

# GENERATIVE AI IN PRACTICE

BONUS  
CHAPTER

100+ AMAZING WAYS  
GENERATIVE ARTIFICIAL  
INTELLIGENCE IS CHANGING  
BUSINESS AND SOCIETY

BERNARD  
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WILEY

## 10 VITAL STEPS EVERYONE MUST TAKE TO PREPARE YOURSELF FOR THE GENERATIVE AI REVOLUTION

You've seen the headlines about generative AI (GenAI) and how tools like ChatGPT are going to transform jobs. But which sorts of jobs and industries are we talking about? And how can we all prepare for the wave of job transformation coming our way? In this bonus chapter, we'll define GenAI, see why it matters to everyone, and explore 10 practical steps you can take to get ready. You can read lots more about GenAI and its impact in my book, *Generative AI in Practice, 100+ Amazing Ways Generative Artificial Intelligence Is Changing Business And Society*.

### WHAT IS GENERATIVE AI AND WHY SHOULD YOU CARE?

You'll already be familiar with the term "artificial intelligence" or "AI" – computer algorithms that can effectively simulate human cognitive processes, like learning, decision making, and problem solving. So how does GenAI differ from this?

#### What is GenAI?

GenAI is a groundbreaking subset of AI that is able to create new content based on patterns and structures it has learned from existing data. Like any AI, GenAI tools are given enormous amounts of data to learn from (what's known as "training data"). They learn from the training data and then use the patterns or rules that they've learned to create new content that's similar to, but not exactly the same as, the data it has been trained on.

In other words, while traditional AIs are able to simulate human cognitive processes like learning and decision making, GenAI can do all that *and* simulate human creativity.

ChatGPT is a well-known example of GenAI. However, GenAI is so much bigger than ChatGPT. We now have GenAI tools that can speak, read, write, see, and create.

Increasingly, GenAIs are learning to do many of these things *at once* – such as being able to create text and images together. As an example, the third iteration of text-to-image tool Dall-E is able to generate high-quality text embedded in its images.<sup>i</sup> And the latest version of ChatGPT can now see, hear, and speak, remember as well as write.<sup>ii</sup>

Thanks to GenAI's creative abilities, you can generate all sorts of outputs: product designs, computer code, music, video, voices, text, recipes, even entire visual worlds. The capabilities are already impressive, but in the future GenAI systems will be able to create pretty much anything that humans can. Indeed, exciting new GenAI tools are emerging all the time.

### Why does GenAI matter to you?

It's no exaggeration to say that GenAI is going to revolutionize our world. I believe it's one of the most powerful, transformative technologies that humans have ever had access to. It's right up there with the emergence of the internet. And just like the internet before it, GenAI is going to alter almost all jobs in some way. Some jobs will disappear, new jobs will emerge, and the rest will be altered or augmented in some way by GenAI.

But you don't have to take my word for it. Analysis by the International Monetary Fund found that almost 40 percent of all global employment may be affected by AI, and in advanced economies that figure shoots up to 60 percent.<sup>iii</sup> That's not to say 40 to 60 percent

of jobs will disappear. Far from it. Rather, it means that AI automation is likely to take away, streamline or enhance some of the tasks associated with those jobs. For the most part, then, we're talking about augmentation of human jobs, not fully replacing human workers with AIs.

But still, up to 60 percent of jobs could be affected or augmented? Why is the figure so high? Because previous waves of automation have largely affected routine and mundane tasks. But thanks to GenAI's ability to generate content, AI can now take on tasks from higher-skilled jobs, too, including the work of teachers, doctors, and writers. Other analysis suggests that GenAI automation may disproportionately affect the jobs of women, with around 80 percent of women in the US workforce in jobs that are exposed to GenAI automation, compared to 60 percent of men.<sup>iv</sup>

Keep in mind that we're only just beginning to see the impact of GenAI. Around 100 million people use ChatGPT on a weekly basis, and it's one of the fastest-growing services ever – and that's just in the *first year* of its release.<sup>v</sup> So we've barely scratched the surface of what this technology can do and how widespread it will become.

