Mapguide Open Source Api

A revision of Openshaw and Abrahart's seminal work,
GeoComputation, Second Edition retains influences of its
originators while also providing updated, state-of-the-art
information on changes in the computational environment. In
keeping with the field's development, this new edition takes a
broader view and provides comprehensive coverage across
the
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
The Rough Guide to Europe on a Budget is the ultimate guide to exploring this fascinating continent on a shoestring, with coverage of all the top sights, the clearest mapping of any guide and handy hints on how to save money. Discover the

highlights of Europe, from the vibrant capitals of London, Paris and Rome to the great outdoors, whether skiing in the Alps, hiking in the Tatras or surfing on the Portuguese coast. Read about Europe's great attractions from the Sistine Chapel in Rome to the Aya Sofia in Istanbul. And with coverage of four new countries - Montenegro, Albania, Macedonia and Bosnia-Hercegovina, The Rough Guide to Europe on a Budget is more comprehensive than ever before. Find practical advice on travelling around Europe, whether by InterRail, Eurail or bus, and what to see and do in each country. With up-to-date descriptions of the best hostels and budget hotels in Europe, bars in Europe, cafés, cheap restaurants, and European shopping and festivals this guide is the budget-conscious traveller's must have item for European trips.

Bill Gates quote, "Banking is necessary, but banks are not", showcases the opportunity for financial services digital transformation. The next transition from industry 4.0 to 5.0 will impact all sectors, including banking. It will combine information technology and automation, based on artificial intelligence, person-robot collaboration, and sustainability. It is time to analyze this transformation in banking deeply, so that the sector can adequately change to the New Normal and a wholly modified banking model can be properly embedded in the business. This book presents a conceptual model of banking 5.0, detailing its implementation in processes, platforms, people, and partnerships of financial services organizations companies. The last part of the book is then dedicated to future developments. Of interest to academics, researchers, and professionals in banking, financial technology, and financial services, this book also includes business cases in financial services. Bernardo Nicoletti is a Professor of Operations Management at Temple University, Rome, Italy. He also provides consultancy advice

and coaching in Europe, the Middle East, and Asia on ICT strategy, process improvement, and financial services. In his research, Bernardo has been particularly active in the application of the agile method and its tools to a variety of industries. He has authored 30 books on management and published 250 articles in domestic and international journals. He frequently speaks at international conferences. . Currently, most organizations are dependent on IS/ICT in order to support their business strategies. IS/ICT can promote the implementation of strategies and enhancers of optimization of the various aspects of the business. In market enterprises and social organizations, digital economy and ICTs are important tools that can empower social entrepreneurship initiatives to develop, fund, and implement new and innovative solutions to social, cultural, and environmental problems. The Handbook of Research on Multidisciplinary Approaches to Entrepreneurship, Innovation, and ICTs is an essential reference source that discusses the digitalization techniques of the modern workforce as well as important tools empowering social entrepreneurship initiatives. Featuring research on topics such as agile business analysis, multicultural workforce, and human resource management, this book is ideally designed for business managers, entrepreneurs, IT consultants, researchers, industry professionals, human resource consultants, academicians, and students. Comparative E-Government examines the impact of information and communication technology (ICT) on governments throughout the world. It focuses on the adoption of e-government both by comparing different countries, and by focusing on individual countries and the success and challenges that they have faced. With 32 chapters from leading e-government scholars and practitioners from around the world, there is representation of developing and

developed countries and their different stages of e-government adoption. Part I compares the adoption of e-government in two or more countries. The purpose of these chapters is to discern the development of e-government by comparing different counties and their individual experiences. Part II provides a more in-depth focus on case studies of e-government adoption in select countries. Part III, the last part of the book, examines emerging innovations and technologies in the adoption of e-government in different countries. Some of the emerging technologies are the new social media movement, the development of e-participation, interoperability, and geographic information systems (GIS). Summary PostGIS in Action, Second Edition teaches readers of all levels to write spatial queries that solve real-world problems. It first gives you a background in vector-, raster-, and topology-based GIS and then quickly moves into analyzing, viewing, and mapping data. This second edition covers PostGIS 2.0 and 2.1 series, PostgreSQL 9.1, 9.2, and 9.3 features, and shows you how to integrate with other GIS tools. Purchase of the print book includes a free eBook in PDF, Kindle, and ePub formats from Manning Publications. About the Book Processing data tied to location and topology requires specialized know-how. PostGIS is a free spatial database extender for PostgreSQL, every bit as good as proprietary software. With it, you can easily create location-aware queries in just a few lines of SQL code and build the back end for a mapping, raster analysis, or routing application with minimal effort. PostGIS in Action, Second Edition teaches you to solve real-world geodata problems. It first gives you a background in vector-, raster-, and topology-based GIS and then quickly moves into analyzing, viewing, and mapping data. You'll learn how to optimize queries for maximum speed, simplify geometries for greater efficiency, and create custom functions for your own applications. You'll

