

第19章CHAPTER 19儀式，你的AI研究的基石RITE, the Cornerstone of Your AI Research

在設計人工智慧驅動的產品時，我盡量避免進行可用性測試。普遍進行的可用性測試是浪費時間和資源，並且在絕大多數情況下無法創造出更好的產品。相反，我將大部分研究時間和預算集中在 RITE（快速迭代測試和評估）研究上：這是在現實生活中實際體驗過的唯一方法，可以在更短的時間內產生更令人愉快、可用和成功的人工智慧驅動產品。

When it comes to the design of AI-driven products, I try to avoid running usability tests. Usability tests, as they are popularly conducted, are a waste of time and resources and, in the vast majority of cases, fail to create a better product. Instead, I focus most of my research time and budget on RITE (Rapid Iterative Testing and Evaluation) studies: the only methodology that I've actually experienced in real life yielding more delightful, usable, and successful AI-driven products in less time.

在本章中，我將討論如何以「RITE 方式」與使用者交談，以便以最佳方式推動您的人工智慧驅動專案向前發展。RITE 是人工智慧驅動的產品設計的有效方法，我將用整章來討論它。首先，我們將討論什麼是 RITE 以及它與傳統可用性研究有何不同。其次，我將使用我們在整本書中設計的 Life Copilot 螢幕範例來示範典型 RITE 研究的流程。最後，我將討論 RITE 在未來幾年內可能如何發展，包括引入人工智慧的力量來使流程更快、更容易、更有效率。

In this chapter, I will discuss how to talk to your users the “RITE way” in order to move your AI-driven project forward in the most optimal fashion. RITE is such an effective methodology for AI-driven product design that I will be dedicating this entire chapter to it. First, we'll discuss what RITE is and how it's different from traditional usability studies. Second, I will demonstrate the flow of a typical RITE study using the example of Life Copilot screens we've been designing throughout the book. Finally, I will conclude by discussing how RITE is likely to evolve in the next few years, including by bringing in the power of AI to make the process faster, easier, and much more efficient.

RITE 研究與可用性測試

RITE Study vs. Usability Test

可用性測試和 RITE 研究有什麼區別？

Just what is the difference between a usability test and a RITE study?

可用性測試通常涉及 8-10 名參與者在實驗室環境中使用一組預定義任務在相當複雜的原型上進行測試。研究期間沒有原型更改，測試結果是一份可用性報告，概述了問題和建議。

Usability tests, as they are popularly run, involve testing by 8 – 10 participants on a fairly elaborate prototype using a set of predefined tasks in a laboratory setting. There are no prototype changes during the study, and the result of the test is a usability report outlining issues and recommendations.

相比之下，RITE 研究是在 9-12 輪中使用 3-4 名參與者進行的，每輪 3-4 人。關鍵的區別在於，在兩輪之間，團隊會花時間更新原型並修復前一天測試中發現的問題。為了實現這一點，我通常會使用最簡單的原型來完成這項工作，通常是便利貼或最簡單的 Figma 點擊，加上最簡單的運行 AI 模型，通常在 Python 筆記本中添加（正如我們在上一章中討論的那樣）。

In contrast, RITE studies are conducted using 9 – 12 participants in 3 – 4 rounds, with 3 – 4 people per round. The critical difference is that in between the rounds, the team takes the time to update the prototype and fix the issues discovered during the previous day ' s testing. To enable that, I usually employ the simplest possible prototype for the job, usually sticky notes or the simplest possible Figma click-through plus the simplest running AI model, usually spiked in a Python notebook (as we discussed in the previous chapter).

那些喜歡傳統可用性測試的從業者可能會反對，從本質上講，RITE 研究就像 3-4 個較小的可用性測試串在一起，兩者之間的差異只是語義。

Those practitioners who love traditional usability tests might object that, in essence, a RITE study is just like 3 – 4 smaller usability tests strung together and that the differences between the two are just semantics.

我不同意。

I disagree.

The difference between a usability test and a RITE study is where you put your focus.

讓我通過比較 RITE 研究和可用性測試（通常進行的）來解釋以下三點的意思。

Let me explain what I mean by comparing RITE studies and usability tests (as they are typically conducted) in the following three points.

#1 : RITE

研究構成了設計過程的核心。可用性測試通常被視為 QA

#1: RITE Studies Form the Core of the Design Process. Usability Tests Are Often Treated as QA

根據我的經驗，我發現大多數公司通常將可用性測試視為一項可選的、昂貴的工作。這是有充分理由的：由第三方承包商運行的可用性測試每輪成本超過 20,000 美元（加上設施費、參與者費、原型創建成本等）。出於這個原因，組織通常最終會等到設計相當成熟後再進行可用性測試。

In my experience, I find that most companies typically view usability tests as an optional, expensive undertaking. There is a good reason for this: Usability tests run by a third-party contractor cost in excess of \$20,000 per round (plus facility fees, participant fees, prototype creation costs, etc.). For that reason, organizations usually end up waiting until the design is fairly well baked to conduct usability tests.

這反過來又鼓勵專案經理（和其他團隊成員）誤解練習的全部目的，並將可用性測試視為某種複雜的 QA 流程。

This in turn encourages project managers (and other team members) to misunderstand the whole purpose of the exercise and to treat usability tests as some sort of an elaborate QA process.

便條

NOTE

在遊戲後期進行測試並不能有效地幫助團隊帶來更好的人工智慧驅動產品。可用性測試的全部重點是改進設計。不幸的是，可用性測試在過程中通常進行得太晚，無法影響它們應該修復的問題。

Testing late in the game is not effective in helping the team bring about a better AI-driven product. The entire point of the usability testing is to improve the design. Unfortunately, usability tests are often conducted too late in the process to affect the very thing they are supposed to fix.

雖然 AI 驅動產品的 UI 設計通常相當簡單，但測試中出現的大多數問題都比典型的非 AI 專案更基本、更深入、範圍更廣。例如，人工智慧驅動的產品的整個用例可能完全錯誤。或

者沒有足夠的資料輸入來建立穩健的模型，因此人工智慧無法預測正確的變數。或者人工智慧模型對於現實生活場景來說過於保守或過於激進.....（這些只是一些 AI 特定問題，這些問題很容易讓您的專案陷入困境，正如我們在整本書中所討論的那樣。

While the UI design for AI-driven products is usually fairly simple, most issues that come up in testing are more fundamental, deeper, and wider in scope than a typical non-AI project. For example, the entire use case for the AI-driven product might be completely wrong. Or there are not enough data inputs to create a robust model, so AI cannot predict the right variable. Or the AI model is too conservative or too aggressive for real-life scenarios ... (These are just a few of the AI-specific issues that can easily tank your project, as we 've discussed throughout the book.)

