decorator adapter and composite patterns behavioral patterns including command observer strategy and state patterns multiple design patterns including model view controller and symmetric proxy designs during the course of the book you ll work with examples of increasing complexity such as an e business application with service options that users can select an interface for selecting a class of products and individual products in each class an action game application a video record and playback application and many more whether you re coming to flash and flex from java or c or have experience with actionscript 2 0 actionscript 3 0 design patterns will have you constructing truly elegant solutions for your flash and flex applications in no time

Applied Akka Patterns

2016-12-12

when it comes to big data processing we can no longer ignore concurrency or try to add it in after the fact fortunately the solution is not a new paradigm of development but rather an old one with this hands on guide java and scala developers will learn how to embrace concurrent and distributed applications with the open source akka toolkit you ll learn how to put the actor model and its associated patterns to immediate and practical use throughout the book you ll deal with an analogous workforce problem how to schedule a group of people across a variety of projects while optimizing their time and skillsets this example will help you understand how akka uses actors streams and other tools to stitch your application together model software that reflects the real world with domain driven design learn principles and practices for implementing individual

actors unlock the real potential of akka with patterns for combining multiple actors understand the consistency tradeoffs in a distributed system use several akka methods for isolating and dealing with failures explore ways to build systems that support availability and scalability tune your akka application for performance with jvm tools and dispatchers

Code That Fits in Your Head

2021-11-02

how to reduce code complexity and develop software more sustainably mark seemann is well known for explaining complex concepts clearly and thoroughly in this book he condenses his wide ranging software development experience into a set of practical pragmatic techniques for writing sustainable and human friendly code this book will be a must read for every programmer scott wlaschin author of domain modeling made functional code that fits in your head offers indispensable practical advice for writing code at a sustainable pace and controlling the complexity that causes projects to spin out of control reflecting decades of experience helping software teams succeed mark seemann guides you from zero no code to deployed features and shows how to maintain a good cruising speed as you add functionality address cross cutting concerns troubleshoot and optimize you ll find valuable ideas practices and processes for key issues ranging from checklists to teamwork encapsulation to decomposition api design to unit testing seemann illuminates his insights with code examples drawn from a complete sample project written in c they re designed to be clear and useful to anyone who uses any object oriented language including java c and python to facilitate deeper exploration all code and extensive commit messages are available for download choose mindsets and processes that work and escape bad metaphors that don t use checklists to liberate yourself improving outcomes with the skills you already have get past analysis paralysis by creating and deploying a vertical slice of your application counteract forces that lead to code rot and unnecessary complexity master better techniques for changing code behavior discover ways to solve code problems more quickly and effectively think more productively about performance and security if you ve ever suffered through bad projects or had to cope with unmaintainable legacy code this guide will help you make things better next time and every time register your book for convenient access to downloads updates and or corrections as they become available see inside book for details

Design Patterns for Embedded Systems in C

2010-11-03

a recent survey stated that 52 of embedded projects are late by 4 5 months this book can help get those projects in on time

with design patterns the author carefully takes into account the special concerns found in designing and developing embedded applications specifically concurrency communication speed and memory usage patterns are given in uml unified modeling language with examples including ansi c for direct and practical application to c code a basic c knowledge is a prerequisite for the book while uml notation and terminology is included general c programming books do not include discussion of the contraints found within embedded system design the practical examples give the reader an understanding of the use of uml and oo object oriented designs in a resource limited environment also included are two chapters on state machines the beauty of this book is that it can help you today design patterns within these pages are immediately applicable to your project addresses embedded system design concerns such as concurrency communication and memory usage examples contain ansi c for ease of use with c programming code

