

Learning Three Js The Javascript 3d Library For WebGL Second Edition

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Computer Graphics from Scratch - Gabriel Gambetta 2021-05-18
Computer Graphics from Scratch demystifies the algorithms used in modern graphics software and guides beginners through building

photorealistic 3D renders. Computer graphics programming books are often math-heavy and intimidating for newcomers. Not this one. Computer Graphics from Scratch takes a simpler approach by keeping the math to a minimum and

focusing on only one aspect of computer graphics, 3D rendering. You'll build two complete, fully functional renderers: a raytracer, which simulates rays of light as they bounce off objects, and a rasterizer, which converts 3D models into 2D pixels. As you progress you'll learn how to create realistic reflections and shadows, and how to render a scene from any point of view. Pseudocode examples throughout make it easy to write your renderers in any language, and links to live JavaScript demos of each algorithm invite you to explore further on your own. Learn how to:

- Use perspective projection to draw 3D objects on a 2D plane
- Simulate the way rays of light interact with surfaces
- Add mirror-like reflections and cast shadows to objects
- Render a scene from any camera position using clipping planes
- Use flat, Gouraud, and Phong shading to mimic real surface lighting
- Paint texture details onto basic shapes to create realistic-looking objects

Whether you're an aspiring graphics engineer or

a novice programmer curious about how graphics algorithms work, Gabriel Gambetta's simple, clear explanations will quickly put computer graphics concepts and rendering techniques within your reach. All you need is basic coding knowledge and high school math. *Computer Graphics from Scratch* will cover the rest.

Learning Three.js - Jos Dirksen 2013

"Learning Three.js is a hands-on guide which provides everything you need to start working with the powerful JavaScript library, and start creating awesome in-browser visualizations". Learning Three.js is written for anyone looking to get started with Three.js, or looking to improve their skills with the popular js library. The book assumes some knowledge of javascript, but you don't need any knowledge of Three.js itself to follow the book.

Python Graphics - B.J. Korites 2018-06-20

Use Python's built-in features to create innovative graphics for data visualization and

technical illustrations. This book goes beyond simple commands and libraries to explain how to not only display but also rotate, shade, and edit graphics for any purpose. Starting with the essential Python functions to set up a plotting space and produce 2 and 3-dimensional objects, you'll learn how to construct more complex objects, translate and rotate them, remove hidden lines, introduce shading to add realism, and project images to visualize any dataset. The final chapter includes several worked applications in science and engineering including planetary models, which you can adapt for your own use. Written for developers who want to harness Python's capabilities to fine-tune their images, Python Graphics covers the different commands for plotting dots, lines, arrows, or arcs, creating custom plotting grids, correcting distortions, adding text and labels to illustrations, manipulating arcs and circles, specify and use colors, and more. Armed with these techniques and core math skills, you'll be

ready to create and customize detailed technical illustrations or data visualizations. What You'll Learn Use Python's built-in commands for plotting, removing distortions, and rotating objects Create and edit 2D and 3D objects Develop illustrations for scientific and engineering applications Who This Book Is For Python developers looking for tips on how to create illustrations and visualizations, as well as scientists, engineers, or students using Python. It assumes familiarity with vectors, matrices, geometry and trigonometry.

[WebGL Programming Guide](#) - Kouichi Matsuda
2013-07-04

Using WebGL®, you can create sophisticated interactive 3D graphics inside web browsers, without plug-ins. WebGL makes it possible to build a new generation of 3D web games, user interfaces, and information visualization solutions that will run on any standard web browser, and on PCs, smartphones, tablets, game consoles, or other devices. WebGL

Programming Guide will help you get started quickly with interactive WebGL 3D programming, even if you have no prior knowledge of HTML5, JavaScript, 3D graphics, mathematics, or OpenGL. You'll learn step-by-step, through realistic examples, building your skills as you move from simple to complex solutions for building visually appealing web pages and 3D applications with WebGL. Media, 3D graphics, and WebGL pioneers Dr. Kouichi Matsuda and Dr. Rodger Lea offer easy-to-understand tutorials on key aspects of WebGL, plus 100 downloadable sample programs, each demonstrating a specific WebGL topic. You'll move from basic techniques such as rendering, animating, and texturing triangles, all the way to advanced techniques such as fogging, shadowing, shader switching, and displaying 3D models generated by Blender or other authoring tools. This book won't just teach you WebGL best practices, it will give you a library of code to jumpstart your own projects. Coverage includes:

- WebGL's origin, core concepts, features, advantages, and integration with other web standards
- How and basic WebGL functions work together to deliver 3D graphics
- Shader development with OpenGL ES Shading Language (GLSL ES)
- 3D scene drawing: representing user views, controlling space volume, clipping, object creation, and perspective
- Achieving greater realism through lighting and hierarchical objects
- Advanced techniques: object manipulation, heads-up displays, alpha blending, shader switching, and more
- Valuable reference appendixes covering key issues ranging from coordinate systems to matrices and shader loading to web browser settings

This is the newest text in the OpenGL Technical Library, Addison-Wesley's definitive collection of programming guides an reference manuals for OpenGL and its related technologies. The Library enables programmers to gain a practical understanding of OpenGL and the other Khronos application-programming

libraries including OpenGL ES and OpenCL. All of the technologies in the OpenGL Technical Library evolve under the auspices of the Khronos Group, the industry consortium guiding the evolution of modern, open-standards media APIs.