It's no wonder Bill Gates said, "Generative AI has the potential to change the world in ways that we can't even imagine."<sup>vi</sup> Meanwhile, Adam Selipsky, CEO of Amazon Web Services, says GenAI will "pretty much change every application inside of companies, every application that consumers interact with. It is a profound technological change that we're still at the very beginning of."<sup>vii</sup> What's more, according to McKinsey, GenAI will be so ubiquitous it could add up to \$4.4 trillion in value to the global economy annually – and save up to 70 percent of workers' time.<sup>viii</sup>

Given the transformative nature of GenAI it's really important that everyone assess the impact of such a powerful technology on their job. This is not the time to bury your head in the sand. With that in mind, the rest of this chapter lays out 10 steps everyone should be taking now. These steps are split into two halves, with the first half focusing on building your understanding, and the second half focusing on preparing for change.

## UNDERSTANDING GENERATIVE AI AND THE SCOPE OF TRANSFORMATION

Knowledge is power, as they say. So these first five steps are about equipping yourself with GenAI knowledge and working out how it may affect your work, your company, and more.

### Step 1: Learn about GenAI's capabilities

First, you need to know what GenAI can do. I therefore urge you to start learning about the many GenAI tools out there and the many things that can be created with GenAI. As a starting point, GenAI can be used to generate:

- Text – this spans the whole range of text outputs, from reports and text summaries, to creative writing and even translation assistance.
- Images – many GenAI tools can take a simple word prompt and create artwork to your specifications, for personal use or, say, advertising campaigns.
- Video – tools are emerging that let you create and edit video, just by describing what you want to see.
- Music and sound – GenAI tools can create human-like voices (what's known as voice synthesis), music, and sound effects.

- Designs – from automating aspects of design to creating multiple designs based on word prompts, GenAI will increasingly be incorporated into the design process.
- Data analysis – GenAI excels at digesting and interpreting vast amounts of data, meaning it can be used to generate automated reports, provide useful predictions, and more.
- Computer code – numerous GenAI tools already exist that allow novices and expert coders alike to create, test and enhance computer code.
- Synthetic data – GenAI can be used to create entirely synthetic data that can then be used to train other AI models, or to model scenarios that are difficult to model with real-world data.
- Research – GenAI is already making waves in drug discovery and other forms of health research. In future, GenAI will become a common research tool.
- Video games and virtual worlds – designing immersive videos games and VR experiences can be streamlined and accelerated with the help of GenAI.

At this stage, it's also important to consider how GenAI will interact with, accelerate, and be accelerated by other cutting-edge technologies. For example, super-fast quantum computers will accelerate GenAI capabilities even more. On the other hand, immersive virtual metaverse worlds (such as Decentraland and Roblox) could be enhanced by GenAI's creative capabilities.

Once you know what GenAI is capable of, you can then begin to assess that against your job role (more on this coming up). But also consider how you could potentially use GenAI to streamline aspects of everyday life.

## Step 2: Assess how your industry might be impacted

With the capabilities of GenAI in mind, it's worth taking a good, long look at the industry you work in and ask yourself, "How at risk is my industry from GenAI automation?" But also, "How could my industry be positively impacted by GenAI?"

For example, journalism is a field that's already grappling with GenAI automation. The technology is being used by outlets such as The Associated Press and News Corp to create content, brainstorm ideas for features, create personalized news stories, and produce accompanying video content. This doesn't mean we won't need any journalists in future. But it does mean journalists will increasingly work alongside GenAI tools. And while simple reporting stories will likely be written by GenAIs, we will still need human journalists for stories that require a more investigative, empathetic approach, or require complex human judgment.

And if you think your industry is immune to AI automation, think again. All industries will be augmented or impacted by GenAI to some extent – some in the immediate future, and some in the longer term. For example, industries like construction and hospitality may seem pretty safe from AI automation, but in the future robots could be equipped with GenAI capabilities – thereby expanding the range of tasks GenAIs can do from "knowledge" work to include physical work. Essentially, things that we don't consider to be at risk today could potentially be impacted in the future.