Transactions on Pattern Languages of Programming I

2010-01-08

the transactions on pattern languages of programming subline aims to publish papers on patterns and pattern languages as applied to software design development and use throughout all phases of the software life cycle from requirements and design to implementation maintenance and evolution the primary focus of this lncs transactions subline is on patterns pattern collections and pattern languages themselves the journal also includes reviews survey articles criticisms of patterns and pattern languages as well as other research on patterns and pattern languages this book the first volume in the transactions on pattern languages of programming series presents eight papers that have been through a careful peer review process involving both pattern experts and domain experts by researchers and practitioners the papers cover a wide range of topics from the architectural design of large scale systems down to very detailed design for microcontroller based embedded systems the first paper presents a substantial pattern language for constructing an important part of an integrated development environment the following papers present patterns for batching requests in client server systems graceful degradation to handle errors and exceptions and accurate timing delays two papers present related patterns that address aspects of service oriented architectures considering synchronization and workflow integration finally the last two papers show how patterns can be combined into systems and then used to document those systems designs

Java Design Patterns

2015-12-31

learn how to implement design patterns in java each pattern in java design patterns is a complete implementation and the output is generated using eclipse making the code accessible to all the examples are chosen so you will be able to absorb the core concepts easily and quickly this book presents the topic of design patterns in java in such a way that anyone can grasp the idea by giving easy to follow examples you will understand the concepts with increasing depth the examples presented are straightforward and the topic is presented in a concise manner key features of the book each of the 23 patterns is described with straightforward java code there is no need to know advanced concepts of java to use this book each of the concepts is connected with a real world example and a computer world example the book uses eclipse ide to generate the output because it is the most popular ide in this field this is a practitioner s book on design patterns in java design patterns are a popular topic in software development a design pattern is a common well described solution to a common software problem there is a lot of written material available on design patterns but scattered and not in one single reference source also many of these examples are unnecessarily big and complex

Finite State Machines in Hardware

2013-12-20

a comprehensive guide to the theory and design of hardware implemented finite state machines with design examples developed in both vhdl and systemverilog languages modern complex digital systems invariably include hardware implemented finite state machines the correct design of such parts is crucial for attaining proper system performance this book offers detailed comprehensive coverage of the theory and design for any category of hardware implemented finite state machines it describes crucial design problems that lead to incorrect or far from optimal implementation and provides examples of finite state machines developed in both vhdl and systemverilog the successor of verilog hardware description languages important features include extensive review of design practices for sequential digital circuits a new division of all state machines into three hardware based categories encompassing all possible situations with numerous practical examples provided in all three categories the presentation of complete designs with detailed vhdl and systemverilog codes comments and simulation results all tested in fpga devices and exercise examples all of which can be synthesized simulated and physically implemented in fpga boards additional material is available on the book s website designing a state machine in hardware is more complex than designing it in software although interest in hardware for finite state machines has grown dramatically in recent years there is no comprehensive treatment of the subject this book offers the most detailed coverage of finite state machines available it will be essential for industrial designers of digital systems and for students of electrical engineering and computer science

Pattern Classifiers and Trainable Machines

2012-12-06

this book is the outgrowth of both a research program and a graduate course at the university of california irvine uci since 1966 as well as a graduate course at the california state polytechnic university pomona cal poly pomona the research program part of the uci pattern recogni tion project was concerned with the design of trainable classifiers the graduate courses were broader in scope including subjects such as feature selection cluster analysis choice of data set and estimates of probability densities in the interest of minimizing overlap with other books on pattern recogni tion or classifier theory we have selected a few topics of special interest for this book and treated them in some depth some of this material has not been previously published the book is intended for use as a guide to the designer of pattern classifiers or as a text in a graduate course in an engi neering or computer science curriculum although this book is directed primarily to engineers and computer scientists it may also be of interest to psychologists biologists medical scientists and social scientists

Constructing the User Interface with Statecharts

1999

readers will learn how to design implement and test high quality user interface software rapidly while using it with any graphic user interface gui development tool this book allows developers to work at the design level and never have to drop down the code

State Machines using VHDL

2021-01-07

this textbook teaches students techniques for the design of advanced digital systems using field programmable gate arrays fpgas the authors focus on communication between fpgas and peripheral devices such as eeprom analog to digital converters sensors digital to analog converters displays etc and in particular state machines and timed state machines for the implementation of serial communication protocols such as uart spi i2c and display protocols such as vga hdmi vhdl is used as the programming language and all topics are covered in a structured step by step manner