便條

NOTE

不幸的是，當進行典型的可用性測試時，許多更深層次的基本問題已經“融入”設計中，無法更改。這是進行可用性測試的根本缺點，也是我不在設計過程中進行測試的主要原因之一。

Unfortunately, by the time the typical usability test is conducted, many of these deeper fundamental issues are already “baked into” the design and can't be changed. This is the fundamental drawback of conducting usability tests, and it is one of the main reasons I don't conduct them in the middle of the design process.

相反，我進行輕量級的敏捷 RITE 研究。

Instead, I conduct lightweight Agile RITE studies.

與典型的可用性測試相比，RITE 研究是儘早進行的，並作為設計過程的一部分進行，而不是測試。（甚至名稱也故意不同：測試與學習。「學習」意味著將作為過程的一部分學習某些東西，以便人工智慧驅動的產品有機會進化到更好的狀態，即使它涉及改變更基本的方面，例如人工智慧模型和數據，如上一章所述。

In contrast to a typical usability test, a RITE study is conducted as early as possible and as part of the design process and is not a test. (Even the name is purposefully different: test vs. study.) “Study” implies that something will be learned as part of the process so that the AI-driven product is given a chance to evolve to a better state, even if it involves changing more fundamental aspects, such as the AI

model and data, as described in the previous chapter.

#2：RITE 研究需要最簡單、快速變化的合適原型。可用性測試通常意味著花哨的剛性原型

#2: RITE Studies Demand the Simplest Appropriate Prototypes That Change Rapidly. Usability Tests Often Mean Fancy Rigid Prototypes

一份典型的可用性調查結果報告在食物鏈中呈現並被多次引用，鼓勵精心製作視頻並創建昂貴的高保真原型，因為當時設計已經非常成熟，並且“以防高管可能想停下來”，因此測試需要“看起來不錯”。可用性測試腳本也是如此——所有版主問題都是提前決定的，並得到為這次小冒險掏錢的高管的批准，因此不允許偏離可用性測試腳本。此外，大多數第三方（或內部用戶研究小組）可用性測試版主往往要求腳本和原型的複雜性具有一定的僵化性。帶有動畫過渡的花哨 Figma 原型變得功能臃腫、成本高昂且更改複雜，忽略了以用戶為中心的流程的主要目的：創建有效的人工智能驅動產品。

A typical usability findings report is presented up the food chain and quoted many times over, encouraging elaborate videotaping and creation of the costly high-fidelity prototype because the design is pretty baked at that point and “in case an executive might want to stop by” so the test needs to “look good.” Ditto for the usability testing script—all of the moderator questions are decided well in advance and approved by the executives who are coughing up the cash for this little adventure, so no deviation from the usability test script is allowed. Furthermore, most third-party (or internal user research group) usability test moderators tend to demand some rigidity in the script and prototype sophistication. Fancy Figma prototypes complete with animated transitions become bloated with features, costly, and complicated to change, losing sight of the primary purpose of the user-centered process: to create an AI-driven product that works.

便條

NOTE

與典型的可用性測試相比，RITE 原型反映了產品的整體完成程度。

In contrast to a typical usability test, RITE prototypes reflect the overall degree of completion of the product.

因此，在專案的開始階段，原型非常粗糙，提供了足夠的細節來回答特定的使用者體驗設計問題，包括價值百萬美元的問題：這個專案一開始就值得做嗎？這遠不是一個閒置的問題；回想一下我們在第 1 章中的討論：85% 的人工智慧驅動專案未能產生任何投資報酬率。

Thus, in the beginning stages of the project, the prototypes are pretty rough, offering just enough detail to answer specific UX design questions, including the million-dollar question: Is this project even worth doing in the first place? This is far from being an idle question; recall from our discussion in Chapter 1: 85 percent of AI-driven projects fail to produce any ROI.

我很少製作花哨的動畫原型，因為成本/收益比太高了。相反，我發現更簡單的 Figma 點擊，或者更好的是，用於 AI 驅動的移動應用程序（例如您將在本章中找到的那些）的便條，使設計人員能夠快速、廉價地探索多種設計方法，同時省去複雜的相機設備和其他小工具。

I rarely build fancy, animated prototypes because the cost/benefit ratio is just too high. Instead, I find that simpler Figma click-throughs or, even better, sticky notes for AI-driven mobile applications (such as the ones you will find in this chapter) allow designers to quickly and inexpensively explore multiple design approaches while dispensing with elaborate camera equipment and other gadgets.

便條

NOTE

粗略的原型會引發改變。花哨的原型禁止這樣做。

Rough prototypes invite change. Fancy prototypes prohibit it.

RITE 研究參與者和主持人應該能夠輕鬆地集思廣益，討論可以納入原型的想法，因為設計尚未最終確定。粗略的原型還允許即時進行許多更改，有時在第一個參與者完成後立即進行，在下一個評估者有機會看到它之前，從而提供更有效率、更緊密的迭代過程。

RITE study participants and moderators should be comfortable brainstorming together ideas that can be incorporated into the prototype because the design is not yet finalized. A rough prototype also allows many changes to be made on the fly, sometimes immediately after the first participant is done and before the next evaluator has a chance to see it, providing a more efficient, tighter iteration process.

便條

NOTE

代碼談話，廢話行走。在你的設計出現在程式碼中之前，它只是一張圖片。您的原型只需要足夠花哨，即可為正確的用例提供創造性的解決方案並暢通開發。

Code talks, bullshit walks. Until your design is in the code, it ' s just a picture. Your prototype needs to be only just fancy enough to provide a creative solution for the right use case and unblock development.

RITE 的重點始終放在解決方案上。

The RITE focus is always on the solution.

#3：RITE 研究產生解決方案。可用性測試產生報告

#3: RITE Studies Produce Solutions. Usability Tests Produce Reports

可用性測試（通常執行）會產生報告。這些報告包含對可用性恐怖的生動描述和最佳實踐，旨在幫助設計師彌補可怕的違規行為。

Usability tests (as they are typically run) produce reports. These reports contain vivid descriptions of usability horrors and best practices designed to help designers atone for the horrific transgressions.

