

Introducing ChatGPT: The AI Revolution in Project Management

As you dive into this opening chapter, you will discover the essence of ChatGPT: what it is, how to access it, and why every modern project manager should grasp its potential and utilize it.

This chapter also acts as your roadmap to use PM-AI to achieve peak productivity and success. A 2019 report from KPMG revealed that organizations that invest in AI benefit from, on average, a 15 percent boost in productivity.

Evolution of AI

AI had its foundation in 1932 when Georges Artsrouni reportedly invented a machine that he referred to as a “mechanical brain” to translate between languages on a mechanical computer encoded with punch cards. He received the first patent for a mechanical translator. AI research began to take shape in 1943 when Warren S. McCulloch and Walter Pitts published “A Logical Calculus of the Ideas Immanent in Nervous Activity.”

In 1950, the AI revolution began with Alan Turing presenting his idea of “machines’ capability to imitate human reasoning and actions,” in his seminal paper, “Computing Machinery and Intelligence.” Today, these machine learning technologies are changing our world. The Dartmouth Conference of 1956 was the birth of AI as an academic discipline. Most importantly, AI has led to the

next level of machine learning (ML), characterized by neural networks with multiple layers, known as the “deep learning revolution.” Thinking of neural networks as a digital brain with neurons or nodes, AI provides value by solving problems through imitating human intelligence.

In 1957, Frank Rosenblatt developed the first artificial neural network capable of learning, called the perceptron. In 1966, Joseph Weizenbaum developed ELIZA: the first natural language processing (NLP) program to simulate conversation. And in 1967, Allen Newell and Herbert A. Simon developed computer programs to mimic human-like problem-solving and decision making.

By the mid-1980s, AI started to find its place in society by providing automation for repetitive tasks, financial forecasting, and medical diagnoses. By the 2020s, AI evolved even further from automation to augmentation with GenAI, using more human-like learning techniques to generate new content based on large sets of historical examples.

In the project-driven AI-dominated world today, you must accept that GenAI is more than just a buzz. The world of AI is as dangerous as a tsunami: the flood will continue forward without stopping and will bring unpredictable waves of risks, regardless of whether you are ready. Such unprecedented challenges should be recognized, and society must adapt before it is too late. GenAI can either be deployed to serve the common good or can cause disaster if it is not properly managed.

The introduction of any new or emerging technology always causes resistance to change, apprehensiveness, and skepticism based on the influence of culture, environment, surroundings, regulations, and individuals’ professional lives. For example, when calculators first appeared in the 1960s, there were concerns about math skills and job losses, but now they’re essential tools on every device. Similarly, early cloud technology in the 2000s led to security worries and job fears, but it’s now a trusted backbone of modern tech. Both of these examples show how initial fears can turn into widespread acceptance.

The story of the evolution of AI in project management, but it is a good guidepost for project managers to let them know where it may be heading in the future. Such tools and techniques include automated replication, guiding decision making processes, interpreting information, forecasting, communicating, and innovative allocation of resources. Project managers can anticipate rather than react to changes when they recognize what is currently possible and are aware of AI’s historical capabilities.

According to IBM (2023), “Executives estimate that 40 percent of their workforce will need to reskill as a result of implementing AI and automation over the next three years.” Project managers must evolve their skills to stay relevant and effective at their jobs by developing competencies in data analytics for decision making.

In the ever-evolving landscape of project management, challenges are as diverse as they are dynamic. What if the way we attempt project management

today could be redefined to manage these challenges more efficiently? There is a way, and it's called ChatGPT! ChatGPT is a sophisticated GenAI chatbot game-changer. It can be your go-to tool to assist in initiating, planning, monitoring, controlling, executing, and closing projects in ways you never imagined by using the correct prompts and knowing their abilities.

OpenAI launched the innovative ChatGPT chatbot based on a large language model on November 30, 2022. The model facilitates more sophisticated user interactions with adjustable conversational lengths, formats, styles, degrees of detail, and language. It can be traced back to 2018, when OpenAI introduced its first generative pretrained transformer (GPT) model.

Mira Murati, the CTO of OpenAI, was instrumental in the creation of ChatGPT. Sam Altman hired her at OpenAI in June 2018 and appointed her his successor as OpenAI's CTO in May 2020. Her leadership went beyond ChatGPT to cover projects such as DALL-E, an AI tool for artistic creation using prompts.

