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Build Chatbot Interactions

Responsive, Intuitive Interfaces with Ruby

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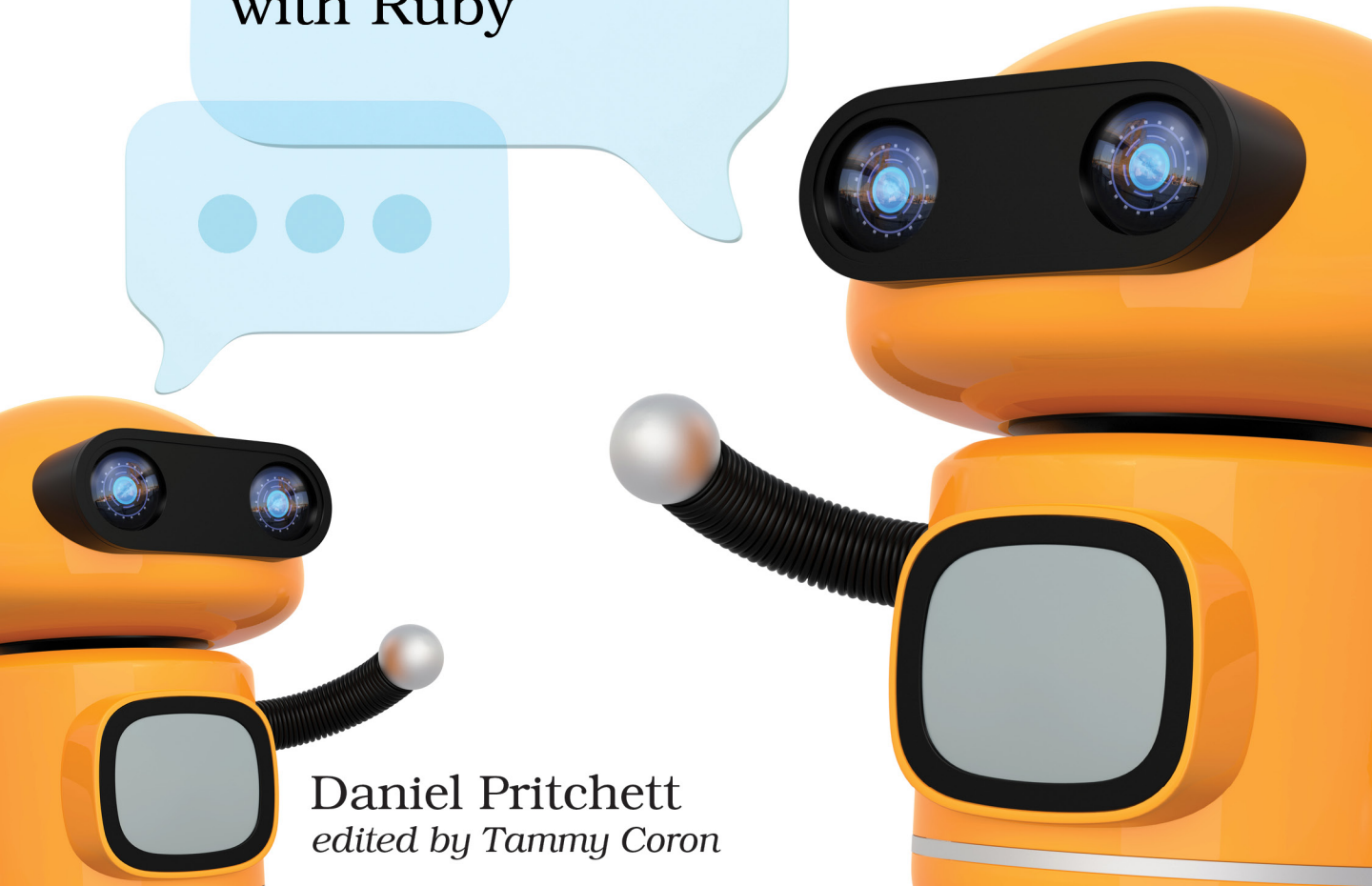

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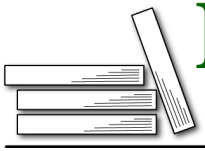

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Preface

Welcome to *Build Chatbot Interactions*.