Advances in Artificial Life

2011-03-31

this book constitutes the refereed proceedings of the 7th european conference on artificial life ecal 2003 held in dortmund germany in september 2003 the 96 revised full papers presented were carefully reviewed and selected from more than 140 submissions the papers are organized in topical sections on artificial chemistries self organization and self replication artificial societies cellular and neural systems evolution and development evolutionary and adaptive dynamics languages and communication methodologies and applications and robotics and autonomous agents

Applied Cryptography and Network Security

2011-06

this book constitutes the refereed proceedings of the 9th international conference on applied cryptography and network security acns 2011 held in nerja spain in june 2011 the 31 revised full papers included in this volume were carefully reviewed and selected from 172 submissions they are organized in topical sessions on malware and intrusion detection attacks applied crypto signatures and friends eclectic assortment theory encryption broadcast encryption and security services

Test Driven Development for Embedded C

2011-04-25

another day without test driven development means more time wasted chasing bugs and watching your code deteriorate you thought tdd was for someone else but it s not it s for you the embedded c programmer tdd helps you prevent defects and build software with a long useful life this is the first book to teach the hows and whys of tdd for c programmers tdd is a modern programming practice c developers need to know it s a different way to program unit tests are written in a tight feedback loop with the production code assuring your code does what you think you get valuable feedback every few minutes you find mistakes before they become bugs you get early warning of design problems you get immediate notification of side effect defects you get to spend more time adding valuable features to your product james is one of the few experts in applying tdd to embedded c with his 1 5 decades of training coaching and practicing tdd in c c java and c he will lead you from being a novice in tdd to using the techniques that few have mastered this book is full of code written for embedded c programmers you don t just see the end

product you see code and tests evolve james leads you through the thought process and decisions made each step of the way you ll learn techniques for test driving code right nextto the hardware and you ll learn design principles and how to apply them to c to keep your code clean and flexible to run the examples in this book you will need a c c development environment on your machine and the gnu gcc tool chain or microsoft visual studio for c some project conversion may be needed

Programming Game AI by Example

2005

this book describes in detail many of the ai techniques used in modern computer games explicity shows how to implement these practical techniques within the framework of several game developers with a practical foundation to game ai

Mastering Python Design Patterns

2018-08-31

exploit various design patterns to master the art of solving problems using python key features master the application design using the core design patterns and latest features of python 3 7 learn tricks to solve common design and architectural challenges choose the right plan to improve your programs and increase their productivity book description python is an object oriented scripting language that is used in a wide range of categories in software engineering a design pattern is an elected solution for solving software design problems although they have been around for a while design patterns remain one of the top topics in software engineering and are a ready source for software developers to solve the problems they face on a regular basis this book takes you through a variety of design patterns and explains them with real world examples you will get to grips with low level details and concepts that show you how to write python code without focusing on common solutions as enabled in java and c you ll also fnd sections on corrections best practices system architecture and its designing aspects this book will help you learn the core concepts of design patterns and the way they can be used to resolve software design problems you ll focus on most of the gang of four gof design patterns which are used to solve everyday problems and take your skills to the next level with reactive and functional patterns that help you build resilient scalable and robust applications by the end of the book you ll be able to effciently address commonly faced problems and develop applications and also be comfortable working on scalable and maintainable projects of any size what you will learn explore factory method and abstract factory for object creation clone objects using the prototype pattern make incompatible interfaces compatible using the adapter pattern secure an interface using the proxy pattern choose an algorithm dynamically using the strategy pattern keep the logic decoupled from the

ui using the mvc pattern leverage the observer pattern to understand reactive programming explore patterns for cloud native microservices and serverless architectures who this book is for this book is for intermediate python developers prior knowledge of design patterns is not required to enjoy this book

Data Analysis, Machine Learning and Applications

2008-04-13

data analysis and machine learning are research areas at the intersection of computer science artificial intelligence mathematics and statistics they cover general methods and techniques that can be applied to a vast set of applications such as web and text mining marketing medical science bioinformatics and business intelligence this volume contains the revised versions of selected papers in the field of data analysis machine learning and applications presented during the 31st annual conference of the german classification society gesellschaft für klassifikation gfkl the conference was held at the albert ludwigs university in freiburg germany in march 2007