便條

NOTE

問題是，人工智慧驅動的產品設計還太年輕，在可靠的最佳實踐的情況下無法擁有太多內容。相反，在給定的可用性測試之後，最好的辦法是“ ChatGPT 是這樣做的 ” 或 “ Claude 是這樣做的 ”。

The problem is that AI-driven product design is just too young to have much in the case of solid best practices. Instead, the best to be said after a given usability test is that “ ChatGPT does it this way ” or “ Claude does it that way. ”

因此，人工智慧驅動的可用性測試建議在組織內經常被視為對抗性。每個人都有自己喜歡的人工智慧驅動的產品或用例，沒有人能就應該遵循哪種寵物設計模式達成一致。

For this reason, AI-driven usability test recommendations are often received as adversarial within the organization. Everyone has their favorite AI-driven product or use case, and no one can agree on which pet design pattern should be followed.

在快速發展的行業中，設計師需要空間來探索創意解決方案。最好的方法是：

In a rapidly evolving industry, designers need space to explore creative solutions. And the best way to do that is to:

便條

NOTE

專注於獲得持續的反饋並快速迭代到真正有效的解決方案。

Focus on getting continuous feedback and iterating rapidly to a solution that actually works.

RITE 研究提供了探索的創意空間，以及專注於創建有效的解決方案的快速用戶反饋。出於這個原因，我很少錄像我的學習或提供詳細的報告。我最多創建一個 FigJam/Miro/Mural 板，顯示 RITE 研究期間原型的設計變更進展（迭代），以及一些關鍵見解和引言，我們作為一個團隊一路上用作燃料，以幫助我們調整並達到當前改進的設計。

A RITE study provides creative space for exploration coupled with rapid user feedback focused on creating a solution that works. For this reason, I rarely videotape my studies or provide elaborate reports. At most, I create a FigJam/Miro/Mural board showing the design change progression (iterations) of the prototype during the RITE study, along with a few key insights and quotes that we, as a team, used along the way as fuel to help us pivot and arrive at the present improved design.

Instead of the usability report, the product of the RITE study is the improved design solution.

RITE 研究的附帶好處

A Fringe Benefit of RITE Studies

作為一項顯著的附加福利，

As a significant fringe benefit,

便條

NOTE

RITE 研究有助於建立有效的 AI 驅動設計團隊。

RITE studies help build effective AI-driven design teams.

RITE 方法本質上是敏捷的，非常適合敏捷/Scrum 專案。由於 RITE 方法側重於解決方案而不是煽動性報告，因此它往往不那麼具有對抗性：

The RITE approach is inherently Agile, making it a perfect fit for the Agile/Scrum projects. And because the RITE methodology is focused on solutions rather than inflammatory reports, it tends to be less adversarial:

便條

NOTE

有一個很酷的主意嗎？讓我們來試試看。此刻。

Have a cool idea? Let ' s try it. Right now.

當我與我的團隊合作時，我們每週都會使用 RITE 研究的最新見解進行幾次有機的溝通和集思廣益，因此幾乎不需要花哨的可用性報告。整個 4 人團隊（使用者體驗、專案經理、開發和 AI 主管）都在那裡，即時共同推動和體驗跨職能設計流程，核心團隊中的每個人都專注於為棘手的問題提出創造性的解決方案，而不是製作報告。

When I work with my team, we communicate and brainstorm organically several times a week using the latest insights of the RITE study, so there is little need for a fancy usability report. The entire 4-in-the-box team (UX, PM, Dev, and AI leads) is there—driving and experiencing the cross-functional design process together, in real time, and everyone on the core team is focused on coming up with creative solutions to tough problems—not on producing reports.

可用性研究和詳盡的報告都有其用武之地，但熱門的人工智慧驅動的產品設計流程的中間並不是其中之一。因此，在設計人工智慧驅動的產品時，不要繼續做你一直做的事情。相反，做 RITE 的事情！

Usability studies and elaborate reports have their place, but the middle of a hot AI-driven product design process is not one of them. So, when it comes to designing AI-driven products, don't keep doing what you have always done. Instead, do the RITE thing!

如何進行 RITE 研究

How to Conduct a RITE Study

在本節中，我將討論如何運行典型的 RITE 研究。有關更多詳細信息，請參閱我的 1 美元原型書（1）。

In this section, I will discuss how to run a typical RITE study. For more details, see my \$1 Prototype book (1).

要開始 RITE 研究，您不需要大量螢幕；1-3 足以開始。

To start a RITE study, you don't need a ton of screens; 1 – 3 is plenty to start.

便條

NOTE

畢竟，最重要的問題之一是用例是否有意義，最好提前回答，並在必要時盡快調整。

After all, one of the most important questions is whether the use case makes sense at all, and it's best to answer it up-front and, if necessary, pivot as quickly as possible.

RITE 最好的事情之一是，您也不需要擔心進行荒謬的疲憊的兩小時研究（無論如何，現在誰還在這樣做？即使是與真實客戶進行 10 到 15 分鐘的快速對話，使用原型作為對話的開場白和討論的管道，也足以讓事情順利進行。這種低投入的時間和精力對於在工業環境中作為團隊一員的設計師來說尤其重要，因為它允許用戶體驗儘早參與並在項目期間保持參與。這對於建立健康的持續使用者體驗研究實踐至關重要。

One of the best things about RITE is that you also don't need to worry about conducting an absurdly exhausting two-hour study (who still does this nowadays anyway?). Even a quick 10 – 15-minute conversation with a real customer using a prototype as a conversation starter and a conduit for discussion is enough to get the ball rolling. This low investment of time and effort is particularly important for designers operating as part of the team in the industrial setting because it

allows UX to get engaged early and stay engaged for the duration of the project. This is critical to establishing a healthy ongoing UX research practice.

我建議不要從一次性歡迎流程開始，而是先專注於最重要的用例。描述您要拍攝的用例並設置場景至關重要。與評估者的對話可能是這樣的：

I recommend not starting with a one-time welcome flow but instead focusing on the most essential use case first. Describing the use case you are shooting for and setting the scene is critical. The conversation with an evaluator might go something like this:

Imagine that you have installed and personalized an app called “ Life Copilot ” that aims to help you improve the quality and duration of your active life. The app provides AI-generated nutrition and exercise guidance customized to you. Currently, it is about lunchtime, and you are deciding what to eat. So you open the app, and you see this screen. Tell me about your initial impression.

第一輪 RITE 可能看起來像我們在第 7 章中勾勒出的初始設計方向（見圖 19.1）。

The first round of RITE might look like our initial design direction that we sketched in Chapter 7 (see Figure 19.1).