Sam Altman, one of the cofounders of OpenAI, along with other renowned personalities such as Elon Musk, was the CEO during the creation and introduction of ChatGPT. He led OpenAI to make great strides in AI.

A major participant in this success story is Microsoft, headed by Satya Nadella. Microsoft is the biggest investor in OpenAI, and its third investment was significant (\$10 billion), as reported in January 2024. The collaboration has seen ChatGPT integrated into Microsoft's Bing search engine Copilot for Microsoft 365, and the Azure OpenAI Service.

The World Economic Forum predicts that 75 percent of companies are planning to adopt AI technologies by 2027. Despite the significant advancements in AI since it began, the future promises more amazing discoveries, providing project managers with innovative tools and techniques that lead to competitive advantage. Shifting toward sophisticated AI applications can change the way we do project management. Understanding these forthcoming shifts will be key in adapting to the scenario of AI-based project management.

What Is ChatGPT?

Why is the world so intrigued with ChatGPT? Can this tool be useful in your project management tasks? The answer is yes! Figure 1.1 is based on Gartner's "Five days with a million users after ChatGPT." Now that we live in the era of AI and project management, with well over 100 million users, there definitely must be something this tool can do for you.

ChatGPT is the closest thing to having a digital robot assistant that is immensely learned and talks like a person. The large language models from OpenAI were released in 2018 with minimal fanfare. However, when ChatGPT was released on November 30, 2022, it took the world by storm. ChatGPT was made available to the public in both free and paid versions. The paid version of ChatGPT can now use web plugins to analyze real-time data and

information from the Internet from the GPT store that has an extensive collection of GPTs, categorized into areas such as writing, productivity, programming, education, and more.

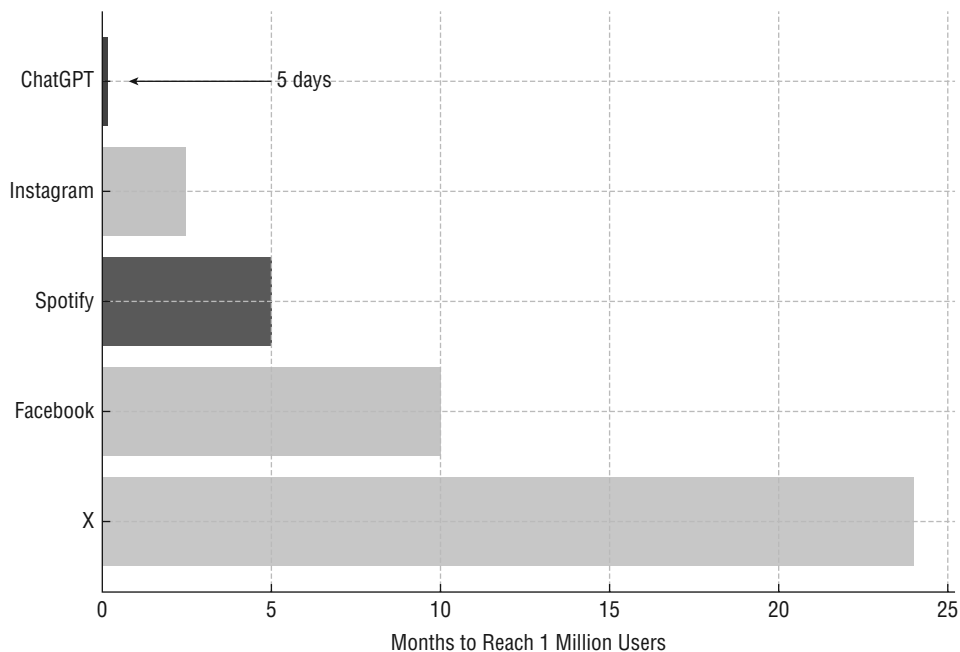


Figure 1.1: Time taken by platforms to reach 1 million users

The name “ChatGPT” originates from generative pretrained transformer, a machine learning technique known for impressive performance on language-related tasks. Its learning is rooted in natural language processing (NLP) and evolves based on user feedback. Therefore, each interaction refines its capabilities.

The uniqueness of ChatGPT is that it talks like a human. Many language-oriented processes are possible using it, such as translations between languages, text summarization, completion of sentences, answers to questions, and speaking similarly to specific individuals.

ChatGPT answers questions and provides information in a human-writable fashion. It has been trained on billions of pieces of text data to understand context and relevance when generating human-like answers to questions.