[Learn JavaScript with p5.js](#) - Engin Arslan
2018-03-07

Learn coding from scratch in a highly engaging and visual manner using the vastly popular JavaScript with the programming library p5.js. The skills you will acquire from this book are highly transferable to a myriad of industries and can be used towards building web applications, programmable robots, or generative art. You'll gain the proper context so that you can build a strong foundation for programming. This book won't hinder your momentum with irrelevant technical or theoretical points. The aim is to build a strong, but not overly excessive knowledge to get you up and running with coding. If you want to program creative visuals and bring that skill set to a field of your your

choice, then Learn JavaScript with p5.js is the book for you. What You'll Learn Code from scratch and create computer graphics with JavaScript and the p5.js library Gain the necessary skills to move into your own creative projects Create graphics and interactive experiences using Processing Program using JavaScript and p5.js and secondarily in creating visuals Who This Book is For Artists or a visual designers. Also, those who want to learn the fundamentals of programming through visual examples.

Hlsl Development Cookbook - Doron Feinstein
2013-06-13

Written in an engaging yet practical manner, HLSL Development Cookbook allows you to pick the recipes you need as and when they are required. If you have some basic Direct3D knowledge and want to give your work some additional visual impact by utilizing advanced rendering techniques, then this book is for you. It is also ideal for those seeking to make the

transition from DirectX 9 to DirectX 11, and those who want to implement powerful shaders with the High Level Shader Language (HLSL).

WebGL: Up and Running - Tony Parisi

2012-08-15

Presents an introduction to WebGL development and production concepts to create full 3D applications.

Eloquent JavaScript - Marijn Haverbeke

2011-01-15

JavaScript is at the heart of almost every modern Web application, whether it's Google Apps, Twitter, or the newest browser-based game. Though it's simple for beginners to pick up and play with, JavaScript is not a toy—it's a flexible and complex language that can be used to build full-scale applications. Eloquent JavaScript dives into this flourishing language and teaches you to write code that's beautiful and effective. By immersing you in example code and encouraging experimentation right from the start, the author quickly gives you the tools you need to build

your own programs. As you follow along with examples like an artificial life simulation and a version of the classic game Sokoban, you'll learn to: -Understand the essential elements of programming: syntax, control, and data -Use object-oriented and functional programming techniques to organize and clarify your programs -Script the browser and make basic Web applications -Work with tools like regular expressions and XMLHttpRequest objects And since programming is an art that's best learned by doing, all example code is available online in an interactive sandbox for you to experiment with. With Eloquent JavaScript as your guide, you can tweak, expand, and modify the author's code, or throw it away and build your own creations from scratch. Before you know it, you'll be fluent in the language of the Web.

AR and VR Using the WebXR API - Rakesh

Baruah 2020-12-01

Gain an in-depth knowledge in immersive web development to create augmented reality (AR)

and virtual reality (VR) applications inside web browsers using WebXR API, WebGL, Three.js, and A-Frame. This project-based book will provide the practice and portfolio content to make the most of what the futures of spatial computing and immersive technology have to offer. Beginning with technical analysis of how web browsers function, the book covers programming languages such as WebGL, JavaScript, and HTML, with an eye on a complete understanding of the WebXR lifecycle. You'll then explore how contemporary web browsers work at the code level and see how to set up a local development server and use it with the Visual Studio Code IDE to create 3D animation in the WebGL programming language. With a familiarity of the web-rendering pipeline in place, you'll venture on to WebGL abstractions such as the Three.js JavaScript library and Mozilla's A-Frame XR Framework, which use WebXR to create high-end visual effects. In the final projects of the book, you'll

create an augmented reality web session for an Android phone device, and create a VR scene in A-Frame (built on Three.js) to demo essential components of the WebXR API pertaining to user positioning and interaction. Game engines have become common-place for the creation of mixed reality content. However, developers not interested in learning entirely new workflows may be better suited to work within a medium almost universally open to all—the web; AR and VR Using the WebXR API will show you the way. What You'll Learn Master the creation of virtual reality and augmented reality features for web page Prepare to work as an immersive web developer with a portfolio of projects in sought-after technologies Review the fundamentals of writing shaders in WebGL Experience the unity between client, server, and cloud architecture as it applies to location-based AR Who This Book Is For Aspiring immersive web developers and developers already familiar with the fundamentals of web development who want to

further explore topics such as spatial computing, computer vision, spatial anchors, and cloud-computing for multi-user social experiences.

Three.js Cookbook - Jos Dirksen 2015-01-30

This book is ideal for anyone who already knows JavaScript and would like to get a broad understanding of Three.js quickly, or for those of you who have a basic grasp of using Three.js but want to really make an impact with your 3D visualizations by learning its advanced features. To apply the recipes in this book you don't need to know anything about WebGL; all you need is some general knowledge about JavaScript and HTML.

Professional WebGL Programming - Andreas Anyuru 2012-04-19

Everything you need to know about developing hardware-accelerated 3D graphics with WebGL! As the newest technology for creating 3D graphics on the web, in both games, applications, and on regular websites, WebGL gives web developers the capability to produce

eye-popping graphics. This book teaches you how to use WebGL to create stunning cross-platform apps. The book features several detailed examples that show you how to develop 3D graphics with WebGL, including explanations of code snippets that help you understand the why behind the how. You will also develop a stronger understanding of WebGL development from coverage that:

- Provides a comprehensive overview of WebGL and shows how it relates to other graphics-related technologies
- Addresses important topics such as the WebGL graphics pipeline, 3D transformations, texturing and lighting
- Teaches you how to write vertex shaders and fragment shaders for WebGL
- Includes a lot of useful guidelines, tips, and tricks for WebGL performance optimizations

Professional WebGL Programming is the first book on the market to delve into this fascinating topic and it puts you on your way to mastering the possibilities that exist with WebGL.

