
CHAPTER

1

Leveling the Playing Field with Data and AI

Data is the language of the powerholders.

– Jodi Petersen

It was a Tuesday morning, mid-March of 2023. With a warm cup of joe in one hand and my cell phone in the other, I saw an Instagram post from a content repurposer I like to work with. I can't recall the exact contents of the post, but the gist was that something big had happened in the artificial intelligence (AI) space and that it would change our lives forever.

Driven by rabid curiosity, I immediately dug deeper and discovered that OpenAI had just “unleashed” its large language model, GPT-4, onto the world. (The word “unleashed” is a dead ringer for GPT-4 generated content, so pardon the pun.)

You know, we who operate in the AI industry have seen it coming for a long time, but the fact that they actually pulled it off was still the wake-up call of a lifetime. Even for those of us who've been working in the data science industry from its inception, the implications were shocking. This was the day that changed everything.

Evolving Business at Breakneck Speed

We're in the midst of a never-before-seen acceleration of business change, the majority of which has been fueled by advancements in data science, data engineering, and AI. While generative AI technologies, like GPT-4, have radically extended the boundaries of what's possible, they've also served as a warning shot in the dark for all businesses to either get on board or get left behind in the dust.

The transformative potential of data and AI cannot be overstated. Data and AI must take center stage when it comes to how your company drives improvements in growth, operational efficiency, customer engagement, product innovation, and strategic decision-making. Traditional strategies will no longer suffice. You need a dedicated, up-to-date data or AI strategy that's laser-targeted to meet your business's growth objectives in furtherance of the company's mission and vision.

That said, it's no easy feat to make effective use of data and AI technologies. You need a strategy, but building successful data strategies requires one to have a combination of strong technical expertise, business acumen, and astute leadership capabilities. These people are few and far between. My goal for this book is to equip you, the reader, with the strategy development know-how that you need in order to leverage your existing data expertise to drive reliable business growth.

With the extent of digital disruption we're facing, one data strategy seldom suffices. It's highly likely that your company will need a broad overarching strategy to guide the development of high return on investment (ROI) data initiatives across the organization, as well as composite data strategies for each of the use cases that are included within that overarching strategy.

Tip

The methods I'm covering in this book show you how to go about developing a data or AI strategy for a single use case. You can repeat the process for multiple use cases, but if you do, it's highly advisable to map back and optimize the projects against one another in a top-level plan that governs your company-wide data and AI strategy.

A well-built data and AI strategy acts as a road map. It acts as a lighthouse to guide your company through the vast and often overwhelming complexities involved in digital transformation. It's designed to directly transform technological

investments into tangible business outcomes, such as improved customer experiences, streamlined operations, or even new revenue streams.

How to Use This Book

Let's look a bit at what this book is meant to be and how to go about getting maximum value from your time within its pages.

My assumption is that, if you're reading this book, you have a solid background in and understanding of data science, analytics, data engineering, and AI. Having a background in strategy development is icing on the cake, but if you don't, that's okay, too.

This book is written in narrative format, yes—but it's more than just a narrative that describes data and AI strategy. Parts I and II are written as an educational primer to supplement and bolster your existing knowledge of applied data, AI, and growth that's required to perform effectively in the data strategist role. Parts III and IV are meant to be used as a step-by-step instruction manual on how to go about building high ROI data strategies.

While Parts I and II detail the foundational knowledge that you should have prior to initiating a data strategy-building effort, these chapters will not be of equal importance to all readers. If you find some areas are less relevant to your current role, you're pretty safe skipping around to other parts of the section. That said, for Parts III and IV, I advise you to follow the instructions as they are presented, in a step-by-step methodical manner.

Caution

Data strategy is a big money game; if your project fails, it could cost the company millions of dollars. Following the meticulous steps I've laid out for you in great detail throughout Parts III and IV is the most sure-fire way I know to safeguard the success of your data initiatives.