Chat is a compelling and accessible medium, and it's everywhere—mobile phones, tablets, computers, you name it. It keeps us connected, and it's endlessly programmable. There's room for creativity, convenience, wonder, and excitement.

Chat includes dialog like:

- "Hi, how have you been?"
- "Are you free for lunch tomorrow?"
- "Show me another funny picture."
- "Find me some tickets to NYC for next Friday."

A *chatbot* is a program that exists where users already hang out—in chat rooms and messaging programs. Thanks to chatbots, users don't have to scroll through endless pages or links looking for what they want. Instead, chatbots offer smaller, back-and-forth interactions with a conversational style. You ask the chatbot a question, and it gives you an answer. This type of interaction is more personalized and provides the user with immediate, focused assistance.

The classic chatbot style is a single user in a chat room that has a specific name, like Eliza, Bob, or Computer. The bot you'll work with in this book is named "Lita" after the Ruby-based chatbot building framework you'll learn to use. This particular user is available 24/7 to answer certain types of questions and perform *known tasks*. These known tasks are referred to as *chatbot skills* and are the primary focus of this book.

A chatbot skill is a bit of code that responds to a specific question with a relevant answer. Here's an example:

> You: *Lita, show me a picture of my dog*
>
> The bot: *Ok, here's one! http://instagram.com/fake-photo-url.jpg*

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If you break it down into a few components, it looks something like this:

- The end user supplies a specific plain-text question or command.
- The bot performs a relevant programmable action to fulfill the end user's wish.
- The bot responds in plain text.

In this book, you'll walk through the design and implementation of your own chatbot skills, and you'll deploy these skills as *always-online services* that you can use as you see fit.

Who Is This Book For?

This book is for anyone who's interested in ideas and examples to help build useful and entertaining chatbot interactions. While all of the examples in this book are in Ruby, an experienced programmer can translate them into any language.

This book is equal parts entertainment, instruction, and inspiration. If you're not a confident programmer, don't worry. All of the code examples are tested and executable—you can download, run, and expand on these examples later as needed.

What's in This Book?

This book has several sections. First, you'll set up your own chatbot using the Lita framework in Ruby. From there, you'll create a few sample bot interactions to get your feet wet. After that, you'll deploy your new chatbot to the internet so you can share it with friends. Along the way, you'll learn how to integrate with external APIs, send messages, and perform sysadmin tasks, and how to connect to common "Internet of Things" devices.

What You Need

You'll need a computer that can run Ruby 2.0 or newer. You'll also need an internet connection so you can deploy your bots.

What you won't need, however, is lots of money—you can work through most of the examples using free tools. Several others can be pulled off with free trials and simulators from popular services.

The chatbot skills in this book were developed on a MacBook and the live production bot was published to Linux servers. The Lita framework should work pretty well for development in Windows, but you'll have an easier time on Linux, macOS, or even the Windows Subsystem for Linux. At the time of

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this writing, Ruby and Lita do work on Windows, but many common Ruby gems won't work out-of-the-box unless you're on a Unix-based system.

Why Lita and Ruby?

I selected Lita for this book, because its design and licensing make it ideal for learning, training, and sharing. The project itself is open source, so you'll be using it freely.

The way Lita provides chat skills—which it calls *handlers*—is great for readability, testability, and modularity. As you work through this book, you are going to make individual Lita skills that are publishable as well-tested, standalone Ruby gems.

Online Resources

The code referenced in this book is available on the book's website.[1] You're encouraged to download and run the examples, especially if you get stuck or want to see the finished product.

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1. http://pragprog.com/titles/dpchat

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