Geoserver Beginners Guide

This book is a simple step-by-step, example-oriented guide with a focus on providing the practical skills necessary to develop and customize apps with Apps Script. If you are an application developer with no knowledge of App Script, and would like to learn to build apps using Google Apps script from scratch, then this book is for you. Basic JavaScript knowledge is r

* The first book to cover MapServer. * Shows readers how to build dynamic maps using popular open source languages including PHP, Perl and Python. * Shows readers how to pull map information from a MySQL database, to build data-driven mapping applications.

The Soil Organic Carbon Mapping cookbook provides a step-by-step guidance for developing 1 km grids for soil carbon stocks. It includes the preparation of local soil data, the compilation and pre-processing of ancillary spatial data sets, upscaling methodologies, and uncertainty assessments. Guidance is mainly specific to soil carbon data, but also contains many gen relevant for other soil properties. This second edition of the cookbook provides generic methodologies and technical steps to produce SOC maps and has been updated with knowledge and practical experiences gained during the implementation process of GSOCmap V1.0 throughout 2017. Guidance is mainly specific to SOC data, but as this cookbook contains generic applicable to map various soil properties.

Maps are a fundamental resource in a diverse array of applications ranging from everyday activities, such as route planning through the legal demarcation of space to scientific studies, such as those seeking to understand biodiversity and inform the design of nature reserves for species conservation. For a map to have value, it should provide an accurate and timel this can be a challenge in a dynamic world. Fortunately, mapping activities have benefitted greatly from recent advances in geoinformation technologies. Satellite remote sensing, for example, now offers unparalleled data acquisition and authoritative mapping agencies have developed systems for the routine production of maps in accordance with strict standards. U exclusive realm of authoritative agencies but technological development has also allowed the rise of the amateur mapping community. The proliferation of inexpensive and highly mobile and location aware devices together with Web 2.0 technology have fostered the emergence of the citizen as a source of data. Mapping presently benefits from vast amounts of spat observations of geographic phenomena, which can inform map production, revision and evaluation. The great potential of these developments is, however, often limited by concerns. The latter span issues from the nature of the citizens through the way data are collected and shared to the quality and trustworthiness of the data. This book reports on some of the k in mapping. It arises from a European Co-operation in Science and Technology (COST) Action, which explored issues linked to topics ranging from citizen motivation, data acquisition, data quality and the use of citizen derived data in the production of maps that rival, and sometimes surpass, maps arising from authoritative agencies.

Geocomputation with R

Leaflet.js Essentials

Google Apps Script for Beginners

Introduction to Web Mapping

The Map

This book is written in a helpful, practical style with numerous hands-on recipes and chapters to help you save time and effort by using Python to power ArcGIS to create shortcuts, scripts, tools, and customizations."Programming ArcGIS 10 1 with Python Cookbook" is written for GIS professionals who wish to revolutionize their ArcGIS workflow with Python. Basic Python or programming knowledge is essential(?).

Google Maps API Cookbook follows a fast-paced, high-level, structured cookbook approach, with minimal theory and an abundance of practical, real-world examples explained in a thorough yet concise manner to help you learn quickly and efficiently. Google Maps API Cookbook is for developers who wish to learn how to do anything from adding a simple embedded map to a website to developing complex GIS applications with the Google Maps JavaScript API. It is targeted at JavaScript developers who know how to get by but who are also seeking the immediacy of recipe-based advice.

The Internet has become the major form of map delivery. The current presentation of maps is based on the use of online services. This session examines developments related to online methods of map delivery, particularly Application Programmer Interfaces (APIs) and MapServices in general, including Google Maps API and similar services. Map mashups have had a major impact on how spatial information is presented. The advantage of using a major online mapping site is that the maps represent a common and recognizable representation of the world. Overlaying features on top of these maps provides a frame of reference for the map user. A particular advantage for thematic mapping is the ability to spatially reference thematic data.

PostGIS in Action, Third Edition shows you how to solve real-world geodata problems. You'll go beyond basic mapping, and explore custom functions for your applications. Summary In PostGIS in Action, Third Edition you will learn: An introduction to spatial databases Geometry, geography, raster, and topology spatial types, functions, and queries Applying PostGIS to real-world problems Extending PostGIS to web and desktop applications Querying data from external sources using PostgreSQL Foreign Data Wrappers Optimizing queries for maximum speed Simplifying geometries for greater efficiency PostGIS in Action, Third Edition teaches readers of all levels to write spatial queries for PostgreSQL. You'll start by exploring vector-, raster-, and topology-based GIS before quickly progressing to analyzing, viewing, and mapping data. This fully updated third edition covers key changes in PostGIS 3 1 and PostgreSQL 13, including parallelization support, partitioned tables, and new JSON functions that help in creating web mapping applications. Purchase of the print book includes a free eBook in PDF, Kindle, and ePub formats from Manning Publications. About the technology PostGIS is a spatial database extender for PostgreSQL. It offers the features and firepower you need to take on nearly any geodata task. PostGIS lets you create location-aware queries with a few lines of SQL code, then build the backend for mapping, raster analysis, or routing application with minimal effort. About the book PostGIS in Action, Third Edition shows you how to solve real-world geodata problems. You'll go beyond basic mapping, and explore custom functions for your applications. Inside this fully updated edition, you'll find coverage of new PostGIS features such as PostGIS Window functions, parallelization of queries, and outputting data for applications using JSON and Vector Tile functions. What's inside Fully revised for PostGIS version 3 1 and PostgreSQL 13 Optimize queries for maximum speed Simplify geometries for greater efficiency Extend PostGIS to web and desktop applications About the reader For readers familiar with relational databases and basic SQL. No prior geodata or GIS experience required. About the author Regina Obe and Leo Hsu are database consultants and authors. Regina is a member of the PostGIS core development team and the Project Steering Committee. Table of Contents PART 1 INTRODUCTION TO POSTGIS 1 What is a spatial database? 2 Spatial data types 3 Spatial reference systems 4 Working with real data 5 Using PostGIS on the desktop 6 Geometry and geography functions 7 Raster functions 8 Spatial relationships PART 2 PUTTING POSTGIS TO WORK 9 Proximity analysis 10 PostGIS TIGER geocoder 11 Geometry and geography processing 12 Raster processing 13 Building and using topologies 14 Organizing spatial data 15 Query performance tuning PART 3 USING POSTGIS WITH OTHER TOOLS 16 Extending PostGIS with pgRouting and procedural languages 17 Using PostGIS in web applications

