Data Modeling For Mongodb Building Well Designed And Supportable Mongodb Databases

Build an application from backend to browser with Node.js, and kick open the doors to real-time event programming. With this hands-on book, you'll learn how to create a social network application similar to LinkedIn and Facebook, but with a real-time twist. And you'll build it with just one programming language: JavaScript. If you're an experienced web developer unfamiliar with JavaScript, the book's first section introduces you to the project's core technologies: Node.js, Backbone.js, and the MongoDB data store. You'll then launch into the project—a highly responsive, highly scalable application—guided by clear explanations and lots of code examples. Learn about key modules in Node.js for building real-time apps Use the Backbone.js framework to write clean browser code, and maintain better data integration with MongoDB Structure project files as a foundation for code that will arrive later Create user accounts and learn how to secure the data Use Backbone.js templates to build the application's UIs, and integrate access control with Node.js Develop a contact list to help users link to and track other accounts Use Socket.io to create real-time chat functionality Extend your UIs to give users up-to-the-minute information

Data is getting bigger and more complex by the day, and so are your choices in handling it. Explore some of the most cutting-edge databases available - from a traditional relational database to newer NoSQL approaches - and make informed decisions about challenging data storage problems. This is the only comprehensive guide to the world of NoSQL databases, with in-depth practical and conceptual introductions to seven different technologies: Redis, Neo4J, CouchDB, MongoDB, HBase, Postgres, and DynamoDB. This second edition includes a new chapter on DynamoDB and updated content for each chapter. While relational databases such as MySQL remain as relevant as ever, the alternative, NoSQL paradigm has opened up new horizons in performance and scalability and changed the way we approach data-centric problems. This book presents the essential concepts behind each database alongside hands-on examples that make each technology come alive. With each database, tackle a real-world problem that highlights the concepts and features that make it shine. Along the way, explore five database models - relational, key/value, columnar, document, and graph - from the perspective of challenges faced by real applications. Learn how MongoDB and CouchDB are strikingly different, make your applications faster with Redis and more connected with Neo4J, build a cluster of HBase servers using cloud services such as Amazon's Elastic MapReduce, and more. This new edition brings a brand new chapter on DynamoDB, updated code samples and exercises, and a more up-to-date account of each database's feature set. Whether you're a programmer building the next big thing, a data scientist seeking solutions to thorny problems, or a technology enthusiast venturing into new territory, you will find something to inspire you in this book. What You Need: You'll need a *nix shell (Mac OS or Linux preferred, Windows users will need Cygwin), Java 6 (or greater), and Ruby 1.8.7 (or greater). Each chapter will list the downloads required for that database.

This is the eBook of the printed book and may not include any media, website access codes, or print supplements that may come packaged with the bound book. This up-to-the-minute reference will help you master all three facets of sports analytics — and use it to win! Sports Analytics and Data Science is the most accessible and practical guide to sports analytics for everyone who cares about winning and everyone who is interested in data science. You'll discover how successful sports analytics blends business and sports savvy, modern information technology, and sophisticated modeling techniques. You'll master the discipline through realistic sports vignettes and intuitive data visualizations–not complex math. Every chapter focuses on one key sports analytics application. Miller guides you through assessing players and teams, predicting scores and making game-day decisions, crafting brands and marketing messages, increasing revenue and profitability, and much more. Step by step, you'll learn how analysts transform raw data and analytical models into wins: both on the field and in any sports business.

This book is a mini tutorial full of code examples and strategies to give you plenty of options when building your own applications with MongoDB.This book is ideal for people who want to develop applications on the Node.js stack quickly and efficiently. Prior knowledge of the stack is not essential as the book briefly covers the installation of the core components and builds all aspects of the example application. The focus of the book is on what Mongoose adds to you applications, so experienced Node.js developers will also benefit.

Summary Getting MEAN, Second Edition teaches you how to develop full-stack web applications using the MEAN stack. This edition was completely revised and updated to cover MongoDB 4, Express 4, Angular 7, Node 11, and the latest mainstream release of JavaScript ES2015. Purchase of the print book includes a free eBook in PDF, Kindle, and ePub formats from Manning Publications. About the Technology Juggling languages mid-application can radically slow down a full-stack web project. The MEAN stack—MongoDB, Express, Angular, and Node—uses JavaScript end to end, maximizing developer productivity and minimizing context switching. And you'll love the results! MEAN apps are fast, powerful, and beautiful. About the Book Getting MEAN, Second Edition teaches you how to develop full-stack web applications using the MEAN stack. Practical from the very beginning, the book helps you create a static site in Express and Node. Expanding on that solid foundation, you'll integrate a MongoDB database, build an API, and add an authentication system. Along the way, you'll get countless pro tips for building dynamic and responsive data-driven web applications! What's inside MongoDB 4, Express 4, Angular 7, and Node.js 11 MEAN stack architecture Mobile-ready web apps Best practices for efficiency and reusability About the Reader Readers should be comfortable with standard web application designs and ES2015-style JavaScript. About the Author Simon Holmes and Clive Harber are full-stack developers with decades of experience in JavaScript and other leading-edge web technologies. Table of Contents PART 1 - SETTING THE BASELINE Introducing full-stack development Designing a MEAN stack architecture PART 2 - BUILDING A NODE WEB APPLICATION Creating and setting up a MEAN project Building a static site with Node and Express Building a data model with MongoDB and Mongoose Writing a REST API: Exposing the MongoDB database to the application Consuming a REST API: Using an API from inside Express PART 3 - ADDING A DYNAMIC FRONT END WITH ANGULAR Creating an Angular application with TypeScript Building a single-page application with Angular: Foundations Building a single-page application with Angular: The next level PART 4 - MANAGING AUTHENTICATION AND USER SESSIONS Authenticating users, managing sessions, and securing APIs Using an authentication API in Angular applications

Spring Data

A complete guide to dealing with Big Data using MongoDB

Build Applications with Meteor
Rapid Prototyping and Scalable Deployment
NoSQL Data Models
Mongoose for Application Development
MongoDB Recipes

Solve all big data problems by learning how to create efficient data models Key FeaturesCreate effective models that get the most out of big dataApply your knowledge to datasets from Twitter and weather data to learn big dataTackle different data modeling challenges with expert techniques presented in this bookBook Description Modeling and managing data is a central focus of all big data projects. In fact, a database is considered to be effective only if you have a logical and sophisticated data model. This book will help you develop practical skills in modeling your own big data projects and improve the performance of analytical queries for your specific business requirements. To start with, you'll get a quick introduction to big data and understand the different data modeling and data management platforms for big data. Then you'll work with structured and semi-structured data with the help of real-life examples. Once you've got to grips with the basics, you'll use the SQL Developer Data Modeler to create your own data models containing different file types such as CSV, XML, and JSON. You'll also learn to create graph data models and explore data modeling with streaming data using real-world datasets. By the end of this book, you'll be able to design and develop efficient data models for varying data sizes easily and efficiently. What you will learnGet insights into big data and discover various data modelsExplore conceptual, logical, and big data modelsUnderstand how to model data containing different file typesRun through data modeling with examples of Twitter, Bitcoin, IMDB and weather data modelingCreate data models such as Graph Data and Vector SpaceModel structured and unstructured data using Python and RWho this book is for This book is great for programmers, geologists, biologists, and every professional who deals with spatial data. If you want to learn how to handle GIS, GPS, and remote sensing data, then this book is for you. Basic knowledge of R and QGIS would be helpful.