The focus of this book is on business growth and the data and AI strategies that drive it. For this reason, it's essential that we examine two of the biggest growth drivers in modern data-intensive businesses: product-led and growth marketing, introduced in Chapters 4 and 5, respectively. The recent explosive growth of generative AI start-ups also necessitates that we address the basics of ideation

and validation around commercial AI products and services. That's covered in Chapter 6.

If you're a product, marketing, or start-up leader, then Chapters 4 through 6 will likely resonate with you. But if your background is mostly in data implementation, then you may prefer Chapters 7 and 8 on ethical and implementation-relevant concerns that are related to data strategy. If you're looking to develop a strategy around the use of generative AI technologies, I've also laid out the implications of working with foundation models for you within Chapters 7 and 13.

How This Book Benefits You

Whether you're a business leader, a product or program manager, or an individual contributor in the tech space, this book is designed to equip you with the insights and strategies you need to harness data and AI innovation to drive growth for your company.

If You're a Business Leader or Executive

Whether you're a Chief Technology Officer, a Chief Financial Officer, a Chief Marketing Officer, or any other type of CXO, you're responsible for the growth and operational health of a core business function. And if you're a Chief Executive Officer, then you know exactly how much of your organization's success is riding on your shoulders.

In all the preceding scenarios, it's imperative that you know the ins and outs of data and AI strategy so that you can oversee such strategies in driving the growth your company needs to stay competitive in today's AI-imbued business environment. In this book, I've included all the insights and strategies you need to do just that.

If You're a Product or Program Manager

Data and AI technology are the basis of growth for a modern organization. Customers and users expect that products and services are delivered with the efficiency advantages that only data and AI can deliver. Not every Product or Program Manager needs to become a technology expert, but you do need to know enough to steer your product and program road maps in the right direction. By reading this book, you'll learn what you need to know to do that.

If You're a Data or Technology Professional

Data scientists, data analysts, data engineers, machine learning (ML) engineers, AI engineers, and software developers—I'm looking at you. Without brilliant individual contributors like yourselves, the data and AI industry would never be where it is today. Though, one challenge most executional team members face is that they aren't in the position to see how the work they do on a daily basis actually drives business growth.

As you read this book, you'll get a clear picture of how what you do each day—all the technical bits and pieces—plays such an important role in the success of the final product that's sent out to the market.

At first glance, the audience that I'm speaking to within the pages of this book may seem excessively broad, but here's the thing: recent developments in AI have radically changed the game for all types of knowledge workers. Every role is impacted. Moreover, business executives, product leaders, and executional team members all have seats at the strategic table here. With its strong focus on data and AI strategies to drive exponential business growth, my goal for this book is to bridge the strategic gap that formerly lay between these diverse roles. By the end of this book, you'll have the solid foundation in data and AI strategy that you need to start leading solutions that drive growth for your company and industry.

To the Business Leaders and Executives

From a strategic perspective, there's never been a time when it's more important for business leaders to truly understand how to harness data and AI to drive growth. The elephant in the room, of course, is generative AI. Entire industries are being upended by the radical change that generative AI has spawned. Chances are, your business and industry are affected, too.

Why Leaders Need a Data or AI Strategy

If your company is not leveraging generative AI to at least streamline its marketing and growth operations, then you're already operating at a major disadvantage. But to make the most of any investment into generative AI projects, you must first have a strategy in place to support that project.

The need for data and AI strategy goes beyond novel generative AI projects in the marketing and growth domains. Competitors are capitalizing on new-found

efficiencies across every business function—from software development to customer service, and from financial analysis to product design and innovation. This book helps you lead and champion a data or AI strategy that results in greater efficiencies within your business, regardless of the domain for which the strategy is built.

Caution

The need for astute data leadership is nothing new. Your organization's data initiatives should be designed from the ground up to support one overarching goal. That goal is to fulfill your company's mission. If you've got data operations that are disconnected from that mission, there's a pretty big chance that you're spinning wheels and achieving subpar returns on your investment into data technologies, skill sets, and resources. This book shows you how to align your data initiatives with core business objectives.