Programming ArcGIS 10 1 with Python Cookbook

Mastering OpenLayers 3

Beginning MapServer

GeoServer Beginner's Guide

Mastering GeoServer

Find the right big data solution for your business or organization Big data management is one of the major challenges facing business, industry, and not-for-profit organizations. Data sets such as customer transactions for a mega-retailer, weather patterns monitored by meteorologists, or social network activity can quickly outpace the capacity of traditional data management tools. If you need to develop or manage big data solutions, you'll appreciate how these four experts define, explain, and guide you through this new and often confusing concept. You'll learn what it is, why it matters, and how to choose and implement solutions that work. Effectively managing big data is an issue of growing importance to businesses, not-for-profit organizations, government, and IT professionals Authors are experts in information management, big data, and a variety of solutions Explains big data in detail and discusses how to select and implement a solution, security concerns to consider, data storage and presentation issues, analytics, and much more Provides essential information in a no-nonsense, easy-to-understand style that is empowering Big Data For Dummies cuts through the confusion and helps you take charge of big data solutions for your organization.

A fast-paced guide to putting your GeoServer-based application into fast, user-friendly, and secure production Key Features Resolve bottlenecks, optimize data stores, and cluster server resources Use identity management and authentication for a user-specific, secure web application Go beyond traditional web hosting to explore the full range of hosting options in the cloud Book Description GeoServer is open source, server-side software written in Java that allows users to share and edit geospatial data. In this book, you'll start by learning how to develop a spatial analysis platform with web processing services. Then you'll see how to develop an algorithm by chaining together geospatial analysis processes, which you can share with anyone in the world. Next you'll delve into a very important technique to improve the speed of your map application—tile caching. Here, you'll understand how tile caching works, how to develop an effective tile cache-supported web service, and how to leverage tile caching in your OpenLayers web application. Further on, you'll explore important tweaks to produce a performant GeoServer-backed web mapping application. Moving on, you'll combine authentication on the frontend and backend to protect sensitive map data, and deliver sensitive data to your end user. Finally, you'll see how to put your web application into production in a secure and user-friendly way. You'll go beyond traditional web hosting to explore the full range of hosting options in the cloud, and maintain a reliable server instance. What you will learn Develop a WPS-processing service to allow web-based geospatial data processing Get to know important techniques to improve the speed of your web map application—tile caching, raster data optimization, and server clustering Find out which GeoServer settings resolve bottlenecks Develop an algorithm by chaining geospatial analysis processes together Put your application into production with hosting, monitoring, and automated backup and recovery Understand how to develop an effective tile cache-supported web service Master techniques that ensure resilient server deployment Who this book is for This book is for anyone who wants to learn about advanced interfaces, security, and troubleshooting techniques in GeoServer. A basic understanding of GeoServer is required

Create, analyze, and map your spatial data with ArcGIS for Desktop About This Book Learn how to use ArcGIS for Desktop to create and manage geographic data, perform vector and raster analysis, design maps, and share your results Solve real-world problems and share your valuable results using the powerful instruments of ArcGIS for Desktop Step-by-step tutorials cover the main editing, analyzing, and mapping tools in ArcGIS for Desktop Who This Book Is For This book is ideal for those who want to learn how to use the most important component of Esri's ArcGIS platform, ArcGIS for Desktop. It would be helpful to have a bit of familiarity with the basic concepts of GIS. Even if you have no prior GIS experience, this book will get you up and running quickly. What You Will Learn Understand the functionality of ArcGIS for Desktop applications Explore coordinate reference system concepts and work with different map projections Create, populate, and document a file geodatabase Manage, create, and edit feature shapes and attributes Built automate analysis workflows with ModelBuilder Apply basic principles of map design to create good-looking maps Analyze raster and three-dimensional data with the Spatial Analyst and 3D Analyst extensions In Detail ArcGIS for Desktop is one of the main components of the ESRI ArcGIS platform used to support decision making and solve real-world mapping problems. Learning ArcGIS for Desktop is a tutorial-based guide that provides a practical experience for those who are interested in start working with ArcGIS. The first five chapters cover the basic concepts of working with the File Geodatabase, as well as editing and symbolizing geospatial data. Then, the book focuses on planning and performing spatial analysis on vector and raster data using the geoprocessing and modeling tools. Finally, the basic principles of cartography design will be used to create a quality map that presents the information that resulted from the spatial analysis previously performed. To keep you learning throughout the chapters, all exercises have partial and final results stored in the dataset that accompanies the book. Finally, the book offers more than it promises by using the ArcGIS Online component in the tutorials as source of background data and for results sharing Style and approach This easy-to-follow guide is full of hands-on exercises that use open and free geospatial datasets. The basic features of the ArcGIS for Desktop are explained in a step-by-step style.