Learn how to deploy and monitor databases in the cloud, manipulate documents, visualize data, and build applications running on MongoDB using Node.js Key FeaturesLearn the fundamentals of NoSQL databases with MongoDBCreate, manage, and optimize a MongoDB database in the cloud using AtlasUse a real-world dataset to gain practical experience of handling big dataBook Description MongoDB is one of the most popular database technologies for handling large collections of data. This book will help MongoDB beginners develop the knowledge and skills to create databases and process data efficiently. Unlike other MongoDB books, MongoDB Fundamentals dives into cloud computing from the very start – showing you how to get started with Atlas in the first chapter. You will discover how to modify existing data, add new data into a database, and handle complex queries by creating aggregation pipelines. As you progress, you'll learn about the MongoDB replication architecture and configure a simple cluster. You will also get to grips with user authentication, as well as techniques for backing up and restoring data. Finally, you'll perform data visualization using MongoDB Charts. You will work on realistic projects that are presented as bitesize exercises and activities, allowing you to challenge yourself in an enjoyable and attainable way. Many of these mini-projects are based around a movie database case study, while the last chapter acts as a final project where you will use MongoDB to solve a real-world problem based on a bike-sharing app. By the end of this book, you'll have the skills and confidence to process large volumes of data and tackle your own projects using MongoDB. What you will learnSet up and use MongoDB Atlas on the cloudInsert, update, delete, and retrieve data from MongoDBBuild aggregation pipelines to perform complex queriesOptimize queries using indexesMonitor databases and manage user authorizationImprove scalability and performance with sharding clustersReplicate clusters, back up your database, and restore dataCreate data-driven charts and reports from real-time dataWho this book is for This book is designed for people who are new to MongoDB. It is suitable for developers, database administrators, system administrators, and cloud architects who are looking to use MongoDB for smooth data processing in the cloud. Although not necessary, basic knowledge of a general programming language and experience with other databases will help you grasp the topics covered more easily.

You can choose several data access frameworks when building Java enterprise applications that work with relational databases. But what about big data? This hands-on introduction shows you how Spring Data makes it relatively easy to build applications across a wide range of new data access technologies such as NoSQL and Hadoop. Through several sample projects, you'll learn how Spring Data provides a consistent programming model that retains NoSQL-specific features and capabilities, and helps you develop Hadoop applications across a wide range of use-cases such as data analysis, event stream processing, and workflow. You'll also discover the features Spring Data adds to Spring's existing JPA and JDBC support for writing RDBMS-based data access layers. Learn about Spring's template helper classes to simplify the use of database-specific functionality Explore Spring Data's repository abstraction and advanced query functionality Use Spring Data with Redis (key/value store), HBase (column-family), MongoDB (document database), and Neo4j (graph database) Discover the GemFire distributed data grid solution Export Spring Data JPA-managed entities to the Web as RESTful web services Simplify the development of HBase applications, using a lightweight object-mapping framework Build example big-data pipelines with Spring Batch and Spring Integration

Master modern web and network data modeling: both theory and applications. In Web and Network Data Science, a top faculty member of Northwestern University's prestigious analytics program presents the first fully-integrated treatment of both the business and academic elements of web and network modeling for predictive analytics. Some books in this field focus either entirely on business issues (e.g., Google Analytics and SEO); others are strictly academic (covering topics such as sociology, complexity theory, ecology, applied physics, and economics). This text gives today's managers and students what they really need: integrated coverage of concepts, principles, and theory in the context of real-world applications. Building on his pioneering Web Analytics course at Northwestern University, Thomas W. Miller covers usability testing, Web site performance, usage

analysis, social media platforms, search engine optimization (SEO), and many other topics. He balances this practical coverage with accessible and up-to-date introductions to both social network analysis and network science, demonstrating how these disciplines can be used to solve real business problems.

Summary MongoDB in Action, Second Edition is a completely revised and updated version. It introduces MongoDB 3.0 and the document-oriented database model. This perfectly paced book gives you both the big picture you'll need as a developer and enough low-level detail to satisfy system engineers. Purchase of the print book includes a free eBook in PDF, Kindle, and ePub formats from Manning Publications. About the Technology This document-oriented database was built for high availability, supports rich, dynamic schemas, and lets you easily distribute data across multiple servers. MongoDB 3.0 is flexible, scalable, and very fast, even with big data loads. About the Book MongoDB in Action, Second Edition is a completely revised and updated version. It introduces MongoDB 3.0 and the document-oriented database model. This perfectly paced book gives you both the big picture you'll need as a developer and enough low-level detail to satisfy system engineers. Lots of examples will help you develop confidence in the crucial area of data modeling. You'll also love the deep explanations of each feature, including replication, auto-sharding, and deployment. What's Inside Indexes, queries, and standard DB operations Aggregation and text searching Map-reduce for custom aggregations and reporting Deploying for scale and high availability Updated for Mongo 3.0 About the Reader Written for developers. No previous MongoDB or NoSQL experience is assumed. About the Authors After working at MongoDB, Kyle Banker is now at a startup. Peter Bakkum is a developer with MongoDB expertise. Shaun Verch has worked on the core server team at MongoDB. A Genentech engineer, Doug Garrett is one of the winners of the MongoDB Innovation Award for Analytics. A software architect, Tim Hawkins has led search engineering at Yahoo Europe. Technical Contributor: Wouter Thielen. Technical Editor: Mihalis Tsoukalos. Table of Contents PART 1 GETTING STARTED A database for the modern web MongoDB through the JavaScript shell Writing programs using MongoDB PART 2 APPLICATION DEVELOPMENT IN MONGODB Document-oriented data Constructing queries Aggregation Updates, atomic operations, and deletes PART 3 MONGODB MASTERY Indexing and query optimization Text search WiredTiger and pluggable storage Replication Scaling your system with sharding Deployment and administration