Learning Three.js - the JavaScript 3D

Library for WebGL - Jos Dirksen 2015-03-31

If you know JavaScript and want to start creating 3D graphics that run in any browser, this book is a great choice for you. You don't need to know anything about math or WebGL; all that you need is general knowledge of JavaScript and HTML.

Mastering 3D Printing in the Classroom, Library, and Lab - Joan Horvath 2018-10-24

Learn how to manage and integrate the technology of 3D printers in the classroom, library, and lab. With this book, the authors give practical, lessons-learned advice about the nuts and bolts of what happens when you mix 3D printers, teachers, students, and the general public in environments ranging from K-12 and university classrooms to libraries, museums, and after-school community programs. Take your existing programs to the next level with *Mastering 3D Printing in the Classroom, Library, and Lab*. Organized in a way that is readable and easy to understand, this book is your guide to

the many technology options available now in both software and hardware, as well as a compendium of practical use cases and a discussion of how to create experiences that will align with curriculum standards. You'll examine the whole range of working with a 3D printer, from purchase decision to curriculum design. Finally this book points you forward to the digital-fabrication future current students will face, discussing how key skills can be taught as cost-effectively as possible. What You'll LearnDiscover what is really involved with using a 3D printer in a classroom, library, lab, or public space Review use cases of 3D printers designed to enhance student learning and to make practical parts, from elementary school through university research lab Look at career-planning directions in the emerging digital fabrication arena Work with updated tools, hardware, and software for 3D printingWho This Book Is For Educators of all levels, both formal (classroom) and informal (after-school programs,

libraries, museums).

Programming 3D Applications with HTML5 and WebGL - Tony Parisi 2014-02-13

Create high-performance, visually stunning 3D applications for the Web, using HTML5 and related technologies such as CSS3 and WebGL—the emerging web graphics standard. With this book, you'll learn how to use the tools, frameworks, and libraries for building 3D models and animations, mind-blowing visual effects, and advanced user interaction in both desktop and mobile browsers. In two parts—Foundations and Application Development Techniques—author Tony Parisi provides a thorough grounding in theory and practice for designing everything from a simple 3D product viewer to immersive games and interactive training systems. Ideal for developers with Javascript and HTML experience. Explore HTML5 APIs and related technologies for creating 3D web graphics, including WebGL, Canvas, and CSS Work with the popular

JavaScript 3D rendering and animation libraries Three.js and Tween.js Delve into the 3D content creation pipeline, and the modeling and animation tools for creating killer 3D content Look into several game engines and frameworks for building 3D applications, including the author's Vizi framework Create 3D environments with multiple objects and complex interaction, using examples and supporting code Examine the issues involved in building WebGL-based 3D applications for mobile browsers

Learning Three.js - the JavaScript 3D Library for WebGL - Second Edition - Jos Dirksen 2015-03-31

If you know JavaScript and want to start creating 3D graphics that run in any browser, this book is a great choice for you. You don't need to know anything about math or WebGL; all that you need is general knowledge of JavaScript and HTML.

Introduction to Computer Graphics - Frank Klawonn 2012-01-18

This book is an essential tool for second-year undergraduate students and above, providing clear and concise explanations of the basic concepts of computer graphics, and enabling the reader to immediately implement these concepts in Java 2D and/or 3D with only elementary knowledge of the programming language.

Features: provides an ideal, self-contained introduction to computer graphics, with theory and practice presented in integrated combination; presents a practical guide to basic computer graphics programming using Java 2D and 3D; includes new and expanded content on the integration of text in 3D, particle systems, billboard behaviours, dynamic surfaces, the concept of level of detail, and the use of functions of two variables for surface modelling; contains many pedagogical tools, including numerous easy-to-understand example programs and end-of-chapter exercises; supplies useful supplementary material, including additional exercises, solutions, and program examples, at

an associated website.

Learning Three.js: The JavaScript 3D Library for WebGL - Jos Dirksen 2013-10-17

“Learning Three.js is a hands-on guide which provides everything you need to start working with the powerful JavaScript library, and start creating awesome in-browser visualizations”. Learning Three.js is written for anyone looking to get started with Three.js, or looking to improve their skills with the popular js library. The book assumes some knowledge of javascript, but you don’t need any knowledge of Three.js itself to follow the book.

Learning Virtual Reality - Tony Parisi 2015-10-26
Annotation Get an introduction to the technologies, tools, and techniques for programming virtual reality on the latest generation of desktop and mobile VR hardware. With this hands-on guide, you'll learn essential development and production concepts, including UI design, stereo rendering, 3D input, and programming VR applications for native desktop,

mobile and the web. You don't have to be a game development wizard or have 3D graphics experience to get started. If you have basic programming skills and some familiarity with mobile development, this book will help you gain a working knowledge of virtual reality through clear and simple examples.