Create powerful applications with the most robust open source web mapping library using this advanced guide About This Book Develop responsive and platform-independent web mapping applications with OpenLayers 3 Learn the key points of creating great applications with native JavaScript through the step-by-step examples Master the use of the library, from compiling custom builds to developing a complete WebGIS application Who This Book Is For This book is intended for front-end developers with basic understanding of JavaScript and GIS concepts, and preferably for those who are familiar with the fundamentals of OpenLayers 3. You might have never used OpenLayers 3 as a seasoned JavaScript developer. If this is the case and you are eager to learn web mapping, this book will definitely set you on the right track. What You Will Learn Use the advanced functionality of the OpenLayers 3 library effectively Implement the library in your application, shaping it to your needs Manage layers and the layer stack dynamically Create not only stunning but also accurate thematic maps Extend OpenLayers 3 with your own custom classes Develop mobile-friendly web mapping applications Make stunning effects with canvas manipulation, or visualize point clouds with WebGL Integrate third-party applications, and create custom builds that completely satisfy your needs In Detail OpenLayers 3 allows you to create stunning web mapping and WebGIS applications. It uses modern, cutting edge browser technologies. It is written with Closure Library, enabling you to build browser-independent applications without painful debugging ceremonies, which even have some limited fallback options for older browsers. With this guide, you will be introduced to the world of advanced web mapping and WebGIS. First, you will be introduced to the advanced features and functionalities available in OpenLayers 3. Next, you will be taken through the key points of creating custom applications with OpenLayers 3. You will then learn how to create the web mapping application of yours (or your company's) dream with this open source, expense-free, yet very powerful library. We'll also show you how to make amazing looking thematic maps and create great effects with canvas manipulation. By the end of this book, you will have a strong command of web mapping and will be well on your way to creating amazing applications using OpenLayers 3. Style and approach This is an advanced guide packed with comprehensive examples, and it concentrates on the advanced parts of OpenLayers 3 and JavaScript. It intentionally skips the basic and well-known methodologies, but discusses the hard-to-understand ones in great detail.

Mapping Hacks

Google Maps JavaScript API Cookbook

GIS For Dummies

GeoServer Beginner's Guide - Second Edition

QGIS By Example

Create, optimize, and deploy stunning cross-browser web maps with the OpenLayers JavaScript web mapping library.

The Map is a practical guidebook introducing the basics of research in translation studies for students doing their first major research project in the field. Depending on where they are studying, this may be at advanced undergraduate (BA) or at postgraduate (MA/PHD) level. The book consists of ten chapters. Chapter 1 offers an overview of 12 research areas in translation studies in order to help students identify a topic and establish some of the current research questions relating to it. Chapter 2 is designed to assist students in planning their research project and covers topics such as refining the initial idea, determining the scope of the project, checking out resources, reading critically, keeping complete bibliographic records, and working with a supervisor. Chapters 3 to 7 provide some of the conceptual and methodological tools needed in this area of research, with detailed discussion of such topics as theoretical models of translation, types of research, asking questions, making claims, formulating hypotheses, establishing relations between variables, and selecting and analyzing data. Chapters 8 and 9 are about presenting one's research, in writing as well as orally. Finally, chapter 10 deals with some of the criteria commonly used in research assessment, especially in the assessment of theses. The authors provide detailed guidance on further reading throughout. This is an essential reference work for research students and lecturers involved in supervising research projects and degrees.

This enhanced eBook version is equipped with videos and pop-up explanations to extend the reader's experience on essential cartographic design topics and to make the reading experience more enjoyable and more effective. The 16 videos placed throughout the text will demonstrate some highly complex map design issues to help understand and visualize the task at hand and show how to achieve the best results following the author's instructions. Pop-up explanations of selected concepts are also placed throughout the text to help readers refresh their knowledge and better understand the map design process. All chapters are richly illustrated with color and include practical exercises and questions.

Geocomputation with R is for people who want to analyze, visualize and model geographic data with open source software. It is based on R, a statistical programming language that has powerful data processing, visualization, and geospatial capabilities. The book equips you with the knowledge and skills to tackle a wide range of issues manifested in geographic data, including those with scientific, societal, and environmental implications. This book will interest people from many backgrounds, especially Geographic Information Systems (GIS) users interested in applying their domain-specific knowledge in a powerful open source language for data science, and R users interested in extending their skills to handle spatial data. The book is divided into three parts: (I) Foundations, aimed at getting you up-to-speed with geographic data in R, (II) extensions, which covers advanced techniques, and (III) applications to real-world problems. The chapters cover progressively more advanced topics, with early chapters providing strong foundations on which the later chapters build. Part I describes the nature of spatial datasets in R and methods for manipulating them. It also covers geographic data import/export and transforming coordinate reference systems. Part II represents methods that build on these foundations. It covers advanced map making (including web mapping), "bridges" to GIS, sharing reproducible code, and how to do cross-validation in the presence of spatial autocorrelation. Part III applies the knowledge gained to tackle real-world problems, including representing and modeling transport systems, finding optimal locations for stores or services, and ecological modeling. Exercises at the end of each chapter give you the skills needed to tackle a range of geospatial problems. Solutions for each chapter and supplementary materials providing extended examples are available at https://geocompr.github.io/geocompkg/articles/. Dr. Robin Lovelace is a University Academic Fellow at the University of Leeds, where he has taught R for geographic research over many years, with a focus on transport systems. Dr. Jakub Nowosad is an Assistant Professor in the Department of Geoinformation at the Adam Mickiewicz University in Poznan, where his focus is on the analysis of large datasets to understand environmental processes. Dr. Jannes Muenchow is a Postdoctoral Researcher in the GIScience Department at the University of Jena, where he develops and teaches a range of geographic methods, with a focus on ecological modeling, statistical geocomputing, and predictive mapping. All three are active developers and work on a number of R packages, including stplanr, sabre, and RQGIS.