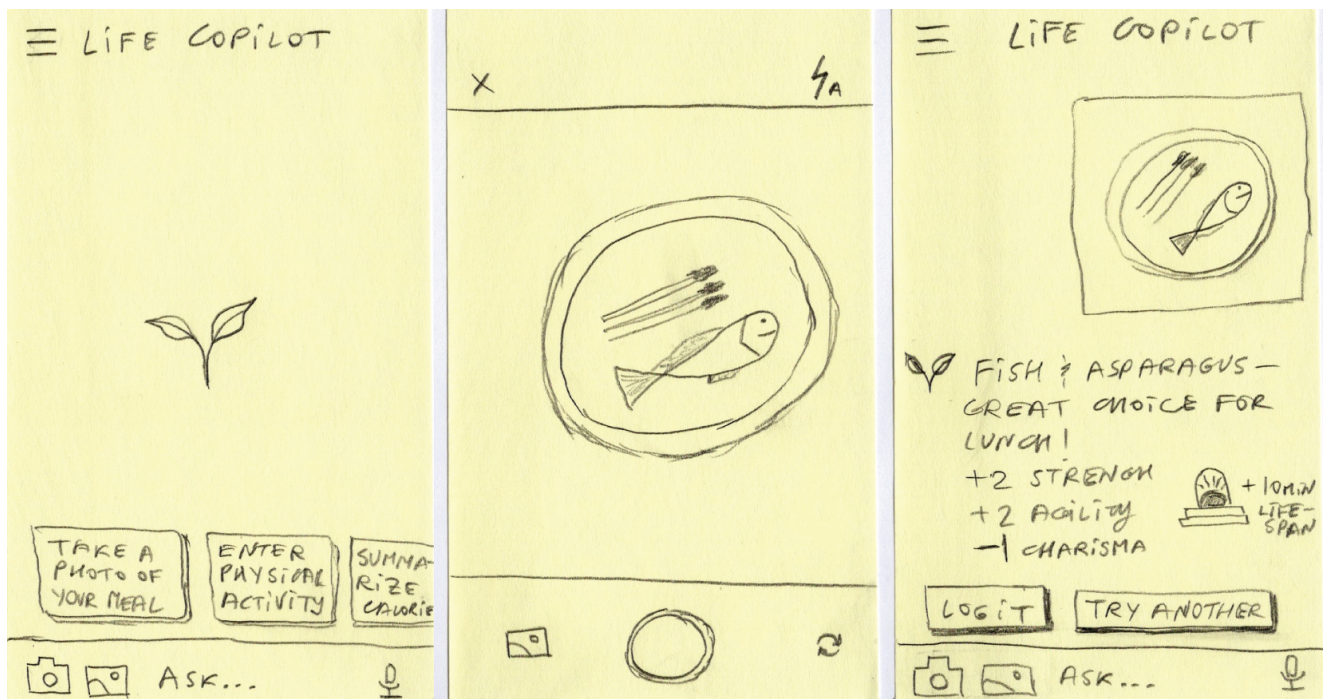


圖 19.1 RITE 第一輪：2-3 個螢幕足以開始證明我們的用例

Figure 19.1 RITE Round One: 2 – 3 screens is enough to get started proving our use case

便條

NOTE

如果您的團隊有多個初始設計方向，請以隨機順序向評估員展示設計。由於新近度偏差（人類愛上他們看到的第一個選項的傾向），始終輪換起始選項非常重要。

If your team has more than one initial design direction, present the designs to the evaluator in random order. It is important to always rotate the starting option due to recency bias—the tendency of humans to fall in love with the first option they see.

評估者提供初始意見反應之後，下一步可能是說：

After the evaluator provides their initial feedback, the next step might be to say:

Great. Now what would you want to do next?

這種開放的詢問路線比讓評估者沿著一些預先確定的用例路徑走上可能一開始甚至不適用於他們的路徑更自然、更靈活！如果您沒有準備好下一個螢幕怎麼辦？好吧，因為這是一個非常粗糙的原型，而且你從一開始就沒有開發很多螢幕，所以很可能會發生這種情況。幸運的是，正是因為原型很粗糙，您可以與客戶實時共同創建下一個螢幕。

This open line of inquiry is more natural and flexible than taking the evaluator down some predetermined path of a use case that might not even apply to them in the first place! What if you do not have the next screen ready? Well, because this is a very rough prototype and you do not have many screens developed from the start, that is likely what will happen. Fortunately, and precisely because the prototype is rough, you can co-create the next screen in real time working with the customer.

便條

NOTE

快速即時共同創作技能對於人工智慧驅動的產品設計這個新興領域非常有價值，也是我們在整本書中一直痴迷地使用快速素描技術練習的絕地思維技巧。

The rapid real-time co-creation skill is highly valuable for the nascent field of AI-driven product design, and it is the Jedi mind trick we've been obsessively practicing using rapid sketching techniques throughout the book.

因此，如果您一直在跟上設計練習，您應該能夠避免驚慌，相反，只需花時間請評估者描述他們希望應用程序做什麼：

So, if you have been keeping up with the design exercises, you should be able to avoid panicking, but instead, simply take the time to ask the evaluator to describe what they would like the app to do:

So, if I understood you correctly, you are expecting to be able to click a button and add a food from a list of recently consumed lunchtime options? Maybe something like this ... A big + button ... (point to the place where they might want the button). Where do you think? Right, on the top right, okay, like so ... (sketch). And when you click on the +, do you get a new screen? Yes, I see ... And what do you expect on this screen? A list of food, right ... (sketch). Do these have images? (sketch) Calories? (sketch) Macros? (sketch) Anything else?

從本質上講，您將通過所需的選項與評估員交談，同時粗略地繪製他們正在談論的設計草圖。（注意：我強烈建議您購買一台價值 100 美元的實物投影機，您可以連接到計算機，以便在 Zoom 通話中實時投影您的草圖。只需一次療程即可收回成本！一旦評估者滿意並表達了他們的想法，並且您建立了融洽的關係，他們就進入了創意領域——現在是向他們詢問您的想法的時候了；比如：

Essentially, you will be talking to the evaluator through the desired option while roughly live-sketching the design they are talking about. (NOTE: I highly recommend buying a \$100 document camera you can hook up to your computer to project your sketch live on a Zoom call. It will pay for itself in just one session!) Once the evaluator is satisfied and has gotten their idea off their chest and you have established rapport, they are in the creative zone—now is the time to ask them about your ideas; for example:

This is fantastic. What do you think of maybe using a plain English sentence to add the food instead, like so (show them a prepared wireframe). Compared to what you just described, which one do you think will be faster/easier/more efficient/more enjoyable/less hassle/etc.? Which one do you think will offer a better experience? Which one are you leaning toward?