Applying the Industry Standard on Data Model Quality
Data Modeling Made Simple
Building Applications with Spring 5 and Vue.js 2
A Guide to Modern Databases and the NoSQL Movement
Effective database design techniques for data architects and business intelligence professionals
A Deep Dive into How Distributed Data Systems Work
Modeling Techniques in Predictive Analytics with R and Python

Build a variety of cross-platform applications with the world's most complete full-stack JavaScript framework— Meteor About This Book Develop a set of real-world applications each exploring different features of Meteor Make your app more appealing by adding reactivity and responsiveness to it Work with the most powerful feature of Meteor—the "full stack reactivity"—through building real-time applications with many third party libraries Who This Book Is For If you are a developer who is looking forward to taking your application development skills with Meteor to next level by getting your hands-on different projects, this book is for you. What You Will Learn See how Meteor fits in the modern web application development by using its reactive data system Make your front-end behave consistently across environments by implementing a predictable state container with Redux Get familiar with React and overview of Angular 2 Add a map to your application with a real-time geolocation Plugin into Meteor social media APIs like Twitter's streaming and Facebook's Messenger Add search functionality from scratch to your existing app and data Add responsiveness with Bootstrap 4 and Google's Material Design using Less and Sass Distribute your data across machines and data centers by adding Apache Cassandra to your existing stack. Learn how to scale your microservices with the high performant language neutral framework gRPC. Learn how to query multiple data sources using GraphQL. In Detail This book starts with the basic installation and overview of the main components in Meteor. You'll get hands-on multiple versatile applications covering a wide range of topics from adding a front-end views with the hottest rendering technology React to implementing a microservices oriented architecture.All the code is written with ES6/7 which is the latest significantly improved JavaScript language. We'll also look at real-time data streaming, server to server data exchange, responsive styles on the front-end, full-text search functionality, and integration of many third-party libraries and APIs using npm. By the end of the book, you'll have the skills to quickly prototype and even launch your next app idea in a matter of days. Style and Approach This book takes an easy-to-follow project-based approach. Each project starts with the goal of what you will learn and an overview the technologies used.

Become efficient in both frontend and backend web development with Spring and Vue Key FeaturesConnect application's frontend and backend with Vue, Vuex, and Spring BootLeverage the latest web standards to enhance code performance, readability, and cross-compatibilityBuild secure full-stack web applications with Spring SecurityBook Description Building Applications with Spring 5 and Vue.js 2, with its practical approach, helps you become a full-stack web developer. As well as knowing how to write frontend and backend code, a developer has to tackle all problems encountered in the application development life cycle – starting from the simple idea of an application, to the UI and technical designs, and all the way to implementation, testing, production deployment, and monitoring. With the help of this book, you'll get to grips with Spring 5 and Vue.js 2 as you learn how to develop a web application. From the initial structuring to full deployment, you'll be guided at every step of developing a web application from scratch with Vue.js 2 and Spring 5. You'll learn how to create different components of your application as you progress through each chapter, followed by exploring different tools in these frameworks to expedite your development cycle. By the end of this book, you'll have

gained a complete understanding of the key design patterns and best practices that underpin professional full-stack web development. What you will learnAnalyze requirements and design data modelsDevelop a single-page application using Vue.js 2 and Spring 5Practice concept, logical, and physical data modelingDesign, implement, secure, and test RESTful API Add test cases to improve reliability of an applicationMonitor and deploy your application to productionWho this book is for Building Applications with Spring 5.0 and Vue.js 2.0 is for you if you are developer who is new to Vue.js or Spring. It is assumed that you have some knowledge of HTML, CSS, and Java.

The Easy, Common-Sense Guide to Solving Real Problems with NoSQL The Mere Mortals ® tutorials have earned worldwide praise as the clearest, simplest way to master essential database technologies. Now, there's one for today's exciting new NoSQL databases. NoSQL for Mere Mortals guides you through solving real problems with NoSQL and achieving unprecedented scalability, cost efficiency, flexibility, and availability. Drawing on 20+ years of cutting-edge database experience, Dan Sullivan explains the advantages, use cases, and terminology associated with all four main categories of NoSQL databases: key-value, document, column family, and graph databases. For each, he introduces pragmatic best practices for building high-value applications. Through step-by-step examples, you'll discover how to choose the right database for each task, and use it the right way. Coverage includes --Getting started: What NoSQL databases are, how they differ from relational databases, when to use them, and when not to Data management principles and design criteria: Essential knowledge for creating any database solution, NoSQL or relational --Key-value databases: Gaining more utility from data structures --Document databases: Schemaless databases, normalization and denormalization, mutable documents, indexing, and design patterns --Column family databases: Google's BigTable design, table design, indexing, partitioning, and Big Data Graph databases: Graph/network modeling, design tips, query methods, and traps to avoid Whether you're a database developer, data modeler, database user, or student, learning NoSQL can open up immense new opportunities. As thousands of database professionals already know, For Mere Mortals is the fastest, easiest route to mastery.

The topic of NoSQL databases has recently emerged, to face the Big Data challenge, namely the ever increasing volume of data to be handled. It is now recognized that relational databases are not appropriate in this context, implying that new database models and techniques are needed. This book presents recent research works, covering the following basic aspects: semantic data management, graph databases, and big data management in cloud environments. The chapters in this book report on research about the evolution of basic concepts such as data models, query languages, and new challenges regarding implementation issues.

With modern tools. it is possible to create a production grade, full-stack application using HTML, CSS, and JavaScript alone. The combination of MongoDB, Express, AngularJS, and Node.js has become so popular that it has earned the title MEAN stack -- the subject of this book. This book explores the MEAN stack in detail. We will begin by covering Node.js, as it will lay the groundwork for all of our server-side work. You will learn how to get Node running on your local machine as well as download modules using npm. The key aspects of the Node.js programming model will also be covered. From there, we will move on to MongoDB, where you'll learn how to interact with Mongo from a Node application. You will also learn how to create, retrieve, update, and delete data from a Mongo store. After you have a solid grasp on Node and Mongo, the book will move on to the Express web server. We'll cover the basics of Express applications via topics like routes and middleware. Building on previous chapters, we will cover the integration of Node, Mongo, and Express. Our coverage of the MEAN stack will wrap up with several chapters on AngularJS. These chapters will cover Angular fundamentals like data binding, directives, controllers, routing, and services. In an effort to explore competing technologies, a slight introduction to Ember.js will also be provided. Full stack JavaScript is not fully encompassed by the MEAN stack. There is an entire ecosystem of JavaScript tools to learn about, and this book will introduce a few of them. We will cover task runners Gulp.js and Grunt.js which are extremely useful for automating mundane, repetitive tasks. We'll also cover JSHint, a linting tool used to improve code quality. Linting tools analyze source code and report potentials issues - a feature that is especially useful in non-compiled languages like JavaScript.