also learn how to apply your existing GIS knowledge to PostGIS and integrate with other GIS tools. Familiarity with relational database and GIS concepts is helpful but not required. What's Inside 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 Updated for PostGIS 2.x and PostgreSQL 9.x About the Authors 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 What is a spatial database? Spatial data types Spatial reference system considerations Working with real data Using PostGIS on the desktop Geometry and geography functions Raster functions PostGIS TIGER geocoder Geometry relationships PART 2 PUTTING POSTGIS TO WORK Proximity analysis Geometry and geography processing Raster processing Building and using topologies Organizing spatial data Query performance tuning PART 3 USING POSTGIS WITH OTHER TOOLS Extending PostGIS with pgRouting and procedural languages Using PostGIS in web applications
This volume emphasizes the applications and implications of the Geospatial Web and the role of contextual knowledge in shaping the emerging network society. There is a clear focus on applied geospatial aspects. The book has contributions from a very active research community. Containing chapters from renowned researchers and practitioners, this volume will be invaluable to all interested in this field.
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.

The International Encyclopedia of Human Geography provides an authoritative and comprehensive source of information on the discipline of human geography and its constituent, and related, subject areas. The encyclopedia includes over 1,000 detailed entries on philosophy and theory, key concepts, methods and practices, biographies of notable geographers, and geographical thought and praxis in different parts of the world. This groundbreaking project covers every field of human geography and the discipline's relationships to other disciplines, and is global in scope, involving an international set of contributors. Given its broad, inclusive scope and unique online accessibility, it is

anticipated that the International Encyclopedia of Human Geography will become the major reference work for the discipline over the coming decades. The Encyclopedia will be available in both limited edition print and online via ScienceDirect - featuring extensive browsing, searching, and internal cross-referencing between articles in the work, plus dynamic linking to journal articles and abstract databases, making navigation flexible and easy. For more information, pricing options and availability visit http://info.sciencedirect.com/content/ books/ref_works/coming/ Available online on ScienceDirect and in limited edition print format Broad, interdisciplinary coverage across human geography: Philosophy, Methods, People, Social/Cultural, Political, Economic, Development, Health, Cartography, Urban, Historical, Regional Comprehensive and unique - the first of its kind in human geography

This book aims to help students, researchers and policy makers understand the latest research and development trends in the application of WebGIS for Disaster Management and Emergency Response. It is designed as a useful tool to better assess the mechanisms for planning, response and mitigation of the impact of disaster scenarios at the local, regional or national levels. It contains details on how to use WebGIS to solve real-world problems associated with Disaster Management Scenarios for the long-term sustainability. The book broadens the reader understanding of the policy and decision-making issues related to Disaster Management response and planning.

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.
This book places spatial data within the broader domain
of information technology (IT) while providing a
comprehensive and coherent explanation of the guiding
principles, methods, implementation and operational
management of spatial databases within the workplace.
The text explains the key concepts, issues and
processes of spatial data implementation and provides a
holistic management perspective.
Since the first edition of Open Source GIS: A GRASS
GIS Approach was published in 2002, GRASS has
undergone major improvements. This second edition
includes numerous updates related to the new
development; its text is based on the GRASS 5.3 version
from December 2003. Besides changes related to
GRASS 5.3 enhancements, the introductory chapters

have been re-organized, providing more extensive information on import of external data. Most of the improvements in technical accuracy and clarity were based on valuable feedback from readers. Open Source GIS: A GRASS GIS Approach, Second Edition, provides updated information about the use of GRASS, including geospatial modeling with raster, vector, and site data, image processing, visualization, and coupling with other open source tools for geostatistical analysis and web applications. A brief introduction to programming within GRASS encourages new development. The sample data set used throughout the book has been updated and is available on the GRASS web site. This book also includes links to sites where the GRASS software and on-line reference manuals can be downloaded and additional applications can be viewed.