Domain-driven Design

2004

domain driven design incorporates numerous examples in java case studies taken from actual projects that illustrate the application of domain driven design to real world software development

Pattern-Oriented Software Architecture, A Pattern Language for Distributed Computing

2007-04-04

the eagerly awaited pattern oriented software architecture posa volume 4 is about a pattern language for distributed computing the authors will guide you through the best practices and introduce you to key areas of building distributed software systems posa 4 connects many stand alone patterns pattern collections and pattern languages from the existing body of literature found in the posa series such patterns relate to and are useful for distributed computing to a single language the panel of experts provides you with a consistent and coherent holistic view on the craft of building distributed systems includes a foreword by martin fowler a must read for practitioners who want practical advice to develop a comprehensive language integrating patterns

from key literature

Java Cookbook

2014-06-25

from lambda expressions and javafx 8 to new support for network programming and mobile development java 8 brings a wealth of changes this cookbook helps you get up to speed right away with hundreds of hands on recipes across a broad range of java topics you ll learn useful techniques for everything from debugging and data structures to gui development and functional programming each recipe includes self contained code solutions that you can freely use along with a discussion of how and why they work if you are familiar with java basics this cookbook will bolster your knowledge of the language in general and java 8 s main apis in particular recipes include methods for compiling running and debugging manipulating comparing and rearranging text regular expressions for string and pattern matching handling numbers dates and times structuring data with collections arrays and other types object oriented and functional programming techniques directory and filesystem operations working with graphics audio and video gui development including javafx and handlers network programming on both client and server database access using jpa hibernate and jdbc processing json and xml for data storage multithreading and concurrency

Design Patterns in C#

2018-06-21

get hands on experience with each gang of four design pattern using c for each of the patterns you ll see at least one real world scenario a coding example and a complete implementation including output in the first part of design patterns in c you will cover the 23 gang of four gof design patterns before moving onto some alternative design patterns including the simple factory pattern the null object pattern and the mvc pattern the final part winds up with a conclusion and criticisms of design patterns with chapters on anti patterns and memory leaks by working through easy to follow examples you will understand the concepts in depth and have a collection of programs to port over to your own projects along the way the author discusses the different creational structural and behavioral patterns and why such classifications are useful in each of these chapters there is a q a session that clears up any doubts and covers the pros and cons of each of these patterns he finishes the book with faqs that will help you consolidate your knowledge this book presents the topic of design patterns in c in such a way that anyone can grasp the idea what you will learn work with each of the design patterns implement the design patterns in real world applications select an alternative to these patterns by comparing their pros and cons use visual studio community edition 2017

to write code and generate output who this book is for software developers software testers and software architects

A Pattern Language

2018-09-20

you can use this book to design a house for yourself with your family you can use it to work with your neighbors to improve your town and neighborhood you can use it to design an office or a workshop or a public building and you can use it to guide you in the actual process of construction after a ten year silence christopher alexander and his colleagues at the center for environmental structure are now publishing a major statement in the form of three books which will in their words lay the basis for an entirely new approach to architecture building and planning which will we hope replace existing ideas and practices entirely the three books are the timeless way of building the oregon experiment and this book a pattern language at the core of these books is the idea that people should design for themselves their own houses streets and communities this idea may be radical it implies a radical transformation of the architectural profession but it comes simply from the observation that most of the wonderful places of the world were not made by architects but by the people at the core of the books too is the point that in designing their environments people always rely on certain languages which like the languages we speak allow them to articulate and communicate an infinite variety of designs within a forma system which gives them coherence this book provides a language of this kind it will enable a person to make a design for almost any kind of building or any part of the built environment patterns the units of this language are answers to design problems how high should a window sill be how many stories should a building have how much space in a neighborhood should be devoted to grass and trees more than 250 of the patterns in this pattern language are given each consists of a problem statement a discussion of the problem with an illustration and a solution as the authors say in their introduction many of the patterns are archetypal so deeply rooted in the nature of things that it seemly likely that they will be a part of human nature and human action as much in five hundred years as they are today

