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Practical A/B Testing

Creating Experimentation-Driven Products

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Creating Experimentation-Driven Products

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Preface

What happens when you build a new feature, then make an assumption about the impact on the product? Your prediction may be right. Or your prediction may be wrong. How do you know for certain that the change had a positive influence on your product metrics?

If these questions resonate, even in the slightest bit, there's a solution: A/B testing. When you build the capability to practice A/B testing on your product, you can measure how a change influenced key product and business metrics. With this evaluation methodology, you and anyone on your team can test new ideas and measure the impact of that change with data.

Speaking of new feature ideas, I had a grand idea to evolve a product in 2019.

This idea, although not very novel since many other products had already implemented such a feature, was to build a personalized For You homepage. At the time, I was leading a small and talented engineering team responsible for the personalization features on the X1 video product at Comcast Corporation.

After a few months of kicking the idea around with engineering and product leads, we met resistance because it needed to be clarified how the For You homepage would impact critical product and business metrics. The natural next step was, of course, to build an A/B testing platform. We used A/B testing as a Trojan horse into the product. Instead of asking to launch the For You homepage, we leaned on A/B testing to provide the data and user insights needed to convince those who thought otherwise.

It was tough.

From the day the test kicked off, it took exactly one year to launch the For You homepage to all users. Why did it take so long? First, we leveraged A/B testing in an organization that historically did not use this methodology to evaluate product ideas. In some product organizations, enabling A/B testing may be more of a cultural challenge than an engineering challenge. Motivating

teams to change their habits and trust the A/B testing platform can be challenging, especially if they were accustomed to simply launching their changes straight to production for all their users to engage with immediately.

When you build a product, you want to delight your users with seamless and easy-to-use experiences. How do you know which changes are improving the user experience? How do you know you're not degrading the experience? Or, how do you know the product is optimal for all demographics and not simply geared toward the majority? These are questions that A/B testing can answer.

This book will provide a practical approach to implementing A/B testing so that you can understand the impact of your changes on your user, product, and business metrics.

How to Get Started

The only thing worse than not A/B testing is waiting years to build the perfect engineering platform. You can actually get started with very little. You just need the fundamentals.

This book will introduce you to the core concepts—the anatomy of an A/B test, audience segmentation logic, and the infrastructure to serve and monitor performance. You'll learn how to define a hypothesis, create eligibility criteria, and select metrics to demonstrate the impact of the test.

Understanding the practical examples detailed in this book will help you integrate this experimentation methodology into your product. You'll be able to go into conversations with your engineering and product teams with the right vocabulary and tactics to get started.

What to Expect

This book will not teach you everything there is to know, but it will help you get more comfortable with the key components and concepts so you can kickstart your A/B testing journey. Whether you're an engineer, manager, or product owner, this book is a starting point, overflowing with techniques and practical ways for you to approach the A/B testing process.

Specifically, we'll cover these topics in the following chapters:

- Chapter 1: the rationale for running A/B tests.

- Chapter 2: the basic anatomy of an A/B test.

- Chapter 3: the various types of A/B tests.

- Chapter 4: the data requirements for running A/B tests and visualizing test results.

- Chapter 5: the factors to consider when building an A/B testing platform in-house versus a third-party solution.

- Chapter 6: the tactics to cultivate a test-friendly culture.

To illustrate these concepts, you'll find references to a fictitious company called CableMax. The CableMax narrative is highly influenced by the experiences I already alluded to—my time at Comcast. The majority of the examples throughout this book are anchored on this experience of building an in-house solution to run experiments on a video product used by millions. When you're ready to get started, you'll have the perfect blueprint.

It's worth noting that the CableMax use case will also provide a means for you to practice what you've learned by reading the sidebars for relevant tasks throughout this book, so don't forget to check those out!

OK, So What's Next?

If you're not currently A/B testing, this book will help identify some of the tools and techniques you need to move forward. By learning from the practical examples and exploring how they may apply to your product, you'll be A/B testing changes sooner than you think.

Let's get started!