The Definitive Guide to MongoDB

Sams Teach Yourself NoSQL with MongoDB in 24 Hours

A hands-on guide to using MongoDB and Atlas in the real world

Modeling Techniques in Predictive Analytics

Database Internals

Powerful and Scalable Data Storage

Graph Data Modeling for NoSQL and SQL

Leverage the power of MongoDB 4.x to build and administer fault-tolerant database applications Key FeaturesMaster the new features and capabilities of MongoDB 4.x Implement advanced data modeling, querying, and administration techniques in MongoDBIncludes rich case-studies and best practices followed by expert MongoDB developersBook Description MongoDB is the best platform for working with non-relational data and is considered to be the smartest tool for organizing data in line with business needs. The recently released MongoDB 4.x supports ACID transactions and makes the technology an asset for enterprises across the IT and fintech sectors. This book provides expertise in advanced and niche areas of managing databases (such as modeling and querying databases) along with various administration techniques in MongoDB, thereby helping you become a successful MongoDB expert. The book helps you understand how the newly added capabilities function with the help of some interesting examples and

large datasets. You will dive deeper into niche areas such as high-performance configurations, optimizing SQL statements, configuring large-scale sharded clusters, and many more. You will also master best practices in overcoming database failover, and master recovery and backup procedures for database security. By the end of the book, you will have gained a practical understanding of administering database applications both on premises and on the cloud; you will also be able to scale database applications across all servers. What you will learnPerform advanced querying techniques such as indexing and expressionsConfigure, monitor, and maintain a highly scalable MongoDB environment Master replication and data sharding to optimize read/write performance Administer MongoDB-based applications on premises or on the cloud Integrate MongoDB with big data sources to process huge amounts of data Deploy MongoDB on Kubernetes containers Use MongoDB in IoT, mobile, and serverless environmentsWho this book is for This book is ideal for MongoDB developers and database administrators who wish to become successful MongoDB experts and build scalable and fault-tolerant applications using MongoDB. It will also be useful for database professionals who wish to become certified MongoDB professionals. Some understanding of MongoDB and basic database concepts is required to get the most out of this book.

NoSQL database usage is growing at a stunning 50% per year, as organizations discover NoSQL's potential to address even the most challenging Big Data and real-time database problems. Every NoSQL database is different, but one is the most popular by far: MongoDB. Now, in just 24 lessons of one hour or less, you can learn how to leverage MongoDB's immense power. Each short, easy lesson builds on all that's come before, teaching NoSQL concepts and MongoDB techniques from the ground up. Sams Teach Yourself NoSQL with MongoDB in 24 Hours covers all this, and much more: Learning how NoSQL is different, when to use it, and when to use traditional RDBMSes instead Designing and implementing MongoDB databases of diverse types and sizes Storing and interacting with data via Java, PHP, Python, and Node.js/Mongoose Choosing the right NoSQL distribution model for your application Installing and configuring MongoDB Designing MongoDB data models, including collections, indexes, and GridFS Balancing consistency, performance, and durability Leveraging the immense power of Map-Reduce Administering, monitoring, securing, backing up, and repairing MongoDB databases Mastering advanced techniques such as sharding and replication Optimizing performance

Manage the huMONGOus amount of data collected through your web application with MongoDB. This authoritative introduction—written by a core contributor to the project—shows you the many advantages of using document-oriented databases, and demonstrates how this reliable, high-performance system allows for almost infinite horizontal scalability. This updated second edition provides guidance for database developers, advanced configuration for system administrators, and an overview of the concepts and use cases for other people on your project. Ideal for NoSQL newcomers and experienced MongoDB users alike, this guide provides numerous real-world schema design examples. Get started with MongoDB core concepts and vocabulary Perform basic write operations at different levels of safety and speed Create complex queries, with options for limiting, skipping, and sorting results Design an application that works well with MongoDB Aggregate data, including counting, finding distinct values, grouping documents, and using MapReduce Gather and interpret statistics about your collections and databases Set up replica sets and automatic failover in MongoDB Use sharding to scale horizontally, and learn how it impacts applications Delve into monitoring, security and authentication, backup/restore, and other administrative tasks

Data models are the main medium used to communicate data requirements from business to IT, and within IT from analysts, modelers, and architects, to database designers and developers. Therefore it's essential to get the data model right. But how do you determine right? That's where the Data Model Scorecard® comes in. The Data Model Scorecard is a data model quality scoring tool containing ten categories aimed at improving the quality of your organization's data models. Many of my consulting assignments are dedicated to applying the Data Model Scorecard to my client's data models – I will show you how to apply the Scorecard in this book. This book, written for people who build, use, or review data models, contains the Data Model Scorecard template and an explanation along with many examples of each of the ten Scorecard categories. There are three sections: In Section I, Data Modeling and the Need for Validation, receive a short data modeling primer in Chapter 1, understand why it is important to get the data model right in Chapter 2, and learn about the Data Model Scorecard in Chapter 3. In Section II, Data Model Scorecard Categories, we will explain each of the ten categories of the Data Model Scorecard. There are ten chapters in this section, each chapter dedicated to a specific Scorecard category: · Chapter 4: Correctness · Chapter 5: Completeness · Chapter 6: Scheme · Chapter 7: Structure · Chapter 8: Abstraction · Chapter 9: Standards · Chapter 10: Readability · Chapter 11: Definitions · Chapter 12: Consistency · Chapter 13: Data In Section III, Validating Data Models, we will prepare for the model review (Chapter 14), cover tips to help during the model review (Chapter 15), and then review a data model based upon an actual project (Chapter 16).