OpenLayers Cookbook

Practical GIS

Mastering Geospatial Development with QGIS 3.x

Tips & Tools for Electronic Cartography

Create and manage spatial data with PostGIS Key Features Import and export geographic data from the PostGIS database using the available tools Maintain, optimize, and fine-tune spatial data for long-term viability Utilize the parallel support functionality that was introduced in PostgreSQL 9.6 Book Description PostGIS is a spatial database that integrates the advanced storage and analysis of vector and raster data, and is remarkably flexible and powerful. PostGIS provides support for geographic objects to the PostgreSQL object-relational database and is currently the most popular open source spatial databases. If you want to explore the complete range of PostGIS techniques and expose related extensions, then this book is for you. This book is a comprehensive guide to PostGIS tools and concepts which are required to manage, manipulate, and analyze spatial data in PostGIS. It covers key spatial data manipulation tasks, explaining not only how each task is performed, but also why. It provides practical guidance allowing you to safely take advantage of the advanced technology in PostGIS in order to simplify your spatial database administration tasks. Furthermore, you will learn to take advantage of basic and advanced vector, raster, and routing approaches along with the concepts of data maintenance, optimization, and performance, and will help you to integrate these into a large ecosystem of desktop and web tools. By the end, you will be armed with all the tools and instructions you need to both manage the spatial database system and make better decisions as your

project's requirements evolve. What you will learn Import and export geographic data from the PostGIS database using the available tools Structure spatial data using the functionality provided by a combination of PostgreSQL and PostGIS Work with a set of PostGIS functions to perform basic and advanced vector analyses Connect PostGIS with Python Learn to use programming frameworks around PostGIS Maintain, optimize, and fine-tune spatial data for long-term viability Explore the 3D capabilities of PostGIS, including LiDAR point clouds and point clouds derived from Structure from Motion (SfM) techniques Distribute 3D models through the Web using the X3D standard Use PostGIS to develop powerful GIS web applications using Open Geospatial Consortium web standards Master PostGIS Raster Who this book is for This book is for developers who need some quick solutions for PostGIS. Prior knowledge of PostgreSQL and spatial concepts would be an added advantage.

A web map is an interactive display of geographic information, in the form of a web page, that you can use to tell stories and answer questions. Web maps have numerous advantages over traditional mapping techniques, such as the ability to display up-to-date or even real-time information, easy distribution to end users, and highly customized interactive content. Introduction to Web Mapping teaches you how to develop online interactive web maps and web mapping applications, using standard web technologies: HTML, CSS and JavaScript. The core technologies are introduced in Chapters 1-5, focusing on the specific aspects which are most relevant to web mapping. Chapters 6-13 then implement the material and demonstrate key concepts for building and publishing interactive web maps.

If you are a web developer working with geospatial concepts and mapping APIs, and you want to learn Leaflet to create mapping solutions, this book is for you. You need to have a basic knowledge of working with JavaScript and performing web application development.

The integration of the 3rd dimension in the production of spatial representation is largely recognized as a valuable approach to comprehend our reality, that is 3D. During the last decade developments in 3D Geoinformation (GI) system have made substantial progress. We are about to have a more complete spatial model and understanding of our planet in different scales. Hence, various communities and cities offer 3D landscape and 3D city models as valuable source and instrument for sustainable management of rural and urban resources. Also municipal utilities, real estate companies benefit from recent developments related to 3D applications. In order to present recent developments and to discuss future trends, academics and practitioners met at the 7th International Workshop on 3D Geoinformation. This book comprises a selection of evaluated, high quality papers that were presented at this workshop in May 2012. The topics focus explicitly on the last achievements (methods, algorithms, models, systems) with respect to 3D GeoInformation requirements. The book is aimed at decision makers and experts as well as students interested in the 3D component of geographical information science including GI engineers, computer scientists, photogrammetrists, land surveyors, urban planners, and mapping specialists.

Open Source GIS Development
Bringing GEOSS services into practice
GIS Cartography
Online Maps with APIs and WebServices
Learning ArcGIS for Desktop