To drive business value from data and AI, you need to do so responsibly to safeguard the reputation of your company and the bottom line of its investments. To do that, your company's approach to data and AI must be both ethical and compliant with laws and regulations. Chapter 7 of this book provides you with the foundational knowledge you need about ethical considerations as they relate to data and AI projects. Chapter 13 describes how to go about assessing the current state of your company's AI ethics and compliance.

Lastly, your talent needs your leadership support in helping them upskill and successfully transition to a new data-driven landscape. Chapter 11 will show you the most efficient ways to assess data skill gaps across your organization. Chapter 15 educates you on how to develop effective training programs and make optimal selections for any new hires that might be required for the execution of your data strategy.

Steering the Data and AI Revolution

Not too long ago, generative AI capabilities were mere mental constructs in the minds of only the most creative of innovators. Today, these technologies are facilitating the type of vast data processing and pattern recognition that was only formerly available to big tech companies with the resources and know-how to build these capabilities from scratch in-house.

Like it or not, modern business leaders need to employ AI across the enterprise to achieve both productivity gains and competitive advantages. Naturally, this process involves addressing extremely complex challenges like the technology's potential for making costly errors or its reliance on large volumes of data. To squarely meet these responsibilities, business leaders must be data literate to their core, but that isn't enough. You also need strategies to steer your company's data and AI developments to protect investment while also growing its bottom-line revenue. My goal with this book is to provide you with an approach and methodology on how to do it.

I also emphasize this a lot: modern business leaders must have a fundamental understanding of what's involved in implementing data and AI technologies. Within this book, I'm covering these fundamentals to the extent I am able, but I'm assuming that you're coming to it with at least a basic understanding of data engineering, analytics, data science, and AI.

As you know, integrating AI in business operations requires far more than just technical implementation capabilities. Business leaders need the durable soft skills to lead large-scale technical initiatives in the face of internal resistance to change. Throughout this book, I share leadership tips on how to finesse the finer nuances involved in delivering data and AI strategies that drive growth.

Lastly, leaders need to know how to identify winning use cases for their projects. Winning use cases are the low-risk, high-reward cases around which successful data and AI strategies are built. To drive true competitive advantage, your strategies must be based on an exhaustive assessment of the current state and a thorough analysis of use case alternatives before deciding which one is optimal for your growth goals at this time. Chapters 9 through 14 guide you through the process of selecting a winning use case for strategy development and implementation.

By following the comprehensive approach I've laid out for you in meticulous detail throughout Chapters 9 through 17, I'm confident that you'll quickly be on your way up the path toward leveraging data and AI to drive growth, innovation, and competitive differentiation in your industry.

Two Case Studies to Inspire Your Vision

To inspire your vision, I'm sharing two recent and powerful case studies that were massively effective in driving growth in the telecom and financial services industries. The following Vodafone case study illustrates a data-intensive strategic win that was achieved by Vodafone Italy.

Growth Marketing Case Study

Title: Vodafone Italy's Conversion Boost of 42% with AI-Driven Creativity¹

Company Name: Vodafone Italy

Industry: Telecom Services

Situation Summary

Vodafone Italy faced the challenge of enhancing customer experiences and loyalty through digital communication channels like mobile push notifications and SMS. The marketing team knew they needed to increase the impact of their marketing messaging to increase customer lifetime value, prevent churn, win back former customers, and boost customer satisfaction through loyalty campaigns.

Challenges

The company struggled with delivering the right message to the right people at the right time. It, also struggled to publish content that resonated with diverse customer types, and this led to missed opportunities in upselling, cross-selling, and customer retention.

Solution

With the goal being to boost their marketing efficiency and results, Vodafone Italy turned to Persado's AI platform. Persado specializes in deploying machine learning and AI to generate optimized marketing creative. The platform analyzes and predicts the effect that specific words and emotions would have on customer decisions. In this way, Persado enabled Vodafone to craft more precise messages to significantly increase the quality and effectiveness of its marketing campaigns across its primary digital channels.

Results

Compared to conventional methods, Vodafone Italy saw a 42% lift in conversion rates for CRM campaigns and a 9% increase for win-back campaigns. The loyalty campaigns saw a 60% average increment in redemption rates

at a relatively much lower cost. This strategic partnership improved Vodafone Italy's marketing efficiency and contributed to significant business growth and customer engagement improvements.