D3.js in Action - Elijah Meeks 2017-11-17
Summary D3.js in Action, Second Edition is completely revised and updated for D3 v4 and ES6. It's a practical tutorial for creating interactive graphics and data-driven applications using D3. Purchase of the print book includes a free eBook in PDF, Kindle, and ePub formats from Manning Publications. About the Technology Visualizing complex data is hard. Visualizing complex data on the web is darn near impossible without D3.js. D3 is a JavaScript library that provides a simple but powerful data visualization API over HTML, CSS, and SVG. Start with a structure, dataset, or algorithm; mix in D3; and you can programmatically generate

static, animated, or interactive images that scale to any screen or browser. It's easy, and after a little practice, you'll be blown away by how beautiful your results can be! About the Book D3.js in Action, Second Edition is a completely updated revision of Manning's bestselling guide to data visualization with D3. You'll explore dozens of real-world examples, including force and network diagrams, workflow illustrations, geospatial constructions, and more. Along the way, you'll pick up best practices for building interactive graphics, animations, and live data representations. You'll also step through a fully interactive application created with D3 and React. What's Inside Updated for D3 v4 and ES6 Reusable layouts and components Geospatial data visualizations Mixed-mode rendering About the Reader Suitable for web developers with HTML, CSS, and JavaScript skills. No specialized data science skills required. About the Author Elijah Meeks is a senior data visualization engineer at Netflix. Table of Contents PART 1 -

D3.JS FUNDAMENTALS An introduction to D3.js
Information visualization data flow Data-driven
design and interaction Chart components

Layouts PART 2 - COMPLEX DATA

VISUALIZATION Hierarchical visualization

Network visualization Geospatial information
visualization PART 3 - ADVANCED

TECHNIQUES Interactive applications with
React and D3 Writing layouts and components
Mixed mode rendering

Learning HTML5 Game Programming - James
Lamar Williams 2012

Presents practical instruction and theory for
using the features of HTML5 to create a online
gaming applications.

Beginning Blender - Lance Flavell 2011-08-27

A new world of creative possibilities is opened
by Blender, the most popular and powerful open
source 3D and animation tool. Blender is not just
free software; it is also an important professional
tool used in animated shorts, television
commercials, and shows, as well as in

production for films like Spiderman 2. Lance
Flavell's *Beginning Blender* will give you the
skills to start shaping new worlds and virtual
characters, and perhaps lead you down a new
professional path. *Beginning Blender* covers the
Blender 2.5 release in-depth. The book starts
with the creation of simple figures using basic
modeling and sculpting. It then teaches you how
to bridge from modeling to animation, and from
scene setup to texture creation and rendering,
lighting, rigging, and ultimately, full animation.
You will create and mix your own movie scenes,
and you will even learn the basics of games logic
and how to deal with games physics. Whether
you are new to modeling, animation, and game
design, or whether you are simply new to
Blender, this book will show you everything you
need to know to get your 3D projects underway.

WebGL Insights - Patrick Cozzi 2015-08-06

Given its ubiquity, plugin-free deployment, and
ease of development, the adoption of WebGL is
on the rise. Skilled WebGL developers provide

organizations with the ability to develop and implement efficient and robust solutions—creating a growing demand for skilled WebGL developers. WebGL Insights shares experience-backed lessons learned by the WebGL

Javascript for R - John Coene 2021-07-15

Little known to many, R works just as well with JavaScript—this book delves into the various ways both languages can work together. The ultimate aim of this work is to put the reader at ease with inviting JavaScript in their data science workflow. In that respect the book is not teaching one JavaScript but rather we show how little JavaScript can greatly support and enhance R code. Therefore, the focus is on integrating external JavaScript libraries and no prior knowledge of JavaScript is required. Key Features: ● Easy to pick up. ● An entry way to learning JavaScript for R. ● Covers topics not covered anywhere else. ● Easy to follow along. [Deep Learning with JavaScript](#) - Stanley Bileschi 2020-01-24

Summary Deep learning has transformed the fields of computer vision, image processing, and natural language applications. Thanks to TensorFlow.js, now JavaScript developers can build deep learning apps without relying on Python or R. Deep Learning with JavaScript shows developers how they can bring DL technology to the web. Written by the main authors of the TensorFlow library, this new book provides fascinating use cases and in-depth instruction for deep learning apps in JavaScript in your browser or on Node. Foreword by Nikhil Thorat and Daniel Smilkov. About the technology Running deep learning applications in the browser or on Node-based backends opens up exciting possibilities for smart web applications. With the TensorFlow.js library, you build and train deep learning models with JavaScript. Offering uncompromising production-quality scalability, modularity, and responsiveness, TensorFlow.js really shines for its portability. Its models run anywhere JavaScript runs, pushing

ML farther up the application stack. About the book *In Deep Learning with JavaScript*, you'll learn to use TensorFlow.js to build deep learning models that run directly in the browser. This fast-paced book, written by Google engineers, is practical, engaging, and easy to follow. Through diverse examples featuring text analysis, speech processing, image recognition, and self-learning game AI, you'll master all the basics of deep learning and explore advanced concepts, like retraining existing models for transfer learning and image generation. What's inside - Image and language processing in the browser - Tuning ML models with client-side data - Text and image creation with generative deep learning - Source code samples to test and modify About the reader For JavaScript programmers interested in deep learning. About the author Shangqing Cai, Stanley Bileschi and Eric D. Nielsen are software engineers with experience on the Google Brain team, and were crucial to the development of the high-level API of TensorFlow.js. This book is

based in part on the classic, *Deep Learning with Python* by François Chollet. TOC: PART 1 - MOTIVATION AND BASIC CONCEPTS 1 • Deep learning and JavaScript PART 2 - A GENTLE INTRODUCTION TO TENSORFLOW.JS 2 • Getting started: Simple linear regression in TensorFlow.js 3 • Adding nonlinearity: Beyond weighted sums 4 • Recognizing images and sounds using convnets 5 • Transfer learning: Reusing pretrained neural networks PART 3 - ADVANCED DEEP LEARNING WITH TENSORFLOW.JS 6 • Working with data 7 • Visualizing data and models 8 • Underfitting, overfitting, and the universal workflow of machine learning 9 • Deep learning for sequences and text 10 • Generative deep learning 11 • Basics of deep reinforcement learning PART 4 - SUMMARY AND CLOSING WORDS 12 • Testing, optimizing, and deploying models 13 • Summary, conclusions, and beyond **JavaScript Frameworks for Modern Web Development** - Sufyan bin Uzayr 2019-10-31