The richly illustrated Interactive Web-Based Data Visualization with R, plotly, and shiny focuses on the process of programming interactive web graphics for multidimensional data analysis. It is written for the data analyst who wants to leverage the capabilities of interactive web graphics without having to learn web programming. Through many R code examples, you will learn how to tap the extensive functionality of these tools to enhance the presentation and exploration of data. By mastering these concepts and tools, you will impress your colleagues with your ability to quickly generate more informative, engaging, and reproducible interactive graphics using free and open source software that you can

share over email, export to pdf, and more. Key Features: Convert static ggplot2 graphics to an interactive web-based form Link, animate, and arrange multiple plots in standalone HTML from R Embed, modify, and respond to plotly graphics in a shiny app Learn best practices for visualizing continuous, discrete, and multivariate data Learn numerous ways to visualize geo-spatial data This book makes heavy use of plotly for graphical rendering, but you will also learn about other R packages that support different phases of a data science workflow, such as tidyr, dplyr, and tidyverse. Along the way, you will gain insight into best practices for visualization of high-dimensional data, statistical graphics, and graphical perception. The printed book is complemented by an interactive website where readers can view movies demonstrating the examples and interact with graphics.

User story mapping is a valuable tool for software development, once you understand why and how to use it. This insightful book examines how this often misunderstood technique can help your team stay focused on users and their needs without getting lost in the enthusiasm for individual product features. Author Jeff Patton shows you how changeable story maps enable your team to hold better conversations about the project throughout the development process. Your team will learn to come away with a

shared understanding of what you're attempting to build and why. Get a high-level view of story mapping, with an exercise to learn key concepts quickly Understand how stories really work, and how they come to life in Agile and Lean projects Dive into a story's lifecycle, starting with opportunities and moving deeper into discovery Prepare your stories, pay attention while they're built, and learn from those you convert to working software

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

By meditating on personal examples from the author's life, as well as reflecting on the inspirational life and writings of Thomas Merton, stories from the Gospels, as well as the lives of other holy men and women (among them, Henri Nouwen, Therese of Lisieux and Pope John XXIII) the reader will see how becoming who you are, and becoming the person that God created, is a simple path to happiness, peace of mind and even sanctity.

This book offers an overview of geospatial technologies in land resource mapping, monitoring and management. It consists of four main parts: geospatial technology principles and applications; geospatial technologies in land resources mapping; geospatial technologies in land resources monitoring; and geospatial technologies in land resources management. Each part is divided into

detailed chapters that include illustrations and tables. The authors, from leading institutes, such as the ICAR-NBSS&LUP, IIT, NRSC, ICRISAT, share their experiences and offer case studies to provide advanced insights into the field. It is a valuable resource for the scientific community, the teaching community, extension scientists at research institutes and agricultural universities and colleges as well as those involved in planning and managing land resources for sustainable agriculture and livelihood security.

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.

First published in 2002. Routledge is an imprint of Taylor & Francis, an informa company.

This edited volume presents a collection of lessons learned with, and research conducted on, OpenStreetMap, the goal being to promote the project's integration. The respective chapters address a) state-of-the-art and cutting-edge approaches to data quality analysis in OpenStreetMap, b) investigations on understanding OpenStreetMap contributors and the nature of their contributions, c) identifying patterns of contributions and contributors, d) applications of OpenStreetMap in different domains, e) mining value-added knowledge and information from OpenStreetMap, f) limitations in the analysis OpenStreetMap data, and g) integrating OpenStreetMap with commercial and non-commercial datasets. The book offers an ideal opportunity to present and disseminate a number of cutting-edge developments and applications in the field of geography, spatial statistics, GIS, social science, and cartography. Get up to speed with core PostgreSQL tasks such as database administration, application development, database performance monitoring, and database testing Key Features Build real-world enterprise database management systems using Postgres 12 features Explore the development, administrative and security aspects of PostgreSQL 12 Implement best practices from industry experts to build powerful database applications Book Description PostgreSQL is an open-source object-relational database management system (DBMS) that provides enterprise-level services, including high performance and scalability. This book is a collection of unique projects providing you with a wealth of information relating to administering, monitoring, and testing PostgreSQL. The focus of each project is on both the development and the administrative aspects of PostgreSQL. Starting by exploring development aspects such as database design and its implementation, you'll then cover PostgreSQL administration by understanding PostgreSQL architecture,