Java Design Patterns

2018-12-06

get hands on experience implementing 26 of the most common design patterns using java and eclipse in addition to gang of four gof design patterns you will also learn about alternative design patterns and understand the criticisms of design patterns with an overview of anti patterns for each pattern you will see at least one real world scenario a computer world example and a

complete implementation including output this book has three parts the first part covers 23 gang of four gof design patterns the second part includes three alternative design patterns the third part presents criticisms of design patterns with an overview of anti patterns you will work through easy to follow examples to understand the concepts in depth and you will have a collection of programs to port over to your own projects a q a session is included in each chapter and covers the pros and cons of each pattern the last chapter presents faqs about the design patterns the step by step approach of the book helps you apply your skills to learn other patterns on your own and to be familiar with the latest version of java and eclipse what you ll learn work with each of the design patterns implement design patterns in real world applications choose from alternative design patterns by comparing their pros and cons use the eclipse ide to write code and generate output read the in depth q a session in each chapter with pros and cons for each design pattern who this book is for software developers architects and programmers

Practical Game AI Programming

2017-06-30

jump into the world of game ai development about this book move beyond using libraries to create smart game ai and create your own ai projects from scratch implement the latest algorithms for ai development and in game interaction customize your existing game ai and make it better and more efficient to improve your overall game performance who this book is for this book is for game developers with a basic knowledge of game development techniques and some basic programming techniques in c or c what you will learn get to know the basics of how to create different ai for different type of games know what to do when something interferes with the ai choices and how the ai should behave if that happens plan the interaction between the ai character and the environment using smart zones or triggering events use animations correctly blending one animation into another and rather than stopping one animation and starting another calculate the best options for the ai to move using pruning strategies wall distances map preprocess implementation and forced neighbours create theta algorithms to the ai to find short and realistic looking paths add many characters into the same scene and make them behave like a realistic crowd in detail the book starts with the basics examples of ai for different game genres and directly jumps into defining the probabilities and possibilities of the ai character to determine character movement next you ll learn how ai characters should behave within the environment created moving on you ll explore how to work with animations you ll also plan and create pruning strategies and create theta algorithms to find short and realistic looking game paths next you ll learn how the ai should behave when there is a lot of characters in the same scene you ll explore which methods and algorithms such as possibility maps forward chaining plan rete algorithm pruning strategies wall distances and map preprocess implementation should be used on different occasions you ll discover how to overcome some limitations and how to deliver a better experience to the player by the end of the book you think differently about ai style and approach the book has a step by step tutorial style approach the algorithms are explained by

implementing them in

System Design, Modeling, and Simulation

2013-09-27

this book is a definitive introduction to models of computation for the design of complex heterogeneous systems it has a particular focus on cyber physical systems which integrate computing networking and physical dynamics the book captures more than twenty years of experience in the ptolemy project at uc berkeley which pioneered many design modeling and simulation techniques that are now in widespread use all of the methods covered in the book are realized in the open source ptolemy ii modeling framework and are available for experimentation through links provided in the book the book is suitable for engineers scientists researchers and managers who wish to understand the rich possibilities offered by modern modeling techniques the goal of the book is to equip the reader with a breadth of experience that will help in understanding the role that such techniques can play in design

Deep Learning for Coders with fastai and PyTorch

2020-06-29

deep learning is often viewed as the exclusive domain of math phds and big tech companies but as this hands on guide demonstrates programmers comfortable with python can achieve impressive results in deep learning with little math background small amounts of data and minimal code how with fastai the first library to provide a consistent interface to the most frequently used deep learning applications authors jeremy howard and sylvain gugger the creators of fastai show you how to train a model on a wide range of tasks using fastai and pytorch you ll also dive progressively further into deep learning theory to gain a complete understanding of the algorithms behind the scenes train models in computer vision natural language processing tabular data and collaborative filtering learn the latest deep learning techniques that matter most in practice improve accuracy speed and reliability by understanding how deep learning models work discover how to turn your models into web applications implement deep learning algorithms from scratch consider the ethical implications of your work gain insight from the foreword by pytorch cofounder soumith chintala