Enrich your software design skills and take a guided tour of the wild, vast, and untamed frontier that is JavaScript development. Especially useful for frontend developers, this revision includes specific chapters on React and VueJS, as well as an updated one on Angular. To help you get the most of your new skills, each chapter also has a "further reading" section. This book will serve as an introduction to both new and well established libraries and frameworks, such as Angular, VueJS, React, Grunt, Yeoman, RequireJS, Browserify, Knockout, Kraken, Async.js, Underscore, and Lodash. It also covers utilities that have gained popular traction and support from seasoned developers and tools applicable to the entire development stack, both client- and server-side. While no single book can possibly cover every JavaScript library of value, JavaScript Frameworks for Modern Web Development focuses on incredibly useful libraries and frameworks that production software uses. You will be treated to detailed

analyses and sample code for tools that manage dependencies, structure code in a modular fashion, automate repetitive build tasks, create specialized servers, structure client side applications, facilitate horizontal scaling, and interacting with disparate data stores. What You'll Learn Work with a variety of JavaScript frameworks, such as Angular, Vue, React, RequireJS, Knockout, and more Choose the right framework for different types of projects Employ the appropriate libraries and tools in your projects Discover useful JavaScript development tools such as Grunt, Yeoman, Lodash, etc. Who This Book Is For Web developers of all levels of ability; particularly relevant for front-end developers, server-side coders, and developers interested in learning JavaScript.

Flutter Complete Reference - Alberto Miola
2020-09-30

Flutter is Google's UI toolkit for creating beautiful and native applications for mobile, desktop and web from a single Dart codebase. In

this book we cover in detail the Dart programming language (version 2.10, with null safety support) and the Flutter framework (version 1.20). While reading the chapters, you'll find a lot of good practices, tips and performance advices to build high quality products. The book is divided in 3 parts. PART 1: It's about the Dart programming language (classes, exceptions, inheritance, null safety, streams, SOLID principles...). PART 2. It's about the Flutter framework (localization, routing, state management with Bloc and Provider, testing, performances with DevTools, animations...). PART 3. It's a long collection of examples (using Firestore, monetizing apps, using gestures, networking, publishing packages at pub.dev, race recognition with ML kits, playing audio and video...). The official website of the book contains the complete source code of the examples and a "Quiz Game" to test your Dart and Flutter skills!

[Coding with JavaScript For Dummies](#) - Chris

Minnick 2015-05-12

Go from beginner to builder quickly with this hands-on JavaScript guide Coding with JavaScript For Dummies provides easy, hands-on instruction for anyone looking to learn this popular client-side language. No experience? No problem! This friendly guide starts from the very beginning and walks you through the basics, then shows you how to apply what you've learned to real projects. You'll start building right away, including web page elements and simple applications, so you can immediately see how JavaScript is used in the real world. Online exercises allow you to test your code and expand your skills, and the easy-to-follow instruction provides step-by-step guidance toward understanding the JavaScript syntax, applications, and language. JavaScript enhances static web pages by providing dynamic elements that can adapt and react to user action. It's a need-to-know tool for aspiring web designers, but anyone can benefit from understanding this

core development language. Coding with JavaScript For Dummies takes you from beginner to builder quickly as you: Learn what JavaScript does, how it works, and where to use it Master the core elements of JavaScript and immediately put it to work Build interactive web elements and try out your code online Create basic applications as you apply JavaScript to the app development workflow Anytime a website responds to your movement around the screen, that's JavaScript. It makes websites more functional, more beautiful, and more engaging, and your site visitors will demand nothing less. If you want to build a better website, you need JavaScript. If you need JavaScript, Coding with JavaScript For Dummies gets you started off quickly and painlessly, with plenty of hands-on practice.

JavaScript for Kids - Nick Morgan 2014-12-14
JavaScript is the programming language of the Internet, the secret sauce that makes the Web awesome, your favorite sites interactive, and

online games fun! JavaScript for Kids is a lighthearted introduction that teaches programming essentials through patient, step-by-step examples paired with funny illustrations. You'll begin with the basics, like working with strings, arrays, and loops, and then move on to more advanced topics, like building interactivity with jQuery and drawing graphics with Canvas. Along the way, you'll write games such as Find the Buried Treasure, Hangman, and Snake. You'll also learn how to: -Create functions to organize and reuse your code -Write and modify HTML to create dynamic web pages -Use the DOM and jQuery to make your web pages react to user input -Use the Canvas element to draw and animate graphics -Program real user-controlled games with collision detection and score keeping With visual examples like bouncing balls, animated bees, and racing cars, you can really see what you're programming. Each chapter builds on the last, and programming challenges at the end of each

chapter will stretch your brain and inspire your own amazing programs. Make something cool with JavaScript today! Ages 10+ (and their parents!)