A hands-on guide to leveraging NoSQL databases NoSQL databases are an efficient and powerful tool for storing and manipulating vast quantities of data. Most NoSQL databases scale well as data grows. In addition, they are often malleable and flexible enough to accommodate semi-structured and sparse data sets. This comprehensive hands-on guide presents fundamental concepts and practical solutions for getting you ready to use NoSQL databases. Expert author Shashank Tiwari begins with a helpful introduction on the subject of NoSQL, explains its characteristics and typical uses, and looks at where it fits in the application stack. Unique insights help you choose which NoSQL solutions are best for solving your specific data storage needs. Professional NoSQL: Demystifies the concepts that relate to NoSQL databases, including column-family oriented stores, key/value databases, and document databases. Delves into installing and configuring a number of NoSQL products and the Hadoop family of products. Explains ways of storing, accessing, and querying data in NoSQL databases through examples that use MongoDB, HBase, Cassandra, Redis, CouchDB, Google App Engine Datastore and more. Looks

at architecture and internals. Provides guidelines for optimal usage, performance tuning, and scalable configurations. Presents a number of tools and utilities relating to NoSQL, distributed platforms, and scalable processing, including Hive, Pig, RRDtool, Nagios, and more.
MongoDB and Python
Expert techniques to run high-volume and fault-tolerant database solutions using MongoDB 4.x, 2nd Edition
MongoDB and PHP
Marketing Data Science
Document-Oriented Data for Web Developers
Professional NoSQL
Seven Databases in Seven Weeks

"Now, in just 24 lessons of one hour or less, you can learn how to leverage MongoDB's immense power. Each short, easy lesson builds on all that's come before, teaching NoSQL concepts and MongoDB techniques from the ground up."--

Data Modeling Made Simple will provide the business or IT professional with a practical working knowledge of data modeling concepts and best practices. This book is written in a conversational style that encourages you to read it from start to finish and master these ten objectives: Know when a data model is needed and which type of data model is most effective for each situation Read a data model of any size and complexity with the same confidence as reading a book Build a fully normalized relational data model, as well as an easily navigatable dimensional model Apply techniques to turn a logical data model into an efficient physical design Leverage several templates to make requirements gathering more efficient and accurate Explain all ten categories of the Data Model Scorecard Learn strategies to improve your working relationships with others Appreciate the impact unstructured data has, and will have, on our data modeling deliverables Learn basic UML concepts Put data modeling in context with XML, metadata, and agile development Book Review by Johnny Gay In this book review, I address each section in the book and provide what I found most valuable as a data modeler. I compare, as I go, how the book's structure eases the new data modeler into the subject much like an instructor might ease a beginning swimmer into the pool. This book begins like a Dan Brown novel. It even starts out with the protagonist, our favorite data modeler, lost on a dark road somewhere in France. In this case, what saves him isn't a cipher, but of all things, something that's very much like a data model in the form of a map! The author deems they are both way-finding tools. The chapters in the book are divided into 5 sections. The chapters in each section end with an exercise and a list of the key points covered to reinforce what you've learned. I find myself comparing the teaching structure of the book to the way most of us learn to swim.

Summary Get Programming with Node.js teaches you to build web servers using JavaScript and Node. In this engaging tutorial, you'll work through eight complete projects, from writing the code for your first web server to adding live chat to a web app. Your hands will stay on the keyboard as you explore the most important aspects of the Node development process, including security, database management, authenticating user accounts, and deploying to production. You'll especially appreciate the easy-to-follow discussions, illuminating diagrams, and carefully explained code! Purchase of the print book includes a free eBook in PDF, Kindle, and ePub formats from Manning Publications. About the Technology Node.js delivers the speed and reliability you need for ecommerce, social media, and gaming applications. It comes with thousands of prebuilt packages to help you get started immediately. If you want to use JavaScript on the server, Node.js is your choice. What's inside New features from ES2015 and later Writing asynchronous code Creating data models Debugging JavaScript modules About the Reader Written for front-end web developers with intermediate JavaScript skills. Table of Contents GETTING SET UP Lesson 0- Setting up Node.js and the JavaScript engine Lesson 1 - Configuring your environment Lesson 2- Running a Node.js application UNIT 1 - GETTING STARTED WITH NODE.JS Lesson 3- Creating a Node.js module Lesson 4- Building a simple web server in Node.js Lesson 5- Handling incoming data Lesson 6- Writing better routes and serving external files Lesson 7- Capstone: Creating your first web application UNIT 2 - EASIER WEB DEVELOPMENT WITH EXPRESS.JS Lesson 8- Setting up an app with Express.js Lesson 9- Routing in Express.js Lesson 10- Connecting views with templates Lesson 11 - Configurations and error handling Lesson 12- Capstone: Enhancing the Confetti Cuisine site with Express.js UNIT 3- CONNECTING TO A DATABASE Lesson 13- Setting up a MongoDB database Lssson 14- Building models with Mongoose Lesson 15- Connecting controllers and models Using promises with Mongoose Lesson 16- Capstone: Saving user subscriptions UNIT 4- BUILDING A USER MODEL Lesson 17- Improving your data models Lesson 18- Building the user model Lesson 19- Creating and reading your models Lesson 20- Updating and deleting your models Lesson 21 - Capstone: Adding CRUD models to Confetti Cuisine Creating controllers UNIT 5- AUTHENTICATING USER ACCOUNTS Lesson 22- Adding sessions and flash messages Lesson 23- Building a user login and hashing passwords Lesson 24- Adding user authentication Lesson 25- Capstone: Adding user authentication to Confetti Cuisine UNIT 6- BUILDING AN API Lesson 26- Adding an API to your application Lesson 27- Accessing your API from your application Lesson 28- Adding API security Lesson 29- Capstone: Implementing an API UNIT 7- ADDING CHAT FUNCTIONALITY Lesson 30- Working with Socket.io Lesson 31 - Saving chat messages Lesson 32- Adding a chat notification indicator UNIT 8- DEPLOYING AND MANAGING CODE IN PRODUCTION Lesson 33- Capstone: Adding a chat feature to Confetti Cuisine Lesson 34- Deploying your application Lesson 35- Managing in production Lesson 36- Testing your application Lesson 37- Capstone: Deploying Confetti Cuisine

Now, a leader of Northwestern University's prestigious analytics program presents a fully-integrated treatment of both the business and academic elements of marketing applications in predictive analytics. Writing for both managers and students, Thomas W. Miller explains essential concepts, principles, and theory in the context of real-world applications. Building on Miller's pioneering program, Marketing Data Science thoroughly addresses segmentation, target marketing, brand and product positioning, new product development, choice modeling, recommender systems, pricing research, retail site selection, demand estimation, sales forecasting, customer retention, and lifetime value analysis. Starting where Miller's widely-praised Modeling Techniques in Predictive Analytics left off, he integrates

crucial information and insights that were previously segregated in texts on web analytics, network science, information technology, and programming. Coverage includes: The role of analytics in delivering effective messages on the web Understanding the web by understanding its hidden structures Being recognized on the web – and watching your own competitors Visualizing networks and understanding communities within them Measuring sentiment and making recommendations Leveraging key data science methods: databases/data preparation, classical/Bayesian statistics, regression/classification, machine learning, and text analytics Six complete case studies address exceptionally relevant issues such as: separating legitimate email from spam; identifying legally-relevant information for lawsuit discovery; gleaning insights from anonymous web surfing data, and more. This text's extensive set of web and network problems draw on rich public-domain data sources; many are accompanied by solutions in Python and/or R. Marketing Data Science will be an invaluable resource for all students, faculty, and professional marketers who want to use business analytics to improve marketing performance.