ChatGPT is a massive language model with over 175 billion parameters that tell the computer how to do something. These parameters help it understand and generate human-like text. Think of parameters as puzzle pieces: the more you have, the clearer the picture.

As you further examine the capabilities of ChatGPT in project management, it is important to note that ChatGPT’s advanced LLM can support project management from initiation, planning and execution to monitoring and closing projects.

Accessing ChatGPT

ChatGPT is prepackaged and trained, so you do not have to install it on your PC. You can access it simply by typing the URL in your web browser's address bar.

Here are the easy steps to follow to get your access today!

1. **Visit OpenAI's website.** Navigate to OpenAI's official website or the specific platform where ChatGPT is hosted. The URL may have changed, but as of this book's publication, it is <https://chat.openai.com>.
2. **Sign up or log in.** If you're a new user, you'll need to sign up for an account. If you already have an account, simply log in.
3. **Access ChatGPT.** Click on ChatGPT to start using it. Some platforms may require you to start a new session or project.
4. **Start chatting.** You can now enter queries or text into the chat interface to interact with ChatGPT.
5. **Optional: Subscribe.** ChatGPT Paid is available for \$20/month and offers benefits like general access even during peak times, faster response times, and priority access to new features. This subscription is available to customers around the world. Note that the price could change in upcoming versions.

Look at the advantages, such as faster, more precise response times and priority access to new features using the latest ChatGPT model versus the free edition. Many plugins are released each day in the GPT store, and there is an advanced data analysis component: a program that reads and executes source code line by line and creates various types of plots, graphs, and diagrams. It also provides DALL-E, an image generator and reader; the Bing real-time web browser; frequently released OpenAI customized versions of ChatGPT for specific purposes; the ability to customize your own ChatGPT for specific uses; and unlimited time using GPT 3.5.

The upgrade is worth it, as the subscription will be helpful for project managers and anyone working on advanced tasks or who needs fast responses for tasks or projects.

6. **End your session.** Once you're done, you can end the session or log out of the platform.

The ChatGPT Advantage for Project Managers

ChatGPT offers advantages for project managers in automating workflows, drafting project documents and project templates, providing data-driven insights, identifying project risks, enhancing data analysis, assisting in decision making, and summarizing reports with, of course, human review. Although you cannot utilize ChatGPT solely to automate tasks, you can fine-tune the ChatGPT model, integrate the generated text-based output, and feed it into customized software

through robotic process automation (RPA). Properly used, it can be an invaluable digital virtual assistant that allows project managers to spend valuable time working on more important tasks to achieve peak project productivity and project success.

Your Roadmap to Productivity and Success

Project managers face challenges every day, but with these challenges come great opportunities for innovation and growth through GenAI tools like ChatGPT. This book's roadmap to success in project management, reinforced by AI, unfolds in six comprehensive parts:

- Part I gives an overview of the foundation, laying the groundwork by emphasizing the revolutionary features of ChatGPT as well as impacts and relevant ethical issues relating to PM-AI.
- Part II discusses the innovativeness of ChatGPT on projects. It explains how ChatGPT works, guidelines for effective interactions, the benefits of collaboration, how it uses communication, and the way it makes decisions about risks and ethics.
- Part III is the core of this book and directs your attention to physical, practical user cases and user prompts for real-world application in project management processes, groups, and other project considerations such as integration, change, and performance management. You will investigate various project development lifecycles—waterfall, Agile, and hybrid approaches—and wrap up with universal and effective results-driven tips to use ChatGPT to achieve your optimal potential.
- Part IV offers a deep look into practical applications using ChatGPT for accurate project forecasting, professional development, and blending human interaction for PM-AI.
- Part V is a strategic view, guiding effective first-time AI implementation utilizing project management principles. You will learn how to fine-tune a model for your organization and the benefits it will bring, navigating the do's and don'ts of AI as a project manager, and realizing the power and limitations of ChatGPT in project management. The PM-AI modality model is also introduced, which integrates AI technologies like LLMs and prompt engineering.
- Part VI provides a future trajectory of GenAI in project management, including major leading PM-AI industries today and how to move forward to keep up with advances.

By the time you reach the end of this roadmap, the knowledge you will harness utilizing innovative GenAI tools like ChatGPT will revolutionize your perspective of how technology can enhance and assist with your everyday project management tasks and beyond.