根據評估者的反饋，您可以轉向更符合他們正在尋找的內容的不同準備好的設計選項。因為這次遭遇是隨意的，而且原型很粗糙，所以我建議保持一些靈活性——而不是強迫每個評估者每次都查看每個準備好的屏幕，而是繼續進入兔子洞調查一個有趣的評論，包括根據熱情用戶的反饋在電話會議上繪製一個新的潛在設計。

Depending on the evaluator's feedback, you might then pivot to a different prepared design option that is more aligned with what they are looking for. Because the encounter is casual and the prototypes are rough, I recommend being somewhat flexible—rather than forcing every evaluator to look at every single prepared screen every time, go ahead and go down the rabbit hole to investigate an interesting remark, including sketching a new potential design right there on the call based on the feedback from an enthusiastic user.

最重要的是，記得問一個價值百萬美元的問題：

Most importantly, remember to ask the million-dollar question:

便條

NOTE

“ 你會為這個應用程序付費嗎？如果是這樣，多少錢？ ”

“ Would you pay for this app? If so, how much? ”

然後，您可以深入了解並詢問應如何收取此費用：預付、訂閱、試用和購買、高級功能的應用內購買等。

You can then drill down and ask how this fee should be collected: up-front, subscription, try-and-buy, in-app purchases of premium features, etc.

再進行幾輪 RITE

A Few More RITE Rounds

RITE 的第二輪、第三輪和第四輪遵循與第一輪基本相同的結構，但對工作流程進行了更深入的討論，並根據用例規定進行了額外的工作流程分支。

The second, third, and fourth rounds of RITE follow essentially the same structure as the first round, but with a more in-depth discussion of the workflow and additional workflow branching as dictated by the use case.

我們在第一輪開始了 RITE 流程，對 AI 驅動的數據輸入流程進行了簡單的草圖。根據您的使用案例（並回想我們在第 12 章「AI

優先應用程式的現代資訊架構」中對 AI

優先資訊架構的討論)，您可能想要新增基礎頁面，例如分析概觀、類別分析、LLM 搜尋結果、項目詳細資料和維護。因此，在前幾輪之後，您的原型可能看起來更像圖 19.2 中的原型。

We started our RITE process in round 1 with a simple sketch of the AI-driven data entry flow. Depending on your use case (and recalling our discussion of AI-first information architecture from Chapter 12, “ Modern Information Architecture for AI-First Applications ”), you might want to add foundational pages such as Analysis Overview, Category Analysis, LLM Search Results, Item Detail, and Maintenance. So after the first few rounds, your prototype might look more like the one in Figure 19.2.

在前幾輪 RITE 之後（每輪僅花費 10-30 分鐘，每輪有 4-5 名客戶），您應該具備以下內容：

After the first few rounds of RITE (spending just 10 – 30 minutes each with 4 – 5 customers in each round) you should have the following:

- 已驗證的主要使用案例 Validated primary use case
- 或者，根據使用者意見反應更新使用案例 Alternatively, the updated use case depending on user feedback
- 你的 3-5 個初始設計減少到只有 1-2 個選項 Your 3 – 5 initial designs reduced to only 1 – 2 options
- 從初始畫面開始的工作流程主要畫面的粗略圖面 Rough drawings of the key screens of the workflow that started on the initial screen
- 1-2 個使用者提出或啟發的其他設計方向 1 – 2 additional design directions users came up with or inspired
- 驗證使用案例是否會賺錢，並估計客戶願意支付的費用 Validation that the use case will make money, and an estimate of what the customers are willing to pay
- 關於如何構建數字孿生的更好想法（參見第 4 章 “ 數字孿生：系統物理組件的數字表示 ” ），包括您的 AI 需要什麼樣的數據進行訓練以及 AI 的預期輸出是什麼。 A much better idea on how to construct your digital twin (see Chapter 4, “ Digital Twin: Digital Representation of the Physical Components of Your System ”), including what kind of data your AI will need for training and

what AI's expected output will be.

雄心勃勃？你打賭。但只要進行最少的練習，也是非常可行的。

Ambitious? You bet. But also extremely doable with a minimum amount of practice.



圖 19.2 經過幾輪 RITE 研究後更完整的原型

Figure 19.2 A more complete prototype after a few rounds of RITE studies

RITE 設計的演變

The RITE Design Evolution

在為期兩到三週的完整 RITE 研究結束時，您應該具備以下內容：

At the end of a complete two- to three-week RITE study, you should have the following:

- 單一最佳設計方向經過潛在用戶驗證 Single best design direction validated with the potential users
- 大部分關鍵畫面都以粗略格式完成 Most of the key screens completed in rough format
- 識別、標記和放置最基本的功能、輸入和按鈕 Most essential functions, inputs, and buttons identified, labeled, and placed
- 與用戶和 PM 驗證的貨幣化策略 Monetization strategy validated with the users and the PM
- MVP 範圍已與使用者和開發主管驗證 MVP scope validated with users and the Dev lead
- 數字學生輸入和輸出，以及經過用戶和數據科學負責人驗證的 AI 模型設計等。 Digital twin inputs and outputs, and AI model design validated with users and the data science lead, etc.

最重要的是，正如我們在第 17 章「新常態：以 AI 為中心的以使用者為中心的設計流程」中所述，您在整個過程中一直與您的團隊合作，以便您核心 4-in-the-box 團隊中的每個人都了解專案方向，討論和驗證 UI、AI 模型、資料擷取策略，以及開發範圍和貨幣化策略。現在您已經基本弄清楚了所有內容，您可以製作最終的高清屏幕並最後一次與潛在用戶重新測試，然後獲得最終的執行批准並將設計移交給開發以進行執行和 GA 發布。

Most importantly, you have been working with your team throughout the process as we described in Chapter 17, “ The New Normal: AI-Inclusive User-Centered Design Process, ” so that everyone on your core 4-in-the-box team is aware of the project direction, discussed and validated the UI, AI model, data acquisition strategy, and also the dev scope and monetization strategy. Now that you have basically everything figured out, you are ready to make final high-definition screens and retest with potential users

one last time, then get the final executive approval and turn the design over to development for execution and GA release.