## Step 3: Assess your organization and its strategy

Next, take a look at the company you work for (or lead). How well is the business positioned for this wave of transformation? Because GenAI will have such a big impact on businesses, it's really important you review your overarching business strategy to ensure it's still relevant, and update it in line with the amazing possibilities of GenAI.

This means you'll need to carefully examine the potential impact of GenAI on your business operations, your products and services, and maybe even your underlying business model – and then update your business strategy accordingly. For example, if you run a marketing agency, GenAI's content creation capabilities could threaten parts of your service, because GenAI can produce marketing copy quickly, easily, and on a mass scale. On the flip side, GenAI also brings new opportunities your way – such as the opportunity to create highly personalized campaigns on a mass scale.

#### Step 4: Assess your job

Now it's time to look at your individual job role. How might the work you do change because of GenAI? For most jobs, it's unlikely that GenAI will replace that job altogether. However, it can probably take on some of the tasks. In other words, GenAI (probably) won't take your job away, but it will very likely change *how* you work.

It's therefore useful to break your job down into its component tasks and core skills, and compare those elements to the GenAI capabilities that we've already discussed. Could the technology be considered good (or even excellent) at those component skills and tasks? Basically, which tasks can you envision being done by GenAI in the future (possibly the very near future), and which tasks will continue to require the human touch?



Some jobs are more exposed than others. Customer service, for example, is a job that I'd consider highly exposed, because chat tools (both text and speech tools) can be used to answer pretty much any simple or routine customer query – especially since GenAI means chatbots are becoming more intelligent, more responsive, and better able to deal with a wider variety of requests. Of course, we'll still need some human customer service agents to deal with the more complex and sensitive issues, but we can certainly expect that to be a smaller number of individuals, working alongside GenAI tools that handle the majority of queries.

Many jobs are moderately or minimally exposed to GenAI automation – in which case, GenAI is likely to be incorporated into the work as a productivity tool, or as a way to streamline work, rather than as a replacement for human workers. In this way, GenAI will increasingly be used as a sort of “co-pilot” tool for all sorts of jobs.

Doctors, for example, will work alongside GenAI diagnostic tools that help them liaise with patients and diagnose issues. Plus, GenAI tools are already emerging that capture doctor–patient conversations and automatically generate notes for the patient's records – thereby saving clinicians precious time. So, GenAI won't replace healthcare professionals, but it will help them in their work.

Likewise, teachers are already beginning to use GenAI tools to automate routine tasks, plan lessons, conduct research, brainstorm fun and creative tasks for students, create learning materials (such as quizzes), and more. GenAI thereby allows teachers to focus more on fostering critical thinking, creativity, and emotional intelligence among students, rather than

being bogged down in routine tasks. Once again, GenAI won't replace teachers in classrooms, but it will make the work of teachers better and easier.

Even in manufacturing settings, people will work alongside GenAI tools. Sure, GenAI can't assemble a component or product (yet – but with the combination of GenAI and robots in future...), but GenAI tools can be used to plan production lines, monitor machinery, plan maintenance, and minimize machine downtime.

I envisage a future where the majority of jobs are, to some extent, augmented by GenAI. To what extent will your job be affected? Which brings us to...

#### Step 5: Look at your exposure and make a plan

Would you define your exposure to GenAI automation as high, moderate, or low risk? That's the question to ask yourself in this step – and then make a plan based on your level of exposure.

Let's say your exposure to GenAI is fairly high risk (say, if you work in customer service, or you write short-form marketing content that could easily be generated by ChatGPT). In that case, will you potentially be looking for a new job in the next couple of years? If so, what kind of work would you like to move into and how can you start preparing for that transition now?