Bonus resource

For help in pinpointing the areas where your company's marketing effectiveness could be improved through the strategic use of data and AI like that described previously, I invite you to use my KPI Scorecard and Pipeline Tracker that I've made freely available to all readers here: www.data-mania.com/book.

Another powerful case study that I'm certain business leaders will appreciate is the decision-support win that was recently achieved by DHFL.

Decision-Support / Operations Case Study

Title: DHFL Streamlines Customer Onboarding from 40 Days to just 7 Days²

Company Name: DHFL (Dewan Housing Finance Corporation Ltd.)

Industry: Financial Services

Situation Summary

DHFL is committed to providing affordable housing finance in India's semi-urban and rural areas, but it faced challenges in managing its customer onboarding process. Due to the rapid growth of its customer base, the company experienced delays in loan application processing. This decreased customer satisfaction rates across the board. To improve customer satisfaction, DHFL knew it needed more efficient operations.

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Challenges

The primary challenge was in analyzing vast operational data to identify causes for delays in customer onboarding. The process was cumbersome and spanned 35–40 days. At these rates, DHFL was unable to deliver timely financial services. Operational bottlenecks across multiple geographies further complicated the problem. The company needed a solution to streamline the entire onboarding process, despite its complex geographical dependencies.

Solution

DHFL partnered with Gramener to develop visual analytics dashboards using Gramex, Gramener's proprietary development platform. DHFL gained an all-around visibility of its operational KPIs and metrics through the solution. With Gramex, it was able to get a clear picture across different geographies and regions (with different levels of geographical granularity) with regard to cases that were either in processing, pending, or awaiting resolution. Gramex dashboards also enabled DHFL executives to make data-driven decisions and identify and address operational bottlenecks on time.

Results

DHFL saw a dramatic improvement in operational efficiency. Customer onboarding time was reduced by 65%, from 35–40 days to just 7–8 days. Loan application pendency decreased by 52%. Significantly reduced processing times directly improved customer satisfaction. It also reinforced DHFL's commitment to its mission of providing accessible housing finance.

To the Product and Program Managers

The strategic use of data and AI has immense potential for product and program management. In direct correlation with the effective usage of data and AI, product and program outcomes are increasingly data-driven, customer-centric, and

efficient. Let's explore just a few of the ways that the data and AI strategy know-how that's imparted in this book is already helping product and program managers score massive wins for their organizations.

Data- and AI-Enabled Product and Program Wins

An effective data or AI strategy has the power to positively transform how your company develops, manages, and evolves its products and services. Decision support, operations, and product growth are often full of quick wins that can be achieved by product and program managers with the help of this book.

Decision-Support Systems That Drive Product and Program Wins

One of the primary ways that you can use data and AI to achieve quick wins in product and program management is by using data to predict future trends and behaviors to improve decision-making processes. AI algorithms help analyze vast amounts of data to predict future trends, customer behavior, and potential market shifts. By leveraging these predictive capabilities, product and program managers can:

- Make better-informed, more timely decisions
- More accurately anticipate market and customer needs
- Proactively adjust strategies based on large bodies of evidence, rather than making strategic decisions on a reactive, ill-informed basis
- Develop tailored product and service recommendations that increase customer satisfaction, build loyalty, and improve customer retention

You can look forward to Parts III and IV, where I share a foolproof, strategic approach to building an effective data strategy around a decision-support use case.

Caution

If you're not leveraging insights from predictive analytics to drive more effective resource allocation, product development prioritization, and risk management strategies, then you're already operating at a disadvantage. This is a pretty standard use case that's already in play at most data-mature organizations. More on data maturity is coming up in Chapter 12.

Automations That Increase Operational Efficiency Generative AI applications are already being used to automate a wide range of routine tasks, including data entry, customer service, and even complex operational decision-making. These types of automations free up product and program managers to focus on their more strategic and creative requirements. They also reduce the likelihood of human error and improve the overall quality of your product and program management processes. This often results in a faster time-to-market for the new products and features you're building. Not to mention that this will also improve the agility of your organization to respond to market changes much more swiftly.