Learn Chart.js - Helder da Rocha 2019-02-28

Design interactive graphics and visuals for your data-driven applications using the popular open-source Chart.js data visualization library. Key Features Harness the power of JavaScript, HTML, and CSS to create interactive visualizations Display quantitative information efficiently in the form of attractive charts by using Chart.js A practical guide for creating data-driven applications using open-source JavaScript library Book Description Chart.js is a free, open-source data visualization library, maintained by an active community of developers in GitHub, where it rates as the second most popular data visualization library. If you want to quickly create responsive Web-based data visualizations for the Web, Chart.js is a great choice. This book guides the reader

through dozens of practical examples, complete with code you can run and modify as you wish. It is a practical hands-on introduction to Chart.js. If you have basic knowledge of HTML, CSS and JavaScript you can learn to create beautiful interactive Web Canvas-based visualizations for your data using Chart.js. This book will help you set up Chart.js in a Web page and show how to create each one of the eight Chart.js chart types. You will also learn how to configure most properties that override Chart's default styles and behaviors. Practical applications of Chart.js are exemplified using real data files obtained from public data portals. You will learn how to load, parse, filter and select the data you wish to display from those files. You will also learn how to create visualizations that reveal patterns in the data. This book is based on Chart.js version 2.7.3 and ES2015 JavaScript. By the end of the book, you will be able to create beautiful, efficient and interactive data visualizations for the Web using Chart.js. What you will

learn Learn how to create interactive and responsive data visualizations using Chart.js Learn how to create Canvas-based graphics without Canvas programming Create composite charts and configure animated data updates and transitions Efficiently display quantitative information using bar and line charts, scatterplots, and pie charts Learn how to load, parse, and filter external files in JSON and CSV formats Understand the benefits of using a data visualization framework Who this book is for The ideal target audience of this book includes web developers and designers, data journalists, data scientists and artists who wish to create interactive data visualizations for the Web. Basic knowledge of HTML, CSS, and JavaScript is required. No Canvas knowledge is necessary.

Learning the Yahoo! User Interface Library - Dan Wellman 2008

The Yahoo! User Interface (YUI) Library is a set of utilities and controls, written in JavaScript, for building richly interactive web applications

using techniques such as DOM scripting, DHTML, and AJAX. The YUI Library also includes several core CSS resources. All components in the YUI Library have been released as open source under a BSD license and are free for all uses. This book covers all released components whether utility, control, core file, or CSS tool. Methods of the YAHOO Global Object are used and discussed throughout the book. The basics of each control will be presented, along with a detailed example showing its use to create complex, fully featured, cross-browser, Web 2.0 user interfaces. Besides giving you a deep understand of the YUI library, this book will expand your knowledge of object-oriented JavaScript programming, as well as strengthen your understanding of the DOM and CSS. You will learn to create a number of powerful JavaScript controls that can be used straight away in your own applications.

Learn Three.js - Jos Dirksen 2018-08-31
Create and animate stunning 3D browser based

graphics with Three.js JavaScript library Key Features Enhance your 3D graphics with light sources, shadows, advanced materials, and textures Load models from external sources, and visualize and animate them directly from JavaScript Create your own custom WebGL shader and explore the postprocessing feature of Three.js Book Description WebGL makes it possible to create 3D graphics in the browser without having to use plugins such as Flash and Java. Programming WebGL, however, is difficult and complex. With Three.js, it is possible to create stunning 3D graphics in an intuitive manner using JavaScript, without having to learn WebGL. With this book, you'll learn how to create and animate beautiful looking 3D scenes directly in your browser-utilizing the full potential of WebGL and modern browsers. It starts with the basic concepts and building blocks used in Three.js. From there on, it will expand on these subjects using extensive examples and code samples. You will learn to

create, or load, from externally created models, realistic looking 3D objects using materials and textures. You'll find out how to easily control the camera using the Three.js built-in in camera controls, which will enable you to fly or walk around the 3D scene you created. You will then use the HTML5 video and canvas elements as a material for your 3D objects and to animate your models. Finally, you will learn to use morph and skeleton-based animation, and even how to add physics, such as gravity and collision detection, to your scene. After reading this book, you'll know everything that is required to create 3D animated graphics using Three.js. What you will learn Work with the different types of materials in Three.js and see how they interact with your 3D objects and the rest of the environment Implement the different camera controls provided by Three.js to effortlessly navigate around your 3D scene Work with vertices directly to create snow, rain, and galaxy-like effects Import and animate models from external

formats, such as OBJ, STL, and COLLADA Create and run animations using morph targets and bones animations Explore advanced textures on materials to create realistic looking 3D objects by using bump maps, normal maps, specular maps, and light maps Interact directly with WebGL by creating custom vertex and fragment shaders Who this book is for The ideal target audience for this book would be JavaScript developers who who want to learn how to use the Three.js library

Real-Time Rendering - Tomas Akenine-Möller
2019-01-18

Thoroughly revised, this third edition focuses on modern techniques used to generate synthetic three-dimensional images in a fraction of a second. With the advent of programmable shaders, a wide variety of new algorithms have arisen and evolved over the past few years. This edition discusses current, practical rendering methods used in games and other applications. It also presents a solid theoretical framework

and relevant mathematics for the field of interactive computer graphics, all in an approachable style. The authors have made the figures used in the book available for download for fair use.:Download Figures. Reviews Rendering has been a required reference for professional graphics practitioners for nearly a decade. This latest edition is as relevant as ever, covering topics from essential mathematical foundations to advanced techniques used by today's cutting edge games. -- Gabe Newell, President, Valve, May 2008 Rendering ... has been completely revised and revamped for its updated third edition, which focuses on modern techniques used to generate three-dimensional images in a fraction of the time old processes took. From practical rendering for games to math and details for better interactive applications, it's not to be missed. -- The Bookwatch, November 2008 You'll get brilliantly lucid explanations of concepts like vertex morphing and variance shadow mapping—as

well as a new respect for the incredible craftsmanship that goes into today's PC games. - Logan Decker, PC Gamer Magazine , February 2009