Even if your exposure is moderate or low (at least, for now), you might still want to grow your skills in certain areas to better cope with future change, or to help you augment your work with GenAI (more on this coming up later). Can you, for example, adapt your job so

that mundane, easily repeatable tasks are done by GenAI – thereby freeing up your time for more complex tasks.

A really good question to ask yourself at this stage is, “How does my work *add value*?” In this age of intelligent machines, I think this is a question everyone – including myself – should be asking. Having considered the value you bring, next ask yourself: “Can machines deliver that value, either today or in the medium-term future?”

As we discussed, there’s a very good chance that some of the value you deliver could be delivered by machines now or in future. If that’s the case, may I suggest asking this final question: “How would I *like* to add value in future?” Meaning, what would you rather be doing if machines can do some or all of your current work? Which leads us nicely onto the second half...

## GETTING READY FOR THE GENERATIVE AI REVOLUTION

Now that you’ve gained a better understanding of GenAI and how it might impact your industry, your organization, and your job, what’s next?

### Step 6: Push for the job you would like to have

Now is the time to take active steps towards the job you would like to have in future. Or the industry you’d like to work in in future. Or even towards a shift in your current job (if you expect that GenAI will take on some of your responsibilities in future).

Revisit your answers from step 5 on how you'd ideally like to *add value* to the organization you work for, and the world at large. What does that look like for you, and what steps can you start taking now?

For example, if you currently copywrite marketing copy – something that will increasingly be done by GenAI tools – can you transition towards a more strategic or creative marketing role, where you plan campaigns? Basically, the key takeaway here is to take on more responsibilities in the areas where human skills are still needed, and will always be needed. Areas like creativity, complex decision making, strategic thinking, leadership, empathy, interpersonal relationships, and so on. These are the areas where humans will continue to have the edge over machines.

Also consider how you can actively use GenAI tools in your role or organization. How can you save time, be more creative, and get things done more easily with GenAI? How can you collaborate with AI? How can you become more of an expert on using AI and getting the best out of it in your industry? How can you influence the direction of your team and organization so that *everyone* can get the best out of AI? Can you become the voice that pushes for positive change?

And if you can't do all this in your current organization – because not all employers are so amenable to transformation – is it time to move on?

### Step 7: Start learning and building the relevant skills

For the most part, GenAI won't do our jobs for us. Instead, we will use GenAI to do our jobs more effectively. To automate or streamline the more repetitive and mundane tasks. And to

free up time for more value-adding tasks. As such, GenAI will not replace the need for very human skills – those areas where humans excel. Skills like:

- Critical thinking
- Judgment and complex decision making
- Emotional intelligence and empathy
- Creativity
- Collaboration and working in teams
- Interpersonal communication
- Working in gigs
- Adaptability and flexibility
- Cultural intelligence and diversity consciousness
- Ethical awareness
- Leadership skills
- Time management
- Curiosity and continuous learning
- Embracing and celebrating change

It makes sense, then, that you should start cultivating these skills right now. Read more about these skills, and how to develop them, in my book, *Future Skills: The 20 Skills & Competencies Everyone Needs To Succeed In A Digital World*.

Alongside these very human skills, it's also important to cultivate digital skills that allow you to get the best out of GenAI. Ask for support from your employer with this. And if your employer can't offer training and education, there's a wealth of online resources (both free

and paid) that can help you get up to speed on topics like AI, GenAI, working with data, and more.

For example, there are generic courses on the basics of GenAI right through to specific courses for specific jobs and sectors (such as GenAI in education or GenAI in healthcare).

There are courses from big online learning platforms, like Udemy and Coursera, and courses from technology-specific providers, like DataCamp. My YouTube channel is also a very good (and free) hub of information.

#### Step 8: Cultivate the right mindset

As well as cultivating the right skills, it's really important to adopt a mindset that embraces change. Let's call it the "GenAI mindset" (or "growth mindset" if you prefer). For me, the GenAI mindset encompasses the following traits and attitudes:

- Understanding that GenAI is *a tool*. It won't do our jobs for us, but we'll use it to do our jobs more effectively.
- Being adaptable. This includes being willing to walk away from what we know, even if we think it works, in order to try something new.
- Being curious. A trait that's vital for success in our rapidly changing workplaces.

