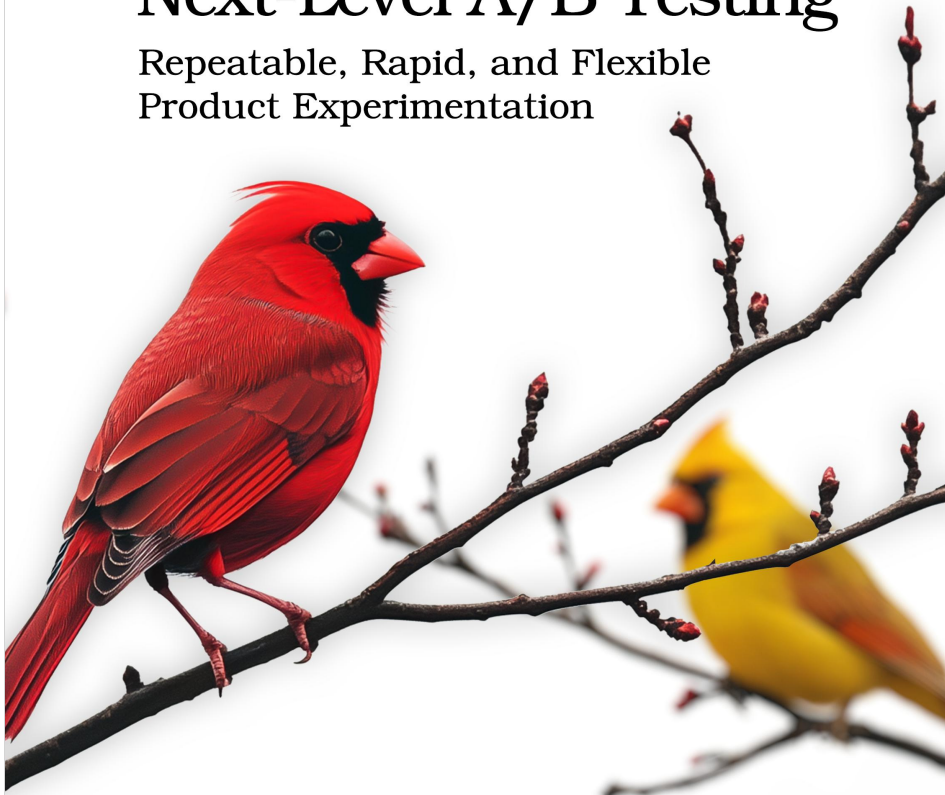


The
Pragmatic
Programmers

Next-Level A/B Testing

Repeatable, Rapid, and Flexible
Product Experimentation



Leemay Nassery
edited by Vanya Wryter

This extract shows the online version of this title, and may contain features (such as hyperlinks and colors) that are not available in the print version.

For more information, or to purchase a paperback or ebook copy, please visit <https://www.pragprog.com>.

Copyright © The Pragmatic Programmers, LLC.

Introduction

Let's say you're already familiar with the basics of A/B testing, like defining hypotheses, success metrics, and variants, from reading my first book *Practical A/B Testing*. In that book, you learned about the basic anatomy of an A/B test, how to foster a culture of experimentation, and the essential elements needed to run an experiment on a product.

Now, you've moved beyond the initial stages of integrating A/B testing onto a product. You're running experiments weekly, gaining insights into user engagement, and launching features based on those results. Your engineering and product teams see the value of evaluating features through experiments, making A/B testing a standard part of your product development process. Overall, the culture of experimentation is deeply engrained in your company.

You're ready to take your experimentation practices to the next level. You may be looking to run more experiments simultaneously to increase the testing rate and unblock teams that otherwise would have had to delay their experiment start date. Or maybe you've encountered frequent experiment restarts due to misconfigurations, highlighting the need for more thorough validation before launching tests to a subset of users.

If any of this is relatable, you're in the right place! In this book, you'll learn how to elevate your experimentation practices, developing techniques to enhance A/B testing rate, cost efficiency, and quality.

Who should read this book

This book assumes you have experience running A/B tests on user-facing products. You could be a product manager, a software engineer, a business analyst, an engineering manager, or any role in between.

If you're a data scientist, you'll likely already be familiar with a good portion of experimentation strategies detailed in this book, but you would benefit from the practical lens of enabling each experimentation strategy on a platform.

Now if you're new to the experimentation domain, read *Practical A/B Testing* first to become familiar with the anatomy of an A/B test before reading this book.

How this book is organized

This book offers practical strategies to improve A/B testing rate, cost, and quality on a product. Specifically, we'll cover these topics in the following chapters:

- Chapter 1: the rationale for improving experimentation rate, cost, and quality.
- Chapter 2: the strategies for running more experiments in parallel.
- Chapter 3: the factors to consider when configuring a well-designed and effective experiment.
- Chapter 4: the various experimentation tactics to enable machine learning evaluations.
- Chapter 5: the monitoring and validation techniques to ensure quality experiments.
- Chapter 6: the tactics to ensure trustworthy data insights.
- Chapter 7: the common adaptive testing strategies.
- Chapter 8: the cost of long-term holdbacks and how to adapt.
- Chapter 9: the key factors for deciding when to make tradeoffs.

You'll find Engineer Tasks and a Chapter Roundup to practice the concepts within each chapter. Don't skip the tasks and chapter roundups! Completing these exercises will prepare you to practice what you've learned in the real world at your company.

For each Engineer Task, you'll play the role of an engineer on a team at a fictitious company, MarketMax, that has been running A/B tests on their website for years. However, as the company and product have scaled, they are now running into coordination constraints, quality issues, and engineering cost concerns. You'll gain experience and understanding through practical hands-on engineering tasks that effectively address common problems teams face after they've surpassed the beginning stages of running experiments in production.

Taking your experimentation to the next level

The long-term success of using A/B testing to innovate and evolve a product hinges on the robustness of the experimentation practices and platform. When you invest in your experimentation strategies, you're directly influencing the

speed and quality of decisions made on a product. The better tools you have in your experimentation toolkit, the better off teams will be shipping and evaluating new features on a product. That's what this book is all about.

Let's jump right in!