這就是如何正確地進行 RITE 學習！但我們還沒有完成。遠不遠。因為由於現代人工智慧驅動的 DesignOps 進步，您的紙質線框圖可以直接轉換為有效的前端程式碼。

This is how to do the RITE study the right way! But we are not done yet. Not by a long shot. Because thanks to advances in DesignOps driven by modern AI, your paper wireframes can be directly converted into working front-end code.

親愛的未來：人工智慧輔助的 RITE 方法

Dear Future: AI-Assisted RITE Methodology

我寫了幾本書，介紹了使用 RITE 研究來快速探索設計空間、迭代並轉向高性能設計解決方案的想法。儘管如此，直到最近，我們需要在經過一天的激烈反饋後花兩到三天的時間來迭代設計。然而，正如我在 AI 驅動的 DesignOps 面板（2）中所描述的那樣，一切都即將改變。

I ' ve written several books on the idea of using RITE research to rapidly explore design space, iterate, and move toward high-performing design solutions. Still, until recently, we needed to take two to three days after an intense day of feedback in order to iterate on the design. However, as I described in the AI-Powered DesignOps Panel (2), all that is about to change.

便條

NOTE

在不久的將來，借助人工智慧，很快就可以即時迭代設計，直接使用參與者的回饋和研究人員的指導作為提示，即時創建設計流程變化。

In the near future, with the help of AI, it will soon be possible to iterate on the design in real time, directly using participant feedback and researcher ' s guidance as a prompt to create design flow variations on the fly.

使用者體驗研究和設計實踐即將發生根本性轉變，我們擴展 RITE 研究的能力，以快速迭代並轉向高性能設計解決方案，將研究和設計週期壓縮為由 AI 增強的近乎即時共同創造工作流程，輸出在 React 程式碼中實現的完全開發的流程。

UX research and design practice is about to undergo a fundamental shift in our ability to scale RITE research to rapidly iterate and move toward high-performing design solutions, compressing research and design cycles to near-real-time co-creation workflow augmented by AI, outputting fully developed flows implemented in React code.

讓我給大家介紹一下這種人工智慧的「增強智慧」應用是如何運作的。想像一下，向客戶展示一些新功能，客戶不會 100% 滿意，或者可能對某些事情感到困惑。人工智慧應該能夠透過即時語音輸入來偵測這種混亂，並立即近乎即時地產生頁面或流程的替代設計，為研究人員提供多種設計選項（類似於 Midjourney 的 /imagine 功能今天的工作方式），然後研究人員將能夠選擇接下來向客戶展示的版本。使用這樣的工作流程，並且由於人工智慧增強，RITE 研究的速度和效率將達到一個新的水平。

Let me give you an idea of how this kind of “ augmented intelligence ” application of AI might work. Imagine showing the customer some new functionality, whereupon the customer is not 100 percent happy or maybe confused about something. AI should be able to detect that confusion through live voice input and immediately generate an alternative design of the page or flow in near real time, offering the researcher multiple design options (similar to how Midjourney ’ s /imagine function works today), whereupon the researcher will be able to choose which version to show to the customer next. Using a workflow like this, and due to AI augmentation, the speed and efficiency of the RITE research will reach the next level.

便條

NOTE

熟練的研究人員可能能夠在一天內實現一個還過得去的設計解決方案，而不是花費數週的時間進行討論和迭代。

Rather than spending weeks discussing and iterating, a skilled researcher might be able to achieve a passable design solution within a single day.

關鍵技能將是選擇正確詢問方向的直覺以及向人工智慧提供準確提示的能力。隨著時間的推移，人工智慧將更好地識別這些模式並提出解決方案。人工智慧也將越來越多地幫助初學者設計師從一開始就做出正確的猜測。

The key skill will be the intuition of picking the right direction of inquiry and the ability to give accurate prompts to the AI. Over time, AI will get even better at recognizing these patterns and suggesting solutions. AI will also increasingly help even beginner designers make the right guesses from the start.

便條

NOTE

最重要的是，該設計將從研究反饋直接進入功能性前端 React 代碼，完全繞過在 Figma 等工具中創建的圖片的創建和驗證。

Most significantly, the design will be going from research feedback directly into functional front-end React code, completely bypassing the creation and validation of pictures created in tools like Figma.

傳統上，設計師處理圖像和資產，使用 Figma (Fireworks、EnVision、Axure 等) 等工具精心製作高清線框圖。然而，圖片從來都不是工作流程中的必需步驟。圖片最初是 (並且直到現在仍然是) 必要的罪惡，因為它們需要花費大量的精力、成本和時間將它們轉換為實際的工作代碼。更改 Figma 文件中的圖片比更改代碼更便宜、更快。然而，隨著人工智慧現在自動創建、維護和組裝 React 元件，這個「圖片步驟」不再需要。

Traditionally, designers have worked with images and assets, meticulously crafting high-def wireframes using tools like Figma (Fireworks, EnVision, Axure, etc.). However, pictures were never a required step in the workflow. Pictures were originally (and remained until now) the necessary evil due to the high level of effort, cost, and time involved in converting them into actual working code. It was simply cheaper and faster to change a picture in a Figma file than to change the code. However, with AI now creating, maintaining, and assembling the React components automatically, this “ picture step ” is just no longer necessary.

人工智慧有望徹底改變研究和設計過程。我們正處於一個門檻，我們可能不再需要在圖片和基於像素的資產中進行操作。人工智慧將使我們能夠直接從草圖或研究評論到程式碼。與人工智慧協同工作的設計師將能夠將工作中的 React 程式碼元件拉入一個頁面，創建一個完整的生產就緒前端，並在後端完成已建立的合約。

AI is poised to revolutionize the research and design process. We ' re at a threshold where we might no longer need to operate in pictures and pixel-based assets. AI will enable us to go directly from a sketch or research comment to code. Designers working in tandem with AI will be able to pull working React code components into a page creating a complete production-ready front-end, complete with established contracts in the backend.

AI 還可以負責填充虛擬數據和示例內容，伴隨著按鈕和字段標籤的第一次迭代，甚至將完成的頁面連接到工作流程中——所有這些都在與客戶進行研究會議時近乎實時地進行。（請參閱本章後面的 Greg Aper 的側邊欄“正在改變我們設計方式的 AI 進步”，以了解有關 UX 行業新興 AI 工具的重要主題的更多信息。

AI can also take care of populating the dummy data and sample content, coming with the first iteration of button and field labels and even wiring up the completed pages into a workflow—all in near real time while in the research session with a customer. (See Greg Aper ' s sidebar, “ The AI Advancements That Are Changing the Way We Design, ” later in this chapter, for more on the important topic of emerging AI tools for the UX industry.)