Three.js - JD Gauchat 2018-01-02

Learn how to create web applications and video games in 3D with the Three.js library. After reading this guide, you will know how to define a 3D world, how to incorporate textures and models, and how to create 3D animations and video games. Table of Contents THREE.JS Renderer Scene Camera Meshes Geometric Primitives Materials Implementation Transformations Lights Textures UV Mapping Canvas Textures Video Textures 3D Models 3D Animations QUICK REFERENCE Renderer Cameras Geometries Materials Transformations Lights Textures This guide assumes that you have a basic knowledge of HTML, CSS and JavaScript, and you know how to create files and upload them to a server. If you don't know how to program in HTML, CSS or JavaScript, you can

download our guides Introduction to HTML, Introduction to CSS, and Introduction to JavaScript. For a complete course on web development, read our book HTML5 for Masterminds. This guide is a collection of excerpts from the book HTML5 for Masterminds. The information included in this guide will help you understand a particular aspect of web development, but it will not teach you everything you need to know to develop a website or a web application. If you need a complete course on web development, read our book HTML5 for Masterminds. For more information, visit our website at www.formasterminds.com.

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Create and animate stunning 3D browser based graphics with Three.js JavaScript library Key Features Enhance your 3D graphics with light sources, shadows, advanced materials, and textures Load models from external sources, and visualize and animate them directly from JavaScript Create your own custom WebGL

shader and explore the postprocessing feature of Three.js Book Description WebGL makes it possible to create 3D graphics in the browser without having to use plugins such as Flash and Java. Programming WebGL, however, is difficult and complex. With Three.js, it is possible to create stunning 3D graphics in an intuitive manner using JavaScript, without having to learn WebGL. With this book, you'll learn how to create and animate beautiful looking 3D scenes directly in your browser-utilizing the full potential of WebGL and modern browsers. It starts with the basic concepts and building blocks used in Three.js.

Game Development with Three.js - Isaac Sukin 2013-10-24

A step-by-step, example-based guide to building immersive 3D games on the Web using the Three.js graphics library. This book is for people interested in programming 3D games for the Web. Readers are expected to have basic knowledge of JavaScript syntax and a basic

understanding of HTML and CSS. This book will be useful regardless of prior experience with game programming, whether you intend to build casual side projects or large-scale professional titles.

Real-Time 3D Graphics with WebGL 2 - Farhad Ghayour 2018-10-31

A comprehensive guide with 80+ examples on 3D programming in WebGL 2, covering computer graphics topics such as rendering, 3D math, camera, and more Key Features Create visually stunning, high-performance 3D applications for the web with WebGL 2 A complete course on 3D computer graphics: rendering, 3D math, lighting, cameras, and more Unlock a variety of new and advanced features offered in WebGL 2 Book Description As highly interactive applications have become an increasingly important part of the user experience, WebGL is a unique and cutting-edge technology that brings hardware-accelerated 3D graphics to the web. Packed with 80+ examples,

this book guides readers through the landscape of real-time computer graphics using WebGL 2. Each chapter covers foundational concepts in 3D graphics programming with various implementations. Topics are always associated with exercises for a hands-on approach to learning. This book presents a clear roadmap to learning real-time 3D computer graphics with WebGL 2. Each chapter starts with a summary of the learning goals for the chapter, followed by a detailed description of each topic. The book offers example-rich, up-to-date introductions to a wide range of essential 3D computer graphics topics, including rendering, colors, textures, transformations, framebuffers, lights, surfaces, blending, geometry construction, advanced techniques, and more. With each chapter, you will "level up" your 3D graphics programming skills. This book will become your trustworthy companion in developing highly interactive 3D web applications with WebGL and JavaScript. What you will learn Understand the rendering

pipeline provided in WebGL Build and render 3D objects with WebGL Develop lights using shaders, 3D math, and the physics of light reflection Create a camera and use it to navigate a 3D scene Use texturing, lighting, and shading techniques to render realistic 3D scenes Implement object selection and interaction in a 3D scene Cover advanced techniques for creating immersive and compelling scenes Learn new and advanced features offered in WebGL 2 Who this book is for This book is intended for developers who are interested in building highly interactive 3D applications for the web. A basic understanding of JavaScript is necessary; no prior computer graphics or WebGL knowledge is required.