Cloud Computing: Web-Based Applications That Change the Way You Work and Collaborate On-Line Computing as you know it has changed. No longer are you tied to using expensive programs stored on your computer. No longer will you be able to only access your data from one computer. No longer will you be tied to doing work only from your work computer or playing only from your personal computer. Enter cloud computing—an exciting new way to work with programs and data, collaborate with friends and family, share ideas with coworkers and friends, and most of all, be more productive! The "cloud" consists of thousands of computers and servers, all linked and accessible to you via the Internet. With cloud computing, everything you do is now web-based instead of being desktop-based; you can access all your programs and documents from any computer that's connected to the Internet. Whether you want to share photographs with your family, coordinate volunteers for a community organization, or manage a multi-faceted project in a large organization, cloud computing can help you do it more easily than ever before. Trust us. If you need to collaborate, cloud computing is the way to do it. • Learn what cloud computing is, how it works, who should use it, and why it's the wave of the future. • Explore the practical benefits of cloud computing, from saving money on expensive programs to accessing your documents ANYWHERE. • See just how easy it is to manage work and personal schedules, share documents with coworkers and friends, edit digital photos, and much more! • Learn how to use web-based applications to collaborate on reports and presentations, share online calendars and to-do lists, manage large projects, and edit and store digital photographs. Michael Miller is known for his casual, easy-to-read writing style and his ability to explain a wide variety of complex topics to an everyday audience. Mr. Miller has written more than 80 nonfiction books over the past two decades, with more than a million copies in print. His books for Que include Absolute Beginner's Guide to Computer Basics, Googlepedia: The Ultimate Google Resource, and Is It Safe?: Protecting Your Computer, Your Business, and Yourself Online. His website is located at www.molehillgroup.com. Covers the most popular cloud-based applications, including the following: • Adobe Photoshop Express • Apple MobileMe • Glide OS • Google Docs • Microsoft Office Live Workspace • Zoho Office CATEGORY: Web Applications COVERS: Cloud Computing USER LEVEL: Beginner-Intermediate

"PostGIS in Action" is the first book devoted entirely to PostGIS. It will help both new and experienced users write spatial queries to solve real-world problems. It also discusses the new features available in PostgreSQL 8.4 and provides tutorials.

Computer Graphics & Graphics Applications

This step-by-step guide will teach you how to use GeoServer to build custom and interactive maps using your data. About This Book Exploit the power of GeoServer to provide agile, flexible, and low-cost community projects Share real-time maps quickly Boost your map server's performance using the power and flexibility of GeoServer Who This Book Is For If you are a web developer with knowledge of server side scripting, have experience in installing applications on the server, and want to go beyond Google Maps by offering dynamically built maps on your site with your latest geospatial data stored in MySQL, PostGIS, MySQL, or Oracle, this is the book for you. What You Will Learn Install GeoServer quickly Access dynamic real-time geospatial data that you can easily integrate into your own web-based application Create custom styles for lines, points, and polygons for great-looking maps Command GeoServer remotely using REST Tune your GeoServer instance for performance Move GeoServer into production Learn advanced topics to extend GeoServer's capabilities In Detail GeoServer is an opensource server written in Java that allows users to share, process, and edit geospatial data. This book will guide you through the new features and improvements of GeoServer and will help you get started with it. GeoServer Beginner's Guide gives you the impetus to build custom maps using your data without the need for costly commercial software licenses and restrictions. Even if you do not have prior GIS knowledge, you will be able to make interactive maps after reading this book. You will install GeoServer, access your data from a database, and apply style points, lines, polygons, and labels to impress site visitors with real-time maps. Then you follow a step-by-step guide that installs GeoServer in minutes. You will explore the web-based administrative interface to connect to backend data stores such as PostGIS, and Oracle. Going ahead, you can display your data on web-based interactive maps, use style lines, points, polygons, and embed images to visualize this data for your web visitors. You will walk away from this book with a working application ready for production. After reading GeoServer Beginner's Guide, you will be able to build beautiful custom maps on your website using your geospatial data. Style and approach Step-by-step instructions are included and the needs of a beginner are totally satisfied by the book. The book consists of plenty of examples with accompanying screenshots and code for an easy learning curve.

Soil Organic Carbon Mapping Cookbook
A Guide to Effective Map Design, Third Edition
Create amazing games with Qt 5, C++, and Qt Quick, 2nd Edition
Mapping and the Citizen Sensor
Share geospatial data using Open Source standards

Learn the basics of Geographic Information Systems by solving real-world problems with powerful open source tools About This Book This easy-to-follow guide allows you to manage and analyze geographic data with ease using open source tools Publish your geographical data online Learn the basics of geoinformatics in a practical way by solving problems Who This Book Is For The book is for IT professionals who have little or no knowledge of GIS. It's also useful for those who are new to the GIS field who don't want to spend a lot of money buying licenses of commercial tools and training. What You Will Learn Collect GIS data for your needs Store the data in a PostGIS database Exploit the data using the power of the GIS queries Analyze the data with basic and more advanced GIS tools Publish your data and share it with others Build a web map with your published data In Detail The most commonly used GIS tools automate tasks that were historically done manually—compiling new maps by overlaying one on top of the other or physically cutting maps into pieces representing specific study areas, changing their projection, and getting meaningful results from the various layers by applying mathematical functions and operations. This book is an easy-to-follow guide to use the most matured open source GIS tools for these tasks. We'll start by setting up the environment for the tools we use in the book. Then you will learn how to work with QGIS in order to generate useful spatial data. You will get to know the basics of queries, data management, and geoprocessing. After that, you will start to practice your knowledge on real-world examples. We will solve various types of geospatial analyses with various methods. We will start with basic GIS problems by imitating the work of an enthusiastic real estate agent, and continue with more advanced, but typical tasks by solving a decision problem. Finally, you will find out how to publish your data (and results) on the web. We will publish our data with QGIS Server and GeoServer, and create a basic web map with the API of the lightweight Leaflet web mapping library. Style and approach The book guides you step by step through each of the core concepts of the GIS toolkit, building an overall picture of its capabilities. This guide approaches the topic systematically, allowing you to build upon what you learned in previous chapters. By the end of this book, you'll have an understanding of the aspects of building a GIS system and will be able to take that knowledge with you to whatever project calls for it.