Mastering Python Design Patterns

2015-01-28

this book is for python programmers with an intermediate background and an interest in design patterns implemented in idiomatic python programmers of other languages who are interested in python can also benefit from this book but it would be better if they first read some introductory materials that explain how things are done in python

Game Development Patterns and Best Practices

2017-04-27

utilize proven solutions to solve common problems in game development about this book untangle your game development workflow make cleaner code and create structurally solid games implement key programming patterns that will enable you to make efficient ai and remove duplication optimize your game using memory management techniques who this book is for if you are a game developer who wants to solve commonly encountered issues or have some way to communicate to other developers in a standardized format then this book is for you knowledge of basic game programming principles and c programming is assumed what you will learn learn what design patterns are and why you would want to use them reduce the maintenance burden with well tested cleaner code employ the singleton pattern effectively to reduce your compiler workload use the factory pattern to help you create different objects with the same creation logic and reduce coding time improve game performance with object pools allow game play to interact with physics or graphics in an abstract way refractor your code to remove common code smells in detail you ve learned how to program and you ve probably created some simple games at some point but now you want to build larger projects and find out how to resolve your problems so instead of a coder you might now want to think like a game developer or software engineer to organize your code well you need certain tools to do so and that s what this book is all about you will learn techniques to code quickly and correctly while ensuring your code is modular and easily understandable to begin we will start with the core game programming patterns but not the usual way we will take the use case strategy with this book we will take an aaa standard game and show you the hurdles at multiple stages of development similarly various use cases are used to showcase other patterns such as the adapter pattern prototype pattern flyweight pattern and observer pattern lastly we ll go over some tips and tricks on how to refactor your code to remove common code smells and make it easier for others to work with you by the end of the book you will be proficient in using the most popular and frequently used patterns with the best practices style and approach this book takes a step by step real life case studies approach every pattern is first explained using a bottleneck we will show you a problem in your everyday workflow and then introduce you to the pattern and show you how the pattern will

resolve the situation

ECOOP 2008 - Object-Oriented Programming

2008-07-01

it is a pleasure to present the proceedings of the 22nd european conference on object oriented programming ecoop 2008 held in paphos cyprus the conference continues to serve a broad object oriented community with a tech cal program spanning theory and practice and a healthy mix of industrial and academic participants this year a strong workshop and tutorial program c plementedthemaintechnicaltrack wehad13workshopsand8tutorials aswell as the co located dynamic language symposium dls finally the program was rounded out with a keynote by rachid guerraoui and a banquet speech by james noble as in previous years two dahl nygaard awards were selected by aito and for the rst time the ecoop program committee gave a best paper award theproceedingsinclude27papersselectedfrom138submissions thepapers werereviewed in a single blind process with three to ve reviews per paper p liminaryversionsofthereviewsweremadeavailabletotheauthorsaweekbefore the pc meeting to allow for short 500 words or less author responses the sponses were discussed at the pc meeting and were instrumental in reaching decisions the pc discussions followed oscar nierstrasz champion pattern pc papers had ve reviews and were held at a higher standard

Cloud Native Infrastructure

2017-10-25

cloud native infrastructure is more than servers network and storage in the cloud it is as much about operational hygiene as it is about elasticity and scalability in this book you ll learn practices patterns and requirements for creating infrastructure that meets your needs capable of managing the full life cycle of cloud native applications justin garrison and kris nova reveal hard earned lessons on architecting infrastructure from companies such as google amazon and netflix they draw inspiration from projects adopted by the cloud native computing foundation cncf and provide examples of patterns seen in existing tools such as kubernetes with this book you will understand why cloud native infrastructure is necessary to effectively run cloud native applications use guidelines to decide when and if your business should adopt cloud native practices learn patterns for deploying and managing infrastructure and applications design tests to prove that your infrastructure works as intended even in a variety of edge cases learn how to secure infrastructure with policy as code

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