JavaScript Bible - Danny Goodman 2010-09-23 The bestselling JavaScript reference, now updated to reflect changes in technology and best practices As the most comprehensive book on the market, the JavaScript Bible is a classic bestseller that keeps you up to date on the latest

changes in JavaScript, the leading technology for incorporating interactivity into Web pages. Part tutorial, part reference, this book serves as both a learning tool for building new JavaScript skills as well as a detailed reference for the more experienced JavaScript user. You'll get up-to-date coverage on the latest JavaScript practices that have been implemented since the previous edition, as well as the most updated code listings that reflect new concepts. Plus, you'll learn how to apply the latest JavaScript exception handling and custom object techniques. Coverage includes: JavaScript's Role in the World Wide Web and Beyond Developing a Scripting Strategy Selecting and Using Your Tools JavaScript Essentials Your First JavaScript Script Browser and Document Objects Scripts and HTML Documents Programming Fundamentals Window and Document Objects Forms and Form Elements Strings, Math, and Dates Scripting Frames and Multiple Windows Images and Dynamic HTML The String Object

The Math, Number, and Boolean Objects The Date Object The Array Object JSON - Native JavaScript Object Notation E4X - Native XML Processing Control Structures and Exception Handling JavaScript Operators Function Objects and Custom Objects Global Functions and Statements Document Object Model Essentials Generic HTML Element Objects Window and Frame Objects Location and History Objects Document and Body Objects Link and Anchor Objects Image, Area, Map, and Canvas Objects Event Objects Practical examples of working code round out this new edition and contribute to helping you learn JavaScript quickly yet thoroughly.

Hands-On Machine Learning with

TensorFlow.js - Kai Sasaki 2019-11-27

Get hands-on with the browser-based JavaScript library for training and deploying machine learning models effectively Key Features Build, train and run machine learning models in the browser using TensorFlow.js Create smart web

applications from scratch with the help of useful examples Use flexible and intuitive APIs from TensorFlow.js to understand how machine learning algorithms function Book Description TensorFlow.js is a framework that enables you to create performant machine learning (ML) applications that run smoothly in a web browser. With this book, you will learn how to use TensorFlow.js to implement various ML models through an example-based approach. Starting with the basics, you'll understand how ML models can be built on the web. Moving on, you will get to grips with the TensorFlow.js ecosystem to develop applications more efficiently. The book will then guide you through implementing ML techniques and algorithms such as regression, clustering, fast Fourier transform (FFT), and dimensionality reduction. You will later cover the Bellman equation to solve Markov decision process (MDP) problems and understand how it is related to reinforcement learning. Finally, you will explore

techniques for deploying ML-based web applications and training models with TensorFlow Core. Throughout this ML book, you'll discover useful tips and tricks that will build on your knowledge. By the end of this book, you will be equipped with the skills you need to create your own web-based ML applications and fine-tune models to achieve high performance. What you will learn Use the t-SNE algorithm in TensorFlow.js to reduce dimensions in an input dataset Deploy tfjs-converter to convert Keras models and load them into TensorFlow.js Apply the Bellman equation to solve MDP problems Use the k-means algorithm in TensorFlow.js to visualize prediction results Create tf.js packages with Parcel, Webpack, and Rollup to deploy web apps Implement tf.js backend frameworks to tune and accelerate app performance Who this book is for This book is for web developers who want to learn how to integrate machine learning techniques with web-based applications from

scratch. This book will also appeal to data scientists, machine learning practitioners, and deep learning enthusiasts who are looking to perform accelerated, browser-based machine learning on Web using TensorFlow.js. Working knowledge of JavaScript programming language is all you need to get started.

Learning Web Design - Jennifer Robbins
2018-05-11

Do you want to build web pages but have no prior experience? This friendly guide is the perfect place to start. You'll begin at square one, learning how the web and web pages work, and then steadily build from there. By the end of the book, you'll have the skills to create a simple site with multicolumn pages that adapt for mobile devices. Each chapter provides exercises to help you learn various techniques and short quizzes to make sure you understand key concepts. This thoroughly revised edition is ideal for students and professionals of all backgrounds and skill levels. It is simple and clear enough for

beginners, yet thorough enough to be a useful reference for experienced developers keeping their skills up to date. Build HTML pages with text, links, images, tables, and forms Use style sheets (CSS) for colors, backgrounds, formatting text, page layout, and even simple animation effects Learn how JavaScript works and why the language is so important in web design Create and optimize web images so they'll download as quickly as possible NEW! Use CSS Flexbox and Grid for sophisticated and flexible page layout NEW! Learn the ins and outs of Responsive Web Design to make web pages look great on all devices NEW! Become familiar with the command line, Git, and other tools in the modern web developer's toolkit NEW! Get to know the super-powers of SVG graphics

Mixing Secrets for the Small Studio - Mike Senior
2018-08-06

Discover how to achieve release-quality mixes even in the smallest studios by applying power-user techniques from the world's most

successful producers. *Mixing Secrets for the Small Studio* is the best-selling primer for small-studio enthusiasts who want chart-ready sonics in a hurry. Drawing on the back-room strategies of more than 160 famous names, this entertaining and down-to-earth guide leads you step-by-step through the entire mixing process. On the way, you'll unravel the mysteries of every type of mix processing, from simple EQ and compression through to advanced spectral dynamics and "fairy dust" effects. User-friendly explanations introduce technical concepts on a strictly need-to-know basis, while chapter summaries and assignments are perfect for school and college use. ■ Learn the subtle editing, arrangement, and monitoring tactics which give industry insiders their competitive

edge, and master the psychological tricks which protect you from all the biggest rookie mistakes. ■ Find out where you don't need to spend money, as well as how to make a limited budget really count. ■ Pick up tricks and tips from leading-edge engineers working on today's multi-platinum hits, including Derek "MixedByAli" Ali, Michael Brauer, Dylan "3D" Dresdow, Tom Elmhirst, Serban Ghenea, Jacquire King, the Lord-Alge brothers, Tony Maserati, Manny Marroquin, Noah "50" Shebib, Mark "Spike" Stent, DJ Swivel, Phil Tan, Andy Wallace, Young Guru, and many, many more... Now extensively expanded and updated, including new sections on mix-buss processing, mastering, and the latest advances in plug-in technology.