PostgreSQL performance, and high-availability clusters. Various PostgreSQL projects are explained through current technologies such as DevOps and cloud platforms using programming languages like Python and Node.js. Later, you'll get to grips with the well-known database API tool, PostgREST, before learning how to use popular PostgreSQL database testing frameworks. The book is also packed with essential tips and tricks and common patterns for working seamlessly in a production environment. All the chapters will be explained with the help of a real-world case study on a small banking application for managing ATM locations in a city. By the end of this DBMS book, you'll be proficient in building reliable database solutions as per your organization's needs. What you will learn Set up high availability PostgreSQL database clusters in the same containment, a cross-containment, and on the cloud Monitor the performance of a PostgreSQL database Create automated unit tests and implement test-driven development for a PostgreSQL database Develop PostgreSQL apps on cloud platforms using DevOps with Python and Node.js Write robust APIs for PostgreSQL databases using Python programming, Node.js, and PostgREST Create a geospatial database using PostGIS and PostgreSQL Implement automatic configuration by Ansible and Terraform for Postgres Who this book is for This PostgreSQL book is for database developers, database administrators, data architects, or anyone who wants to build end-to-end database projects using Postgres. This book will also appeal to software engineers, IT technicians, computer science researchers, and university students who are interested in database development and administration. Some familiarity with PostgreSQL and Linux is required to grasp the concepts covered in the book effectively. The development of net-centric approaches for intelligence and national security applications has become a major

concern in many areas such as defense, intelligence and national and international law enforcement agencies. In this volume we consider the web architectures and recent developments that make n- centric approaches for intelligence and national security possible. These include developments in information integration and recent advances in web services including the concept of the semantic web. Discovery, analysis and management of web-available data pose a number of interesting challenges for research in w-based management systems. Intelligent agents and data mining are some of the techniques that can be employed. A number of specific systems that are net-centric based in various areas of military applications, intelligence and law enforcement are presented that utilize one or more of such techniques The opening chapter overviews the concepts related to ontologies which now form much of the basis of the possibility of sharing of information in the Semantic Web. In the next chapter an overview of Web Services and examples of the use of Web Services for net-centric operations as applied to meteorological and oceanographic (MetOc) data is presented and issues related to the Navy's use of MetOc Web Services are discussed. The third chapter focuses on metadata as conceived to support the concepts of a service-oriented architecture and, in particular, as it relates to the DoD Net-Centric Data Strategy and the NCES core services. This book highlights the rightful role of citizens as per the constitution of the country for participation in Governance of a smart city using electronic means such as high speed fiber optic networks, the internet, and mobile computing as well as Internet of Things that have the ability to transform the dominant role of citizens and technology in smart cities. These technologies can transform the way in which business is conducted, the interaction of interface with citizens and academic institutions, and improve interactions between

business, industry, and city government.

The role open-source geospatial software plays in data handling within the spatial information technology industry is the overarching theme of the book. It also examines new tools and applications for those already using OS approaches to software development.

A daring and timely feminist retelling of The Iliad from the perspective of the women of Troy who endured it—an extraordinary follow up to The Silence of the Girls from the Booker Prize-winning author of The Regeneration Trilogy. "An important, powerful, memorable book."—Emily Wilson, translator of The Odyssey Troy has fallen and the victorious Greeks are eager to return home with the spoils of an endless war—including the women of Troy themselves. They await a fair wind for the Aegean. It does not come, because the gods are offended. The body of King Priam lies unburied and desecrated, and so the victors remain in suspension, camped in the shadows of the city they destroyed as the coalition that held them together begins to unravel. Old feuds resurface and new suspicions and rivalries begin to fester. Largely unnoticed by her captors, the one time Trojan queen Briseis, formerly Achilles's slave, now belonging to his companion Alcimus, quietly takes in these developments. She forges alliances when she can, with Priam's aged wife the defiant Hecuba and with the disgraced soothsayer Calchas, all the while shrewdly seeking her path to revenge.

