

THE EXPERT'S VOICE® IN WEB DEVELOPMENT

THIRD EDITION

# Beginning Rails 4

*LEARN TO BUILD WEB APPLICATIONS  
WITH RUBY ON RAILS*

Adam Gamble, Cloves Carneiro Jr., and Rida Al Barazi

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ISBN 978-1-4302-6034-9 e-ISBN 978-1-4302-6035-6

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### **Beginning Rails 4**

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Distributed to the book trade worldwide by Springer Science+Business Media New York, 233 Spring Street, 6th Floor, New York, NY 10013. Phone 1-800-SPRINGER, fax (201) 348-4505, e-mail orders-ny@springer-sbm.com, or visit [www.springeronline.com](http://www.springeronline.com). Apress Media, LLC is a California LLC and the sole member (owner) is Springer Science + Business Media Finance Inc (SSBM Finance Inc). SSBM Finance Inc is a Delaware corporation.

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*To my dad, Gary, who always invested in and encouraged my love of technology.*  
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## About the Authors



**Adam Gamble** is a professional web developer

currently working for Isotope 11 in Birmingham, AL. He has over 10 years experience building web applications for everything from startups to multiple Fortune 500 companies. His passion for technology has enabled him to turn a hobby into a career that he loves. Adam was born in Birmingham, Alabama and currently live there with his wife Monica.



**Cloves Carneiro Jr.** is a software engineer

with over 15 years of experience creating web applications for companies in many fields, including startups and telecommunication and financial companies. He has been using Ruby on Rails since its early days and has been a full-time Rails developer for six years. He currently helps building and scaling services at LivingSocial. Born in Brazil and having lived in many parts of the world, Cloves now lives in South Florida with his wife, Jane, and children, Noah and Sofia. He also maintains a personal web site at <http://www.clovescarneirojr.com/> .



**Rida Al Barazi** is a passionate software

engineer experienced in building smart web applications for startups. He has been designing and building for the web since 2002. He started working with Rails in 2005 and spoke at different web and Rails conferences in North America, Europe, and the Middle East. Rida was raised in Kuwait, grew up in Syria, started his career in Dubai and currently lives in Toronto, Canada, with his wife, Norah. In his free time he enjoys music, concerts, movies, traveling and meeting new people. Rida's contact information can be found on his website, [www.rida.me](http://www.rida.me) .

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## About the Technical Reviewer



**Josh Adams** is a developer and architect with over

eleven years of professional experience building production-quality software and managing projects. Josh is Isotope Eleven's CTO and lead architect, and is responsible for overseeing architectural decisions and translating customer requirements into working software. Josh graduated from the University of Alabama at Birmingham (UAB) with Bachelor of Science degrees in both Mathematics and Philosophy. When he's not working, Josh enjoys spending time with his family. He'd like to thank his wife Kristen, and his children, Matthew and Gracie, for putting up with him.

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## What Is This Book About?

In the past several years, the Web has exploded to include information on every facet of our lives. It touches everything we do; even some refrigerators have included access to the Internet. Ruby on Rails has played a part in fueling that explosion. This book will equip you with the knowledge you need to build real production web applications. It leads you through installing the required prerequisites on Windows, OS X, or Linux and then jumps straight into building applications. It is meant for the novice programmer who has some command line experience but little or no programming experience. At the end of the book, you should have a firm grasp on the Ruby language and the Rails framework.

Chapter 1 introduces you to the current web landscape and then goes over some of the ideals and principles that the Rails framework is built on. It teaches you about the MVC paradigm and shows how Rails implements each piece of that paradigm (model, view, and controller).

Chapter 2 walks you through installing Ruby, Rails, and the SQLite database. It is broken down by operating system, and when finished, will give a level platform among all three. You should be able to follow along with the book no matter which platform you choose. It also will show you how to build a quick “Hello World” application to make sure everything is working correctly.

Chapter 3 dives right in and starts the blog application that we’ll use throughout the rest of the book. We’ll continually build on this application, enhancing and refactoring as we go along. You’ll create your first model in this chapter, the article model. We’ll cover how migrations work and even get Rails to construct our first scaffold. At the end of this chapter, you’ll have a working blog application, although it will be lacking features. We’ll add those in the following chapters.

Chapter 4 slows down a little bit from the previous chapter and takes you on a tour of the Ruby language. If you’ve used Ruby for a while and feel comfortable with it, feel free to skim over this. If you’re new to Ruby, this chapter will teach you everything you need to know to use Rails. Ruby is an easy to pick up language, and the syntax is very inviting and easy to read. Although we won’t add any code to our blog application here, you will get to use the Ruby language inside the Ruby console.

Chapter 5 shows you how Rails uses Active Record to let you interact with any number of databases. Rails abstracts away the difficult bits (unless you need them) and lets you interact with databases in an object-oriented way. You’ll learn how to create new records, find records, and even update and delete them. We’ll also apply some basic validations so we can be sure our data are just the way they should be.

Chapter 6 expounds on the previous chapter. You’ll dive deeper into Active Record and your models. You will build more complex validations and custom instance methods. A major component of this chapter is the relation between your models and how Rails lets you define those relations. Your models for the blog application will have complex relations and validations.

In Chapter 7 we’ll cover the view and controller parts of MVC. We will flesh out the blog application and walk through the code that Rails generated for the scaffold of our controllers and views.

Chapter 8 modifies the controller and views in more advanced ways, and at this point the features of our blog application have come together. You'll learn about controller callbacks and strong parameters that were added in Rails 4. We'll also give our application a fresh coat of paint with some Cascading Style Sheets (CSS).

Chapter 9 goes over the Asset Pipeline that was added in Rails 3.2 and how to add JavaScript and CSS. We'll enhance our application with JavaScript dabbling in Ajax and animation. This chapter covers CoffeeScript and SASS and how they integrate into the Rails landscape. At the end of this chapter, your application will have a nice layer of spit and polish.

Chapter 10 adds e-mail capability to our application. You will be able to suggest articles to friends and even be notified when your article has new comments. It will also discuss methods to receive e-mail into your application.

Chapter 11 covers one of the most important topics in Rails applications: testing. You can be sure that after this chapter you'll be able to add new features without breaking old ones. You'll test whether your application behaves exactly the way you think it should.

Chapter 12 covers internationalization. After all, it is the World Wide Web, and not everyone speaks the same language. We'll translate our web application into another language, and along the way you'll learn how to translate the application into as many languages as you like.

Chapter 13 will show you how to deploy your web application to Heroku, one of the leading Platform As A Service (PAAS) providers. This will allow you to present your application to the world quickly and easily so you can start building a user base.

The three appendices cover the Git version control system, SQL, and where to find help in the Rails community.

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