AI-Enabled Product Growth Integrating AI in product and program management has transformed growth strategies, particularly product-led growth. Product-led growth strategies often use AI to enhance customer engagement by providing personalized experiences, predictive future needs, and automated customer support. AI-driven analytics offer deeper insights into how users interact with the product, which in turn enables continuous improvement and innovation based on actual user behavior and feedback in near real-time.

For more insights on AI-enabled product-led growth gains, be sure to study up on Chapter 4.

To the Data and Technology Professionals

Let's be real. If you're reading this book, then the chances are pretty high that you're a data or tech professional working on executional requirements that, hopefully, are part of a coordinated data or AI strategy designed to support your business in reaching its objectives in a timely manner.

Simply put, the work you do on a daily basis is the foundation of all data- and AI-enabled growth. Let's take a look at how your work drives the greatest period of technological advancement ever known to humanity.

Developing Ground-Breaking Innovation at the Speed of Light

Data professionals are tasked with massive responsibilities associated with the development of AI applications, machine learning models, and the data infrastructure that supports these. Your expertise in data science, analytics, data engineering, computer vision, and natural language processing can help you turn manual data

strategies into practical applications that dramatically increase efficiency, decision-making, and innovation across your industry.

This book is a data and AI strategy development resource manual. While it does not cover implementation-level details related to building data and AI solutions, Chapter 8 provides useful and practical insights into real-world tactics for a successful AI deployment.

Programming Ethics and Compliance Into Massively Scalable Technologies

As AI systems become an integral part of our daily lives, data and tech professionals must address and implement ethical design principles for responsible use. This demands that you build AI systems that are transparent, fair, and accountable.

While ethicists, legal experts, and policymakers establish guidelines and standards that govern data and AI usage, you're tasked with actually embedding these ethical principles into the design and deployment of data and AI technologies in order to mitigate any privacy, bias, and security issues. The outcome of this collaboration, of course, being data and AI technologies that grow your business bottom line, while also benefiting society as a whole and minimizing potential harms.

Warning

Considering the scale at which many commercial data and AI tools are being adopted, the ethical considerations of your work cannot be understated. As builders, you have the power to transform lives, rewrite history, and shape the future of your company. Build wisely!

Cross-reference

Be sure to read Chapters 13 and 15 to learn the finer points involved in building strategies for ethical, responsible, and compliant data products and services.

How This Book Benefits Individual Contributors

As mentioned at the beginning of this chapter, this book provides individual contributors with the vital perspective that you need to see how what you're building on a daily basis actually drives growth for your company. Gone are the days when

you're building with the blinders on, unsure about how a data project you're working on exactly amounts to massive gains for the organization at large.

If you aspire to move into a product or program management role, the data and AI strategy knowledge that's imparted in this book provides a strong foundation for doing so. But, there's more ... the knowledge of data and AI strategy you'll get within the pages of this book empowers you to:

- Start asking better-informed questions of leaders and stakeholders, so that you have a clearer picture of outcomes your work should enable.
- Have a much clearer idea of the tools, methods, and approaches you take toward building products.
- Understand your requirements much better by considering the views of multiple stakeholders that are involved in the strategy development process.
- Look at the road map and the tasks you're allotted both from a technical standpoint and a strategic lens—helping you align better with the overall goals of an organization.
- Truly appreciate how your contribution in each step of the development process results in an end product or service that dramatically improves the lives of other people!

Now that I've provided clarifications and communicated expectations as to who this book is written for and how it will help you, let's move into Chapter 2, where you'll learn about the fundamental and introductory prerequisite concepts you need to know in order to make your grand entrance to the data strategy arena.

Notes

1. Persado + Vodafone (2024). *Persado*. <https://www.persado.com/resource-library/articles/>
2. Gramener (2024). *Gramener*. <https://gramener.com/case-studies/data-driven-operational-excellence/>