Over 60 recipes to create GIS web applications with the open source JavaScript library.

The "Bringing" GEOSS services into practice" workshop aims at teaching participants how to install, configure and deploy a set of open source software to publish and share data and metadata through GEOSS using OGC and ISO standards.

Since the dawn of creation, man has designed maps to help identify the space that we occupy. From Lewis and Clark's pencil-sketched maps of mountain trails to Jacques Cousteau's sophisticated charts of the ocean floor, creating maps of the utmost precision has been a constant pursuit. So why should things change now?Well, they shouldn't. The reality is that map creation, or "cartography," has only improved in its ease-of-use over time. In fact, with the recent explosion of inexpensive computing and the growing availability of public mapping data, mapmaking today extends all the way to the ordinary PC user.Mapping Hacks, the latest page-turner from O'Reilly Press, tackles this notion head on. It's a collection of one hundred simple--and mostly free--techniques available to developers and power users who want draw digital maps or otherwise visualize geographic data. Authors Schuyler Erle, Rich Gibson, and Jo Walsh do more than just illuminate the basic concepts of location and cartography, they walk you through the process one step at a time.Mapping Hacks shows you where to find the best sources of geographic data, and then how to integrate that data into your own map. But that's just an appetizer. This comprehensive resource also shows you how to interpret and manipulate unwieldy cartography data, as well as how to incorporate personal photo galleries into your maps. It even provides practical uses for GPS (Global Positioning System) devices--those touch-of-a-button street maps integrated into cars and mobile phones. Just imagine: If Captain Kidd had this technology, we'd all know where to find his buried treasure!With all of these industrial-strength tips and tools, Mapping Hacks effectively takes the sting out of the digital mapmaking and navigational process. Now you can create your own maps for business, pleasure, or entertainment--without ever having to sharpen a single pencil.

Progress and New Trends in 3D Geoinformation Sciences
Cloud Computing
Expert GeoServer
Game Programming using Qt 5 Beginner's Guide
Web-Based Applications That Change the Way You Work and Collaborate Online

If you are a GIS professional who intends to explore advanced techniques and get more out of GeoServer deployment rather than simply delivering good looking maps, then this book is for you.

Go beyond the basics and unleash the full power of QGIS 3.4 and 3.6 with practical, step-by-step examples Key FeaturesOne-stop solution to all of your GIS needs Master QGIS by learning about database integration, and geoprocessing toolsLearn about the new and updated Processing toolbox and perform spatial analysis Book Description QGIS is an open source solution to GIS and widely used by GIS professionals all over the world. It is the leading alternative to proprietary GIS software. Although QGIS is described as intuitive, it is also, by default, complex. Knowing which tools to use and how to apply them is essential to producing valuable deliverables on time. Starting with a refresher on the QGIS basics and getting you acquainted with the latest QGIS 3.6 updates, this book will take you all the way through to teaching you how to create a spatial database and a GeoPackage. Next, you will learn how to style raster and vector data by choosing and managing different colors. The book will then focus on processing raster and vector data. You will be then taught advanced applications, such as creating and editing vector data. Along with that, you will also learn about the newly updated Processing Toolbox, which will help you develop the advanced data visualizations. The book will then explain to you the graphic modeler, how to create QGIS plugins with PyQGIS, and how to integrate Python analysis scripts with QGIS. By the end of the book, you will understand how to work with all aspects of QGIS and will be ready to use it for any type of GIS work. What you will learnCreate and manage a spatial databaseGet to know advanced techniques to style GIS data Prepare both vector and raster data for processing Add heat maps, live layer effects, and labels to your maps Master LAStools and GRASS integration with the Processing Toolbox Edit and repair topological data errors Automate workflows with batch processing and the QGIS Graphical Modeler Integrate Python scripting into your data processing workflows Develop your own QGIS pluginsWho this book is for If you are a GIS professional, a consultant, a student, or perhaps a fast learner who wants to go beyond the basics of QGIS, then this book is for you. It will prepare you to realize the full potential of QGIS.

Write efficient GIS applications using PostGIS - from data creation to data consumption About This Book Learn how you can use PostGIS for spatial data analysis and manipulation Optimize your queries and build custom functionalities for your GIS application A comprehensive guide with hands-on examples to help you master PostGIS with ease Who This Book Is For If you are a GIS developer or analyst who wants to master PostGIS to build efficient, scalable GIS applications, this book is for you. If you want to conduct advanced analysis of spatial data, this book will also help you. The book assumes that you have a working installation of PostGIS in place, and have working experience with PostgreSQL. What You Will Learn Refresh your knowledge of the PostGIS concepts and spatial databases Solve spatial problems with the use of SQL in real-world scenarios Practical walkthroughs of application development examples using Postgis, GeoServer and OpenLayers. Extract, transform and load your spatial data Expose data directly or through web services. Consume your data in both desktop and web clients In Detail PostGIS is open source extension onto PostgreSQL object-relational database system that allows GIS objects to be stored and allows querying for information and location services. The aim of this book is to help you master the functionalities offered by PostGIS- from data creation, analysis and output, to ETL and live edits. The book begins with an overview of the key concepts related to spatial database systems and how it applies to Spatial RMDS. You will learn to load different formats into your Postgres instance, investigate the spatial nature of your raster data, and finally export it using built-in functionalities or 3th party tools for backup or representational purposes. Through the course of this book, you will be presented with many examples on how to interact with the database using JavaScript and Node.js. Sample web-based applications interacting with backend PostGIS will also be presented throughout the book, so you can get comfortable with the modern ways of consuming and modifying your spatial data. Style and approach This book is a comprehensive guide covering all the concepts you need to master PostGIS. Packed with hands-on examples, tips and tricks, even the most advanced concepts are explained in a very easy-to-follow manner. Every chapter in the book does not only focus on how each task is performed, but also why.