How was Wolfenstein 3D made and what were the secrets of its speed? How did id Software manage to turn a machine designed to display static images for word processing and spreadsheet applications into the best gaming platform in the world, capable of running games at seventy frames per seconds? If you have ever asked yourself these questions, Game Engine Black Book is for you. This is an engineering book. You will not find much prose in here (the author's

English is broken anyway.) Instead, this book has only bit of text and plenty of drawings attempting to describe in great detail the Wolfenstein 3D game engine and its hardware, the IBM PC with an Intel 386 CPU and a VGA graphic card. Game Engine Black Book details techniques such as raycasting, compiled scalers, deferred rendition, VGA Mode-Y, linear feedback shift register, fixed point arithmetic, pulse width modulation, runtime generated code, self-modifying code, and many others tricks. Open up to discover the architecture of the software which pioneered the First Person Shooter genre.

The ability to create automated algorithms to process gridded spatial data is increasingly important as remotely sensed datasets increase in volume and frequency. Whether in business, social science, ecology, meteorology or urban planning, the ability to create automated applications to analyze and detect patterns in geospatial data is increasingly important. This book provides students with a foundation in topics of digital image processing and data mining as applied to geospatial datasets. The aim is for readers to be able to devise and implement automated techniques to extract information from spatial grids such as radar, satellite or high-resolution survey imagery.

Spatial Data on Water: Geospatial Technologies and Data Management focuses on the worldwide corroborated difficulties in accessing data, a major hindrance in conducting water related studies in several domains. Presents examples of research focused on water resource management Includes a guide on how to manage water data using a geographic information system and a spatial data infrastructure Provides several

ideas and techniques to support integrated water data management

Maps and atlases are created as soon as information on our geography has been clarified. They are used to find directions or to get insight into spatial relations. They are produced and used both on paper as well as on-screen. The Web is the new medium for spreading and using maps. This book explains the benefits of this medium from the perspective of the user, and the map provider. Opportunities and pitfalls are illustrated by a set of case-studies. A website accompanies the book and provides a dynamic environment for demonstrating many of the principles set out in the text, including access to a basic course in Internet cartography as well as links to other interesting places on the Web. Professor Kraak looks at basic questions such as "I have this data what can I do with it?" and discusses the various functions of maps on the web. Web Cartography also looks at the particularities of multidimensional web maps and addresses topics such as map contents (colour, text and symbols), map physics (size and resolution), and the map environment (interface design/site contents). Open access to information of geographic places and spatial relationships provides an essential part of the analytical processing of spatial data. Access to connected geospatial programs allows for improvement in teaching and understanding science, technology, engineering, and mathematics. Emerging Trends in Open Source Geographic Information Systems provides emerging research on the applications of free and open software in geographic information systems in various

fields of study. While highlighting topics such as data warehousing, hydrological modeling, and software packages, this publication explores the assessment and techniques of open software functionality and interfaces. This book is an important resource for professionals, researchers, academicians, and students seeking current research on the different types and uses of data and data analysis in geographic information systems. "The definitive guide to a technology that succeeds or fails depending upon our ability to accommodate societal context and structures. This handbook is lucid, integrative, comprehensive and, above all, prescient in its interpretation of GIS implementation as a societal process." - Paul Longley, University College London "This is truly a handbook - a book you will want to keep on hand for frequent reference and to which GIS professors should direct students entering our field... Selection of a few of the chapters for individual attention is difficult because each one contributes meaningfully to the overall message of this volume. An important collection of articles that will set the tone for the next two decades of discourse and research about GIS and society." - Journal of Geographical Analysis Over the past twenty years research on the evolving relationship between GIS and Society has been expanding into a wide variety of topical areas, becoming in the process an increasingly challenging and multifaceted endeavour. The SAGE Handbook of GIS and Society is a retrospective and prospective overview of GIS and Society research that provides an expansive and critical assessment of work in that field. Emphasizing the

theoretical, methodological and substantive diversity within GIS and Society research, the book highlights the distinctiveness and intellectual coherence of the subject as a field of study, while also examining its resonances with and between key themes, and among disciplines ranging from geography and computer science to sociology, anthropology, and the health and environmental sciences. Comprising 27 chapters, often with an international focus, the book is organized into six sections: Foundations of Geographic Information and Society Geographical Information and Modern Life Alternative Representations of Geographic Information and Society Organizations and Institutions Participation and Community Issues Value, Fairness, and Privacy Aimed at academics, researchers, postgraduates, and GIS practitioners, this Handbook will be the basic reference for any inquiry applying GIS to societal issues. What is pgRouting? It's a PostgreSQL extension for developing network routing applications and doing graph analysis. This book will give you all the tools and information you need to get started with pgRouting, as well as complete code examples and even how to deploy your project to the web.
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