

## Rails

### Course Summary

#### Description

In this hands-on Rails training course, you will learn to put your web development on Rails. Experience the Rails-way of approaching web applications and see how you'll be able to spend less time configuring and more time developing - without reinventing the wheel, like in many other environments.

Starting with the basics of Rails, you'll learn the full Rails' MVC stack, testing techniques, Ajax and even web services. We'll work through the full life-cycle of a Rails project, giving you experience with all facets of a typical app.

#### Objectives

By the end of this course, students will be able to:

- Build a new Rails application from scratch
- Setup and manage databases with migrations
- Learn how to configure Rails' routing
- Practice test-driven development (TDD) with Rspec
- Learn about behavior-driven development (BDD) with Cucumber
- Learn how to add Ajax with JQuery
- Learn how to leverage ActiveRecord with associations, validations, and callbacks
- Understand resources and REST, and how to use them in a Rails application
- Learn how to find and use plugins
- Understand the various deployment options for Rails applications
- Understand Rails' opinions and how to embrace or override them

#### Topics

- Rails Introduction
- Rails Toolbox
- Demystifying Rails
- Test-Driving your Rails App
- Advanced Controllers and Models
- Rails Power Tools

#### Audience

This course is designed for developers who have some web development experience that wish to learn Ruby on Rails.

#### Prerequisites

The participants taking our Ruby on Rails Training course must be familiar with the general principles of object oriented programming (OOP). Prior exposure to the following concepts and technologies is very helpful, but not required:

- General understanding of web development principles
- Basic knowledge of HTML and CSS
- Basic knowledge of JavaScript
- Basic understanding of the HTTP protocol, including concepts like SSL, redirection, GET vs POST, etc.
- Basic knowledge of SQL
- Familiarity with MySQL (or any other relational database)

#### Duration

Three days

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### Course Outline

- I. Rails Introduction**
  - A. The Architecture
  - B. the Model-View-Controller pattern
  - C. Rails project structure
  - D. Scaffolding for jumpstart
  
- II. Rails Toolbox**
  - A. Rake
  - B. Git
  - C. Test Frameworks
  - D. Deploying a Rails application
  
- III. Demystifying Rails**
  - A. The Console
  - B. Models with ActiveRecord
  - C. Routes and Controllers
  - D. Associations
  - E. Migrations
  - F. Views
  
- IV. Test-Driving your Rails App**
  - A. Beyond Scaffolding
  - B. BDD with Cucumber and Rspec
  - C. Outside-in Testing
  - D. Test-driving Feature Development
  - E. Rails testing helpers
  
- V. Advanced Controllers and Models**
  - A. Validations
  - B. Evolving your Database
  - C. Modifying Application Flow
  
- VI. Rails Power Tools**
  - A. Named Routes
  - B. Rails Plugins
  - C. User Authentication