This step-by-step guide will teach you how to use GeoServer to build custom and interactive maps using your data.About This Book* Exploit the power of GeoServer to provide agile, flexible, and low-cost community projects* Share real-time maps quickly* Boost your map server's performance using the power and flexibility of GeoServerWho This Book Is ForIf you are a web developer with knowledge of server side scripting, have experience in installing applications on the server, and want to go beyond Google Maps by offering dynamically built maps on your site with your latest geospatial data stored in MySQL, PostGIS, MySQL, or Oracle, this is the book for you.What You Will Learn* Install GeoServer quickly* Access dynamic real-time geospatial data that you can easily integrate into your own web-based application* Create custom styles for lines, points, and polygons for great-looking maps* Command GeoServer remotely using REST* Tune your GeoServer instance for performance* Move GeoServer into production* Learn advanced topics to extend GeoServer's capabilitiesIn DetailGeoServer is an opensource server written in Java that allows users to share, process, and edit geospatial data. This book will guide you through the new features and improvements of GeoServer and will help you get started with it. GeoServer Beginner's Guide gives you the impetus to build custom maps using your data without the need for costly commercial software licenses and restrictions. Even if you do not have prior GIS knowledge, you will be able to make interactive maps after reading this book.You will install GeoServer, access your data from a database, and apply style points, lines, polygons, and labels to impress site visitors with real-time maps. Then you follow a step-by-step guide that installs GeoServer in minutes. You will explore the web-based administrative interface to connect to backend data stores such as PostGIS, and Oracle. Going ahead, you can display your data on web-based interactive maps, use style lines, points, polygons, and embed images to visualize this data for your web visitors. You will walk away from this book with a working application ready for production.After reading GeoServer Beginner's Guide, you will be able to build beautiful custom maps on your website using your geospatial data.Style and approachStep-by-step instructions are included and the needs of a beginner are totally satisfied by the book. The book consists of plenty of examples with accompanying screenshots and code for an easy learning curve.

An in-depth guide to becoming proficient in spatial data analysis using QGIS 3.4 and 3.6 with Python, 3rd Edition
OpenLayers 2.10 Beginner's Guide
PostGIS in Action, Third Edition
Mastering PostGIS
Big Data For Dummies

Applied Spatial Data Analysis with R, second edition, is divided into two basic parts, the first presenting R packages, functions, classes and methods for handling spatial data. This part is of interest to users who need to access and visualise spatial data. Data import and export for many file formats for spatial data are covered in detail, as is the interface between R and the open source GRASS GIS and the handling of spatio-temporal data. The second part showcases more specialised kinds of spatial data analysis, including spatial point pattern analysis, interpolation and geostatistics, areal data analysis and disease mapping. The coverage of methods of spatial data analysis ranges from standard techniques to new developments, and the examples used are largely taken from the spatial statistics literature. All the examples can be run using R contributed packages available from the CRAN website, with code and additional data sets from the book's own website. Compared to the first edition, the second edition covers the more systematic approach towards handling spatial data in R, as well as a number of important and widely used CRAN packages that have appeared since the first edition. This book will be of interest to researchers who intend to use R to handle, visualise, and analyse spatial data. It will also be of interest to spatial data analysts who do not use R, but who are interested in practical aspects of implementing software for spatial data analysis. It is a suitable companion book for introductory spatial statistics courses and for applied methods courses in a wide range of subjects using spatial data, including human and physical geography, geographical information science and geoinformatics, the environmental sciences, ecology, public health and disease control, economics, public administration and political science. The book has a website where complete code examples, data sets, and other support material may be found: http://www.asdar-book.org. The authors have taken part in writing and maintaining software for spatial data handling and analysis with R in concert since 2003.

The latest guide to using QGIS 2.14 to create great maps and perform geoprocessing tasks with ease About This Book Learn how to work with various data and create beautiful maps using this easy-to-follow guide. Give a touch of professionalism to your maps both for functionality and look and feel with the help of this practical guide. A progressive hands-on guide that builds on a geo-spatial data and adds more reactive maps by using geometry tools. Who This Book Is For This book is great for users, developers, and consultants who know the basic functions and processes of GIS and want to learn to use QGIS to analyze geospatial data and create rich mapping applications. If you want to take advantage of the wide range of functionalities that QGIS offers, then this is the book for you. What You Will Learn Install QGIS and get familiar with the user interface Load vector and raster data from files, databases, and web services Create, visualize, and edit spatial data Perform geoprocessing tasks and automate them Create advanced cartographic outputs Design great print maps Expand QGIS using Python In Detail QGIS is a user-friendly open source geographic information system (GIS) that runs on Linux, Unix, Mac OS X, and Windows. The popularity of open source geographic information systems and QGIS in particular has been growing rapidly over the last few years. Learning QGIS Third Edition is a practical, hands-on guide updated for QGIS 2.14 that provides you with clear, step-by-step exercises to help you apply your GIS knowledge to QGIS. Through clear, practical exercises, this book will introduce you to working with QGIS quickly and painlessly. This book takes you from installing and configuring QGIS to handling spatial data to creating great maps. You will learn how to load and visualize existing spatial data and create data from scratch. You will get to know important plugins, perform common geoprocessing and spatial analysis tasks and automate them with Processing. We will cover how to achieve great cartographic output and print maps. Finally, you will learn how to extend QGIS using Python and even create your own plugin. Style and approach A step by step approach to explain concepts of Geospatial map with the help of real life examples