Curiosity can be honed by training ourselves to listen actively, ask questions, and be open when we aren't sure about something. For me, curiosity and humility are two sides of the same coin. If we think of curiosity as, "How can I/we do things better?" humility says, "I don't know everything but am willing to learn."

- Embracing a continuous approach to learning. Gone are the days when school and college set us up for a lifelong career. Keeping ahead today means constantly updating our skills and knowledge.
- Being willing to work collaboratively – with both humans and machines. Because, increasingly, this is how work will get done, by combining the best of human labor and machine labor.

This is the same sort of mindset that's been adopted by those who have successfully harnessed other big waves of transformation, like the internet.

#### Step 9: Start experimenting with AI tools

Speaking at the 2023 World Economic Forum's Growth Summit, economist Richard Baldwin said, "AI won't take your job. It's somebody using AI that will take your job." Let that sink in for a moment. If you don't know how to work with AI, you're putting yourself in a much riskier position – certainly compared to someone who embraces AI and knows how to use it to do their job more effectively.

Which is why it's a good idea to start using GenAI tools and integrating them into your workflow. Can you use GenAI to draft an email, for example? (Note I said "draft" – you should always carefully review any content created by AI.) Can you use it as a productivity tool? To brainstorm creative ideas? To summarize a lengthy report into a neat paragraph? To create visuals to accompany a report? To review content you've written and suggest improvements? To translate content into a different language? There are so many ways you can begin to experiment with GenAI *right now*.

And if you can't use these tools in your workplace (some employers, for example, have placed a ban on using tools like ChatGPT), then experiment with them in your personal life. Ask ChatGPT to suggest tonight's dinner, for example, based on what you have in the fridge. Or ask it to help you plan that novel you've been talking about writing!

#### Step 10: Build your employee brand

Finally, now is a good time to build your brand as an employee. Craft your online presence so it highlights the complementary skills that you have – the skills that will continue to add value in the workplace. Highlight your AI skills, creative skills, strategic skills, and so on. Update your CV while you're at it.

But don't stop there. Join online communities and forums that are relevant to your industry. Share your experiences of working with GenAI (without giving away any confidential information, obviously). Demonstrate your expertise. Write articles and blog posts. Make yourself a voice of authority in your field. Make yourself a desirable candidate for other employers out there. In this digital age, your reputation – everyone's reputation – exists in the online world as much as the offline world. So why not take advantage of this to establish your expertise, grow your network, and enhance your career?

Remember, GenAI won't do our jobs for us, but it will hopefully make work better. That will certainly be the case for people who learn to surf the wave of GenAI transformation. If you'd like to read more about GenAI and its impact, do check out my book, *Generative AI in Practice, 100+ Amazing Ways Generative Artificial Intelligence Is Changing Business And Society*.



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- <sup>i</sup> DALL-E 3 could take AI image generation to the next level; Digital Trends;  
<https://www.digitaltrends.com/computing/dall-e-3-testing-leaked-revealing-interesting-new-text-features/>
- <sup>ii</sup> The New ChatGPT Can Now ‘See’ and ‘Talk.’ Here’s What It’s Like; The New York Times;  
<https://www.nytimes.com/2023/09/27/technology/new-chatgpt-can-see-hear.html>
- <sup>iii</sup> AI Will Transform the Global Economy. Let’s Make Sure It Benefits Humanity; IMF;  
<https://www.imf.org/en/Blogs/Articles/2024/01/14/ai-will-transform-the-global-economy-lets-make-sure-it-benefits-humanity>
- <sup>iv</sup> Will Generative AI Disproportionately Affect The Jobs of Women?; Kenan Institute;  
<https://kenaninstitute.unc.edu/kenan-insight/will-generative-ai-disproportionately-affect-the-jobs-of-women/>
- <sup>v</sup> ChatGPT continues to be one of the fastest-growing services ever; The Verge;  
<https://www.theverge.com/2023/11/6/23948386/chatgpt-active-user-count-openai-developer-conference>
- <sup>vi</sup> The Most Thought-Provoking Generative Artificial Intelligence Quotes Of 2023; Forbes;  
<https://www.forbes.com/sites/bernardmarr/2023/11/29/the-most-thought-provoking-generative-artificial-intelligence-quotes-of-2023/>
- <sup>vii</sup> AWS CEO: Generative AI will ‘pretty much change’ every application consumers interact with; YouTube;  
<https://www.youtube.com/watch?v=iQ18HJkLjw>
- <sup>viii</sup> The economic potential of generative AI; McKinsey; <https://www.mckinsey.com/capabilities/mckinsey-digital/our-insights/the-economic-potential-of-generative-ai-the-next-productivity-frontier#introduction>