The Definitive Guide to MongoDB, Third Edition, is updated for MongoDB 3 and includes all of the latest MongoDB features, including the aggregation framework introduced in version 2.2 and hashed indexes in version 2.4. The Third Edition also now includes Python. MongoDB is the most popular of the "Big Data" NoSQL database technologies, and it's still growing. David Hows from 10gen, along with experienced MongoDB authors Peter Membrey and Eelco Plugge, provide their expertise and experience in teaching you everything you need to know to become a MongoDB pro.
Mongodb Data Modeling

MongoDB: The Definitive Guide
The definitive guide to using the MEAN stack to build web applications
Building Well-Designed and Supportable MongoDB Databases
Web and Network Data Science
Trends and Challenges
A fast paced guide that will help you to create, read, update and delete data using MongoDB Key FeaturesCreate secure databases with MongoDBManipulate and maintain your databaseMode environment with MongoDBBook Description MongoDB has grown to become the de facto NoSQL database with millions of users, from small start-ups to Fortune 500 companies. It can solve difficult, if not impossible, for aging RDBMS technologies. Written for version 4 of MongoDB, this book is the easiest way to get started with MongoDB. You will start by getting a MongoDB safe and secure manner. You will learn how to perform mission-critical create, read, update, and delete operations, and set up database security. You will also learn about advanced features of aggregation pipeline, replication, and sharding. You will learn how to build a simple web application that uses MongoDB to respond to AJAX queries, and see how to make use of the MongoDB driver for PHP. The examples incorporate new features available in MongoDB version 4 where appropriate. What you will learnGet a standard MongoDB database up and running quicklyPerform on the database using the MongoDB command shellSet up a simple aggregation pipeline to return subsets of data grouped, sorted, and filteredSafeguard your data via replication and handle r shardingPublish data from a web form to the database using a program language driverExplore the basic CRUD operations performed using the PHP MongoDB driverWho this book is for Web and Database Administrators (DBAs) who want to learn how to create and manage MongoDB databases.
Node.js, MongoDB and Angular Web Development The definitive guide to using the MEAN stack to build web applications Node.js is a leading server-side programming environment, MongoDB is database, and Angular is the leading framework for MVC-based front-end development. Together, they provide an easy-to-implement, fully integrated web development stack that allows web performance sites and applications built completely in JavaScript, from server to client. Updated for Angular 2, Angular 4, and subsequent versions, this new edition of Node.js, MongoDB and A shows you how to integrate these three technologies into complete working solutions. It begins with concise, crystal-clear tutorials on each technology and then quickly moves on to building You'll learn how to use Node.js and MongoDB to build more scalable, high-performance sites, how to leverage Angular's innovative MVC approach to structure more effective pages and applica three together to deliver outstanding next-generation Web solutions. Implement a highly scalable and dynamic web server using Node.js and Express Implement a MongoDB data store for your interact with MongoDB from Node.js JavaScript code Learn the basics of TypeScript Define custom Angular directives that extend the HTML language Build server-side web services in JavaScr services that can interact with the Node.js web server Build dynamic browser views that provide rich user interaction Add authenticated user accounts and nested comment components to y Contents at a Glance Part I: Getting Started 1 Introducing the Node.js-to-Angular Stack 2 JavaScript Primer Part II: Learning Node.js 3 Getting Started with Node.js 4 Using Events, Listeners, Node.js 5 Handling Data I/O in Node.js 6 Accessing the File System from Node.js 7 Implementing HTTP Services in Node.js 8 Implementing Socket Services in Node.js 9 Scaling Applications Using Node.js 10 Using Additional Node.js Modules Part III: Learning MongoDB 11 Understanding NoSQL and MongoDB 12 Getting Started with MongoDB 13 Getting Started with MongoDB and Node MongoDB Documents from Node.js 15 Accessing MongoDB from Node.js 16 Using Mongoose for Structured Schema and Validation 17 Advanced MongoDB Concepts Part IV: Using Express to N Implementing Express in Node.js 19 Implementing Express Middleware Part V: Learning Angular 20 Jumping into TypeScript 21 Getting Started with Angular 22 Angular Components 23 Express Built-in Directives Part VI: Advanced Angular 26 Custom Directives 27 Events and Change Detection 28 Implementing Angular Services in Web Applications 29 Creating Your Own Custom Angu Fun with Angular
Learn how to leverage MongoDB with your Python applications, using the hands-on recipes in this book. You get complete code samples for tasks such as making fast geo queries for location indexing your user documents for social-graph lookups, and many other scenarios. This guide explains the basics of the document-oriented database and shows you how to set up a Python e read and write to MongoDB, apply idiomatic MongoDB and Python patterns, and use the database with several popular Python web frameworks. You'll discover how to model your data, write concurrency problems such as race conditions and deadlocks. The recipes will help you: Read, write, count, and sort documents in a MongoDB collection Learn how to use the rich MongoDB d integrity in replicated/distributed MongoDB environments Use embedding to efficiently model your data without joins Code defensively to avoid keyerrors and other bugs Apply atomic operatio billing systems, and more with the fast accounting pattern Use MongoDB with the Pylons 1.x, Django, and Pyramid web frameworks

Master a graph data modeling technique superior to traditional data modeling for both relational and NoSQL databases (graph, document, key-value, and column), leveraging cognitive psycholo designs. From Karen Lopez's Foreword: In this book, Thomas Frisendal raises important questions about the continued usefulness of traditional data modeling notations and approaches: Are En (ERDs) relevant to analytical data requirements? Are ERDs relevant in the new world of Big Data? Are ERDs still the best way to work with business users to understand their needs? Are Log too closely coupled? Are we correct in using the same notations for communicating with business users and developers? Should we refine our existing notations and tools to meet these new from a blank page? What new notations and approaches will we need? How will we use those to build enterprise database systems? Frisendal takes us through the history of data modeling, traditional modeling methods. He points out, quite contentiously, where he feels we have gone wrong and in a few places where we got it right. He then maps out the psychology of meaning important issues about where data modeling may or may not fit in business modeling. The main subject of this work is a proposal for a new exploration-driven modeling approach and new mo concept models, business solutions models, and physical data models with examples on how to leverage those for implementing into any target database or datastore. These new notations a approach to modeling data.

This comprehensive guide book begins by explaining what makes MongoDB unique. A series of tutorials designed for MongoDB mastery then leads into detailed examples for leveraging Mongo networking, analytics, and other common applications.