設計練習：運行您自己的 RITE 研究

Design Exercise: Run Your Own RITE Study

1. 為您自己的產品提出 3-4 個設計方向，並與潛在客戶或同事一起測試。如果您在飛機上，請轉向您旁邊的乘客，讓他們評估您的原型。我更喜歡在早上高峰時在咖啡店進行測試——人們都不含咖啡因，而且時間很短，所以這讓反饋變得“紐約誠實”。（我建議您拿起我的一本 1 美元原型書（1），其中我精確詳細地描述了該技術，並提供了大量運行 RITE 研究的實用提示和技巧，這些提示和技巧肯定會節省您的時間和精力。Come up with 3 – 4 design directions for your own product and test them with a potential customer or a coworker. If you are on a plane, turn to the passenger next to you and have them evaluate your prototype. I prefer to test in a morning rush in a coffee shop—people are decaffeinated and time

is short, so it makes the feedback “ New York honest. ” (I recommend you pick up a copy of my \$1 Prototype book (1) where I describe the technique in precise detail and provide a plethora of practical tips and tricks for running a RITE study that are sure to save you time and effort.)

2. 根據客戶反饋至少迭代一次。請務必繪製 3-4 個畫面，以深入了解您在第一輪中確定的 1-2 個關鍵工作流程。 Iterate at least once based on the customer feedback. Be sure to sketch 3 – 4 screens to go deeply into 1 – 2 key workflows you identified in your first round.
3. 在測試結束時選取單一設計方向。潛在客戶願意為此付費嗎？他們建議如何通過該應用程序獲利？ Select a single design direction at the end of the testing. Were the potential customers willing to pay for it? How did they suggest monetizing the app?
4. 反思：你對他們反饋中聽到（或沒有聽到）的任何內容感到驚訝嗎？ Reflect: Were you surprised by anything you heard (or did not hear) in their feedback?

參考

References

1. 1. 努德爾曼，G. (2014)。1 美元的原型：移動用戶體驗設計的現代方法和快速創新。設計咖啡因出版社id_0000。1. Nudelman, G. (2014). The \$1 prototype: A modern approach to mobile UX design and rapid innovation. DesignCaffeine Press.
<https://a.co/d/3jUEMou>
2. 2 面板：AI 驅動的 DesignOps：塑造卓越設計的未來。2024 年 DesignOps 高峰會，洛杉磯，Henry Stewart Events，2024 年 10 月 8 日。2 Panel: AI-powered DesignOps: Shaping the future of design excellence. DesignOps Summit 2024, Los Angeles, Henry Stewart Events, Oct. 8, 2024.

觀點：正在改變我們設計方式的人工智慧進步

PERSPECTIVE: THE AI ADVANCEMENTS THAT ARE CHANGING THE WAY WE DESIGN

格雷格·阿珀

By Greg Aper

事情很快就升級了，對吧？

That escalated quickly, huh?

具有設計用例場景的生成式人工智慧工具在 2023 年和 2024 日曆年中以驚人的速度發展。眨眼間，人工智慧設計工具的採用已經從好奇轉變為必要性。以下是一些正在創建新設計範式的最新功能、工具、技術和改進。

Generative AI tools with design use case scenarios evolved at a breathtaking pace over the course of the 2023 and 2024 calendar years. In the blink of an eye, adoption of AI tools for design has transitioned from curiosity to necessity. Here ' s a look at some of the latest features, tools, technologies, and improvements that are creating a new paradigm of design.

大型語言模型（LLM）記憶體、GPT 和知識

Large Language Model (LLM) Memory, GPTs, and Knowledge

當我們談論評估人工智慧工具對設計工作的準備程度時，一個被嚴重低估的指標是相關性。如果您使用提示最佳實踐，LLM 很少出錯。在過去，它們往往根本不符合我們需要的方式。他們很難將獨特的上下文融入到回應中，並且隨著對話的延長而難以保持上下文。

When we talk about evaluating the readiness of AI tools for design work, one metric that is vastly underappreciated is relevancy. If you ' re using prompt best practices, LLMs are seldom wrong. In the past, they oftentimes simply weren ' t right in the way we needed them to be. They had difficulty incorporating unique context into responses, and trouble maintaining context as conversations lengthened.

記憶體的改進使 ChatGPT

能夠在回應中始終考慮上下文，甚至在您創建新聊天時保持對過去聊天的認識。LLM 記憶體和推理的重大升級將它們從簡單的設計任務可行提升為變革性。他們「記住」您是一位具有特定目標的設計師，他們的回應始終考慮到這一點，通常會解釋該回應與您的特定情況的相關性。這對於通常優先考慮語義洞察而不是直接事實回應的設計流程至關重要。

Improvements in memory allow ChatGPT to consistently consider context in its responses, even maintaining awareness of past chats as you create new ones. The significant upgrades to LLM memory and reasoning elevate them from simply being viable for design tasks to transformational. They “ remember ” that you are a designer with specific objectives, and their responses consistently take this

into account, often with explanations of how the response is relevant to your specific situation. This is crucial for design processes that often prioritize semantic insights over straightforward factual responses.

法學碩士在更長的時間跨度內「記住」和考慮更多資訊的能力的提高，使他們能夠以人類無法做到的方式交叉引用具有不同主題的多種類型的資料，從而為新的構思和分析技術範式打開了大門。人類的頭腦根本沒有能力做到這一點。交叉引用構思和分析是利用設計專業知識來識別以前傳統設計方法和遺留技術無法滿足的需求，然後利用想像力創建新方法，利用人工智能的能力進行前所未有的信息交叉引用和綜合。

The improved abilities of LLMs to “remember” and consider greater amounts of information across longer time spans allow them to cross-reference multiple types of data with different subject matter in a way no human ever could, opening the door for a new paradigm of ideation and analysis techniques. The human mind is simply not capable of it. Cross-referencing ideation and analysis are excellent examples of using design expertise to identify a need that could not previously be answered by traditional design methods and legacy technologies, and then utilizing imagination to create new methods that take advantage of AI’s capacity for unprecedented informational cross-referencing and synthesis.