Step-by-step instructions are included and the needs of a beginner are totally satisfied by the book. The book consists of plenty of examples with accompanying screenshots and code for an easy learning curve. You are a web developer with knowledge of server side scripting, and have experience with installing applications on the server. You have a desire to want more than Google maps, by offering dynamically built maps on your site with your latest geospatial data stored in MySQL, PostGIS, MsSQL or Oracle. If this is the case, this book is meant for you.

An easy-to-understand reference for navigating through popular geographic information systems (GIS) GIS (geographic information system) is a totally cool technology that has been called "geography on steroids." GIS is what lets you see the schools in your neighborhood or tells you where the nearest McDonald's is. GIS For Dummies tells you all about mapping terminology and digital mapping, how to locate geographic features and analyze patterns such as streets and waterways, and how to generate travel directions, customer location lists, and much more with GIS. Whether you're in charge of creating GIS applications for your business or you simply love maps, you'll find GIS For Dummies is packed with information. For example, you can: Learn all the hardware and software necessary to collect, analyze, and manipulate GIS data Explore the difference between 2D and 3D maps, create a map, or manage multiple maps Analyze patterns that appear in maps and interpret the results Measure distance in absolute,

comparative, and functional ways Recognize how spatial factors relate to geographic data Discover how GIS is used in business, the military, city planning, emergency services, land management, and more Find out how GIS can help you find discover where flooding may occur Determine what your organization needs, do appropriate analyses, and plan and design a GIS system You'll find dozens of applications for GIS queries and analyses, and even learn to create animated GIS output. Additionally, you can learn about sources of GIS data and GIS software vendors (and even what questions to ask potential vendors). Whether your goal is to implement a geographic information system or just have fun, GIS For Dummies will get you there!

An Introduction to Digital Multimedia

2nd edition

PostGIS Cookbook

Applied Spatial Data Analysis with R

Store, organize, manipulate, and analyze spatial data, 2nd Edition

A complete guide to designing and building fun games with Qt and Qt Quick using associated toolsets Key Features A step by step guide to learn Qt by building simple yet entertaining games Get acquainted with a small yet powerful addition—Qt Gamepad Module, that enables Qt applications to support the use of gamepad hardware Understand technologies such as QML, OpenGL, and Qt Creator to design intuitive games Book Description Qt is the leading cross-platform toolkit for all significant desktop, mobile, and embedded platforms and is becoming popular by the day, especially on mobile and embedded devices. It's a powerful tool that perfectly fits the needs of game developers. This book will help you learn the basics of Qt and will equip you with the necessary toolsets to build apps and games. The book begins by how to create an application and prepare a working environment for both desktop and mobile platforms. You will learn how to use built-in Qt widgets and Form Editor to create a GUI application and then learn the basics of creating graphical interfaces and Qt's core concepts. Further, you'll learn to enrich your games by implementing network connectivity and employing scripting. You will learn about Qt's capabilities for handling strings and files, data storage, and serialization. Moving on, you will learn about the new Qt Gamepad module and how to add it in your game and then delve into OpenGL and Vulcan, and how it can be used in Qt applications to implement hardware-accelerated 2D and 3D graphics. You will then explore various facets of Qt Quick: how it can be used in games to add game logic, add game physics, and build astonishing UIs for your games. By the end of this book, you will have developed the skillset to develop interesting games with Qt. What you will learn Install the latest version of Qt on your system Understand the basic concepts of every Qt game and application Develop 2D object-oriented graphics using Qt Graphics View Build multiplayer games or add a chat function to your games with Qt Network module Script your game with Qt QML Explore the Qt Gamepad module in order to integrate gamepad support in C++ and QML applications Program resolution-independent and fluid UIs using QML and Qt Quick Control your game flow in line with mobile device sensors Test and debug your game easily with Qt Creator and Qt Test Who this book is for If you want to create great graphical user interfaces and astonishing games with Qt, this book is ideal for you. No previous knowledge of Qt is required; however knowledge of C++ is mandatory.

GeoServer Beginner's GuidePackt Pub Limited

QGIS is a leading user-friendly, cross-platform, open source, desktop geographic information system (GIS). It provides many useful capabilities and features and their number is continuously growing. More and more private users and companies choose QGIS as their primary GIS software because it is very easy to use, feature-rich, extensible, and has a big and constantly growing community. This book guides you from QGIS installation through data loading, and preparation to performing most common GIS analyses. You will perform different types of GIS analyses including density, visibility, and suitability analysis on practical, real-world data. Finally, you will learn how to become more productive and automate your everyday work with the help of the QGIS Processing framework and by developing your own Python plugins. By the end of this book, you will have all the necessary knowledge about handling and analyzing spatial data.

This book is ideal for GIS experts, developers, and system administrators who have had a first glance at GeoServer and who are eager to explore all its features in order to configure professional map servers. Basic knowledge of GIS and GeoServer is required.

A Beginner's Guide to Doing Research in Translation Studies

Build and secure advanced interfaces and interactive maps

PostGIS in Action

Learning QGIS

GeoServer Cookbook