Sports Analytics and Data Science

Winning the Game with Methods and Models

Get Programming with Node.js

Full Stack JavaScript Development With MEAN

Data Modeling for MongoDB

Hands-On Big Data Modeling

Develop, manage, and deploy efficient machine learning applications with Python

Build a working knowledge of data modeling concepts and best practices, along with how to apply these principles with ER/Studio. This second edition includes numerous updates and new sections including an overview of ER/Studio's support for agile development, as well as a description of some of ER/Studio's newer features for NoSQL, such as MongoDB's containment structure. You will build many ER/Studio data models along the way, applying best practices to master these ten objectives: Know why a data model is needed and which ER/Studio models are the most appropriate for each situation Understand each component on the data model and how to represent and create them in ER/Studio Know how to leverage ER/Studio's latest features including those assisting agile teams and forward and reverse engineering of NoSQL databases Know how to apply all the foundational features of ER/Studio Be able to build relational and dimensional conceptual, logical, and physical data models in ER/Studio Be able to apply techniques such as indexing, transforms, and forward engineering to turn a logical data model into an efficient physical design Improve data model quality and impact analysis results by leveraging ER/Studio's lineage functionality and compare/merge utility Be able to apply ER/Studio's data dictionary features Learn ways of sharing the data model through reporting and through exporting the model in a variety of formats Leverage ER/Studio's naming functionality to improve naming consistency, including the new Automatic Naming Translation feature. This book contains four sections: Section I introduces data modeling and the ER/Studio landscape. Learn why data modeling is so critical to software development and even more importantly, why data modeling is so critical to understanding the business. You will learn about the newest features in ER/Studio (including features on big data and agile), and the ER/Studio environment. By the end of this section, you will have created and saved your first data model in ER/Studio and be ready to start modeling in Section II! Section II explains all of the symbols and text on a data model, including entities, attributes, relationships, domains, and keys. By the time you finish this section, you will be able to 'read' a data model of any size or complexity, and create a complete data model in ER/Studio. Section III explores the three different levels of models: conceptual, logical, and physical. A conceptual data model (CDM) ...

Build a working knowledge of data modeling concepts and best practices, along with how to apply these principles with ER/Studio. This second edition includes numerous updates and new sections including an overview of ER/Studio's support for agile development, as well as a description of some of ER/Studio's newer features for NoSQL, such as MongoDB's containment structure.

Get well-versed with FastAPI features and best practices for testing, monitoring, and deployment to run high-quality and robust data science applications Key FeaturesCover the concepts of the FastAPI framework, including aspects relating to asynchronous programming, type hinting, and dependency injectionDevelop efficient RESTful APIs for data science with modern PythonBuild, test, and deploy high performing data science and machine learning systems with FastAPIBook Description FastAPI is a web framework for building APIs with Python 3.6 and its later versions based on standard Python-type hints. With this book, you'll be able to create fast and reliable data science API backends using practical examples. This book starts with the basics of the FastAPI framework and associated modern Python programming language concepts. You'll be taken through all the aspects of the framework, including its powerful dependency injection system and how you can use it to

communicate with databases, implement authentication and integrate machine learning models. Later, you'll cover best practices relating to testing and deployment to run a high-quality and robust application. You'll also be introduced to the extensive ecosystem of Python data science packages. As you progress, you'll learn how to build data science applications in Python using FastAPI. The book also demonstrates how to develop fast and efficient machine learning prediction backends and test them to achieve the best performance. Finally, you'll see how to implement a real-time face detection system using WebSockets and a web browser as a client. By the end of this FastAPI book, you'll have not only learned how to implement Python in data science projects but also how to maintain and design them to meet high programming standards with the help of FastAPI. What you will learnExplore the basics of modern Python and async I/O programmingGet to grips with basic and advanced concepts of the FastAPI frameworkImplement a FastAPI dependency to efficiently run a machine learning modelIntegrate a simple face detection algorithm in a FastAPI backendIntegrate common Python data science libraries in a web backendDeploy a performant and reliable web backend for a data science applicationWho this book is for This Python data science book is for data scientists and software developers interested in gaining knowledge of FastAPI and its ecosystem to build data science applications. Basic knowledge of data science and machine learning concepts and how to apply them in Python is recommended.

Get the most out of MongoDB using a problem-solution approach. This book starts with recipes on the MongoDB query language, including how to query various data structures stored within documents. These self-contained code examples allow you to solve your MongoDB problems without fuss. MongoDB Recipes describes how to use advanced querying in MongoDB, such as indexing and the aggregation framework. It demonstrates how to use the Compass function, a GUI client interacting with MongoDB, and how to apply data modeling to your MongoDB application. You'll see recipes on the latest features of MongoDB 4 allowing you to manage data in an efficient manner using MongoDB. What You Will Learn Work with the MongoDB document model Design MongoDB schemas Use the MongoDB query language Harness the aggregation framework Create replica sets and sharding in MongoDB Who This Book Is ForDevelopers and professionals who work with MongoDB.

When it comes to choosing, using, and maintaining a database, understanding its internals is essential. But with so many distributed databases and tools available today, it's often difficult to understand what each one offers and how they differ. With this practical guide, Alex Petrov guides developers through the concepts behind modern database and storage engine internals. Throughout the book, you'll explore relevant material gleaned from numerous books, papers, blog posts, and the source code of several open source databases. These resources are listed at the end of parts one and two. You'll discover that the most significant distinctions among many modern databases reside in subsystems that determine how storage is organized and how data is distributed. This book examines: Storage engines: Explore storage classification and taxonomy, and dive into B-Tree-based and immutable Log Structured storage engines, with differences and use-cases for each Storage building blocks: Learn how database files are organized to build efficient storage, using auxiliary data structures such as Page Cache, Buffer Pool and Write-Ahead Log Distributed systems: Learn step-by-step how nodes and processes connect and build complex communication patterns Database clusters: Which consistency models are commonly used by modern databases and how distributed storage systems achieve consistency

Practical Use Cases with the Leading NoSQL Database

Build a modern, full-stack web application using Spring Boot and Vuex

MongoDB Applied Design Patterns

NoSQL Distilled

NoSQL for Mere Mortals

A Practical Guide for Business and IT Professionals

Building Data Science Applications with FastAPI

What would happen if you optimized a data store for the operations application developers actually use? You'd arrive at MongoDB, the reliable document-oriented database. With this concise guide, you'll learn how to build elegant database applications with MongoDB and PHP. Written by the Chief Solutions Architect at 10gen—the company that develops and supports this open source database—this book takes you through MongoDB basics such as queries, read-write operations, and administration, and then dives into MapReduce, sharding, and other advanced topics. Get out of the relational database rut, and take advantage of a high-performing system optimized for operations and scale. Learn step-by-step the tools you need to build PHP applications with MongoDB Perform Create, Read, Update, and Delete (CRUD) operations, and learn how to perform queries to retrieve data Administer your database, and access and manipulate data with the MongoDB Shell Use functions to work with sets, arrays, and multiple documents to perform synchronous, asynchronous, and atomic operations Discover PHP's community tools and libraries, and why they're valuable Work with regular expressions, aggregation, MapReduce, replication, and sharding

This book is intended for database professionals, software developers, and architects who have some previous experience with MongoDB and now want to shift their focus to the concepts of data modeling. If you wish to develop better schema designs for MongoDB-based applications, this book is ideal for you.