使用 AI 進行 UI 設計

UI Design with AI

在過去的一年裡，文字到圖像工具創建有價值的 UI 設計概念的能力有了顯著進步，特別是在 Midjourney 的情況下。設計師現在可以一致地創建與他們正在設計的屏幕尺寸具有適當縱橫比的概念，集成特定的調色板，將顏色分配給正確的功能，有時還可以在接近所需字體樣式的適當位置添加文本。

The ability of text-to-image tools to create valuable UI design concepts has advanced significantly over the past year, particularly in the case of Midjourney. Designers can now consistently create concepts that are at the proper aspect ratio of the screen sizes they are designing for, integrate specific color palettes, assign the colors to the proper features, and sometimes add text in the proper places that are close to the desired font styles.

AI 線框圖工具的發展有可能為 UX/UI 設計師提供設計流程效率的最大進步。兩個平台之間的匯出和匯入互動可靠且簡單，具有專業設計師所需的正確數量的選項。設計師可以快速從 Chat 生成的敘述線框轉換為乾淨、具有專業外觀的中保真網站地圖和具有內置響應式

設計的線框圖。AI 網站映射和線框圖工具（如 Relume）的智能分層構建有助於以前所未有的方式連接 UX 和 UI 設計。可以構建文本到圖像或文本到視頻概念和資產的精選集合，並將其直接插入到 Figma 中的線框中，將 Midjourney 和 Runway 等平台無與倫比的創意可視化能力與結構化、響應式用戶體驗設計相結合。

The evolution of AI wireframing tools has the potential to provide the single greatest advance in design process efficiency for UX/UI designers. Export and import interactions between the two platforms are reliable and simple with just the right number of options that professional designers need. Designers can quickly transition from Chat-generated narrative wireframes to clean, professional-looking mid-fidelity sitemaps and wireframes with built-in responsive design. The intelligently layered construction of AI site mapping and wireframing tools like Relume help bridge UX and UI design like never before. A curated collection of text-to-image or text-to-video concepts and assets can be built and inserted directly into the wireframes within Figma, meshing the unrivaled creative visualization powers of platforms like Midjourney and Runway with structured, responsive UX design.

場景、風格和角色一致性

Scene, Style, and Character Consistency

文字到圖像和文字到影片人工智慧工具的快速發展為創意人員和設計師帶來了福音，將講故事的能力提升到了新的水平。Midjourney 的圖像參考、風格參考（--sref）和字符參考（--cref）功能終於解決了文本到圖像工具的關鍵設計要求：設計師對高精度和高質量主題可重複性的需求。

The rapid evolution of text-to-image and text-to-video AI tools has been a boon to creatives and designers, unlocking a new level of storytelling capabilities. Midjourney's image reference, style reference (--sref), and character reference (--cref) features have finally addressed a critical design requirement for text-to-image tools: a designer's need for high-precision and high-quality subject matter repeatability.

參考功能使設計人員能夠控制輸出的不同方面。參考影像可實現一致的構圖、姿勢和環境。風格參考圖像允許將相同的美學風格應用於不同類型的主題。字元參考選項可讓使用者產生多個影像，每個影像中都具有相同的字元。角色參考功能對於想要創建一系列圖像來精確捕捉特定角色的人口統計、活動和生活方式的用戶體驗設計師非常有幫助。

The reference features give designers control over different aspects of the output. Reference images enable consistent compositions, poses, and environments. Style reference images allow the application of the same aesthetic styles to different types of subject matter. The character reference option enables the user to generate multiple images with the same character present in each image. The character reference feature is immensely helpful for UX designers who want to create a series of images that precisely capture the demographics, activities, and lifestyle of a specific persona.

可以創建自定義角色、活動和環境視覺效果，以高度具體性說明用戶的挑戰、需求和理想目標。視覺輸出可以直接反映作為設計焦點的人員、地點和體驗。精心打造的角色可以成為我們場景的明星。我們可以圍繞用戶的生活構建我們的故事和視覺概念，或者我們可以讓我們的產品成為我們體驗的焦點。從本質上講，我們的視覺設計概念是我們角色故事的插圖。

Custom persona, activity, and environment visuals can be created to illustrate users' challenges, needs, and aspirational goals with a high degree of specificity. The visual output can be a direct reflection of the people, places, and experiences that are the focus of a design. Carefully crafted personas can become the stars of our scenes. We can build our stories and our visual concepts around the lives of our users, or we can make our products the focus of our experience. In essence, our visual design concepts are illustrations for our persona stories.

未來

The Future

那麼，下一步是什麼？很容易想像人工智慧視訊工具成為設計師創意工具包中的主力。視頻是終極視覺傳達工具，充滿了詳細的上下文，可以將以人為本和生活中心的設計推向新的水平。隨著 LLM 記憶和推理的不斷改進，GPT 作為個人化合作者的潛力正在日益實現。

So, what's next? It's very easy to imagine AI video tools becoming the workhorse in a designer's creative toolkit. Video is the ultimate visual communication tool, brimming with detailed context that can propel human- and life-centered design to new levels. The potential of GPTs as personalized co-collaborator is increasingly being realized as the improvements in LLM memory and reasoning continue to grow.

我盡量不將人工智慧強加給設計師。我喜歡它，但我也相信對於那些不那麼熱衷於它的設計師來說，有一個可行的未來。我的目標是透過測試具有現實世界設計挑戰的人工智慧工

具來探索可能性，並幫助設計師就其職業未來做出有關人工智慧的明智決策。我希望在此過程中，我能夠改變想法並激勵人們將人工智慧視為互補的合作夥伴，使他們能夠發揮自己的天賦並達到設計師的新高度。

I try to never push AI on designers. I love it, but I also believe there is a viable future for designers who aren't as keen about it. My goal is to explore the possibilities by testing AI tools with real-world design challenges and help designers make informed decisions about AI regarding their professional futures. I hope that along the way I can change minds and inspire people to see AI as a complimentary partner that enables them to amplify their natural talents and reach new heights as designers.

關於格雷格·阿珀

About Greg Aper

Greg 是全球公認的人工智能技術整合設計領域的先驅。格雷格是國際公認的培訓師、顧問和演講者，目前是Superunknown Studios的首席探索官。可以通過 www.superunknown.design 聯繫到他。

Greg is a globally recognized pioneer in the integration of artificial intelligence technologies for design. Internationally recognized Trainer, Consultant, & Speaker, Greg is currently a Chief Exploration Officer at Superunknown Studios. He can be reached at www.superunknown.design.