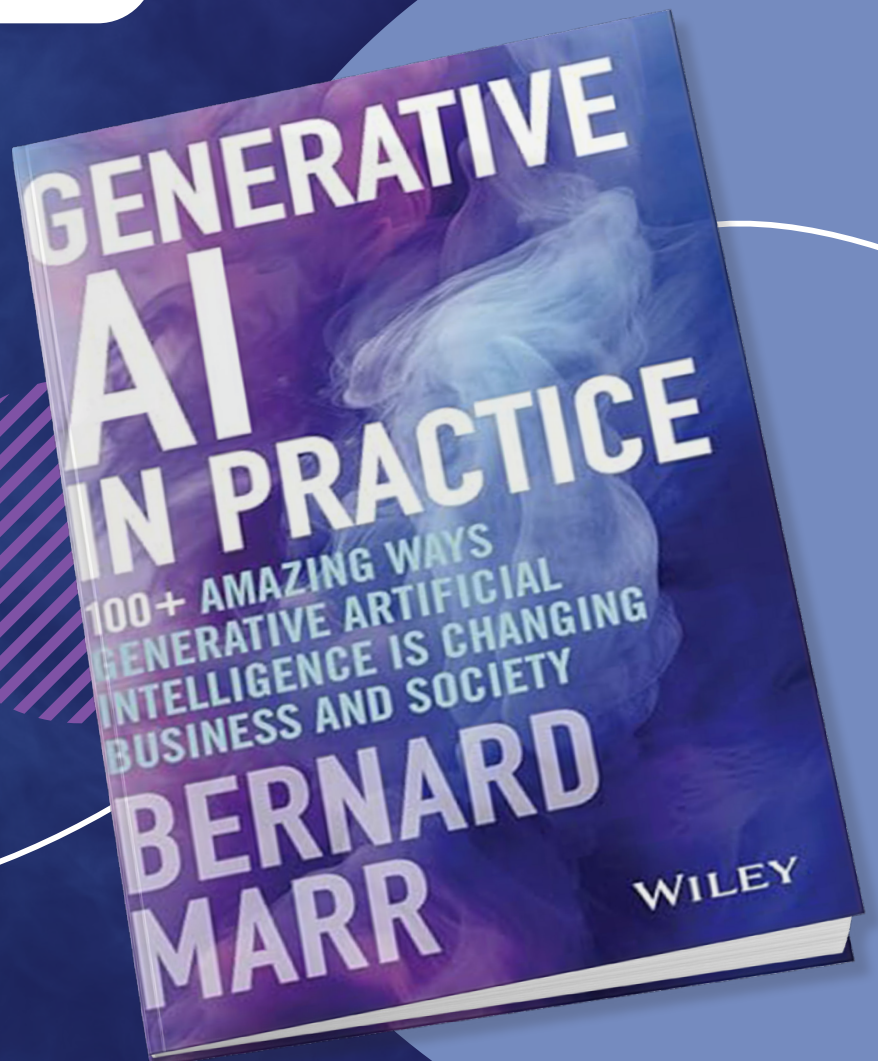
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