The need to handle increasingly larger data volumes is one factor driving the adoption of a new class of nonrelational "NoSQL" databases. Advocates of NoSQL databases claim they can be

used to build systems that are more performant, scale better, and are easier to program. NoSQL Distilled is a concise but thorough introduction to this rapidly emerging technology. Pramod J. Sadalage and Martin Fowler explain how NoSQL databases work and the ways that they may be a superior alternative to a traditional RDBMS. The authors provide a fast-paced guide to the concepts you need to know in order to evaluate whether NoSQL databases are right for your needs and, if so, which technologies you should explore further. The first part of the book concentrates on core concepts, including schemaless data models, aggregates, new distribution models, the CAP theorem, and map-reduce. In the second part, the authors explore architectural and design issues associated with implementing NoSQL. They also present realistic use cases that demonstrate NoSQL databases at work and feature representative examples using Riak, MongoDB, Cassandra, and Neo4j. In addition, by drawing on Pramod Sadalage's pioneering work, NoSQL Distilled shows how to implement evolutionary design with schema migration: an essential technique for applying NoSQL databases. The book concludes by describing how NoSQL is ushering in a new age of Polyglot Persistence, where multiple data-storage worlds coexist, and architects can choose the technology best optimized for each type of data access.

Congratulations! You completed the MongoDB application within the given tight timeframe and there is a party to celebrate your application's release into production. Although people are congratulating you at the celebration, you are feeling some uneasiness inside. To complete the project on time required making a lot of assumptions about the data, such as what terms meant and how calculations are derived. In addition, the poor documentation about the application will be of limited use to the support team, and not investigating all of the inherent rules in the data may eventually lead to poorly-performing structures in the not-so-distant future. Now, what if you had a time machine and could go back and read this book. You would learn that even NoSQL databases like MongoDB require some level of data modeling. Data modeling is the process of learning about the data, and regardless of technology, this process must be performed for a successful application. You would learn the value of conceptual, logical, and physical data modeling and how each stage increases our knowledge of the data and reduces assumptions and poor design decisions. Read this book to learn how to do data modeling for MongoDB applications, and accomplish these five objectives: Understand how data modeling contributes to the process of learning about the data, and is, therefore, a required technique, even when the resulting database is not relational. That is, NoSQL does not mean NoDataModeling! Know how NoSQL databases differ from traditional relational databases, and where MongoDB fits. Explore each MongoDB object and comprehend how each compares to their data modeling and traditional relational database counterparts, and learn the basics of adding, querying, updating, and deleting data in MongoDB. Practice a streamlined, template-driven approach to performing conceptual, logical, and physical data modeling. Recognize that data modeling does not always have to lead to traditional data models! Distinguish top-down from bottom-up development approaches and complete a top-down case study which ties all of the modeling techniques together. This book is written for anyone who is working with, or will be working with MongoDB, including business analysts, data modelers, database administrators, developers, project managers, and data scientists. There are three sections: In Section I, Getting Started, we will reveal the power of data modeling and the tight connections to data models that exist when designing any type of database (Chapter 1), compare NoSQL with traditional relational databases and where MongoDB fits (Chapter 2), explore each MongoDB object and comprehend how each compares to their data modeling and traditional relational database counterparts (Chapter 3), and explain the basics of adding, querying, updating, and deleting data in MongoDB (Chapter 4). In Section II, Levels of Granularity, we cover Conceptual Data Modeling (Chapter 5), Logical Data Modeling (Chapter 6), and Physical Data Modeling (Chapter 7). Notice the "ing" at the end of each of these chapters. We focus on the process of building each of these models, which is where we gain essential business knowledge. In Section III, Case Study, we will explain both top down and bottom up development approaches and go through a top down case study where we start with business requirements and end with the MongoDB database. This case study will tie together all of the techniques in the previous seven chapters. Nike Senior Data Architect Ryan Smith wrote the foreword. Key points are included at the end of each chapter as a way to reinforce concepts. In addition, this book is loaded with hands-on exercises, along with their answers provided in Appendix A. Appendix B contains all of the book's references and Appendix C contains a glossary of the terms used throughout the text.

Whether you're building a social media site or an internal-use enterprise application, this hands-on guide shows you the connection between MongoDB and the business problems it's designed to solve. You'll learn how to apply MongoDB design patterns to several challenging domains, such as ecommerce, content management, and online gaming. Using Python and JavaScript code examples, you'll discover how MongoDB lets you scale your data model while simplifying the development process. Many businesses launch NoSQL databases without understanding the techniques for using their features most effectively. This book demonstrates the benefits of document embedding, polymorphic schemas, and other MongoDB patterns for tackling specific big data use cases, including: Operational intelligence: Perform real-time analytics of business data Ecommerce: Use MongoDB as a product catalog master or inventory management system Content management: Learn methods for storing content nodes, binary assets, and discussions Online advertising networks: Apply techniques for frequency capping ad impressions, and keyword targeting and bidding Social networking: Learn how to store a complex social graph, modeled after Google+ Online gaming: Provide concurrent access to character and world data for a multiplayer role-playing game

Patterns and Processes for the Popular Document-oriented Database
Mastering MongoDB 4.x
A Brief Guide to the Emerging World of Polyglot Persistence
Adapting to Agile Data Modeling in a Big Data World
Getting MEAN with Mongo, Express, Angular, and Node
Visualize Structure and Meaning
Covers MongoDB version 3.0
Data Modeling for MongoDBBuilding Well-Designed and Supportable MongoDB DatabasesTechnics Publications
Data Modeling Made Simple with ER/Studio Data Architect
Building Node Applications with MongoDB and Backbone
Learn the skills you need to work with the world's most popular NoSQL database
With Data Modeling and Query Building Strategies

MongoDB in Action
MongoDB Fundamentals
Node.js, MongoDB and Angular Web Development