

# 第 18 章 CHAPTER 18 人工智慧與使用者體驗研究 AI and UX Research

人工智慧正在從根本上改變使用者體驗行業的格局。在本章中，我將解決以下重要問題：  
：（a）人工智慧將對使用者體驗研究產生什麼影響？（b）使用者體驗研究人員還會有工作嗎？（c）在人工智能的新時代，最需要哪些研究技能？

AI is radically altering the landscape of the UX profession. In this chapter, I tackle important questions such as: (a) What impact will AI have on UX research? (b) Will UX researchers still have jobs? (c) What research skills are going to be most in demand in the new age of AI?

為了清楚起見，我將人工智慧研究技術的使用者體驗分為四個部分：

For clarity, I will split the UX for AI research techniques into four sections:

1. 自動化離開 Automated away
2. 徹底改變 Radically altered
3. 越來越有價值 Increasingly valuable
4. 人工智慧「廢話」——死胡同和糟糕的想法 AI “ Bullshit ” —dead ends and terrible ideas

## 便條

## NOTE

雖然使用者體驗研究技術的完整清單超出了本書的範圍，但我的目標是審查一個足夠廣泛的樣本，以幫助建立基線。讀者可能需要運用一些想像力和推斷力來了解他們最喜歡的研究技術將如何被人工智慧改變。

While the complete list of UX research techniques is outside the scope of this book, I aim to review a sufficiently wide sample to help establish the baseline. The reader will likely need to use some imagination and extrapolation to see how their favorite research techniques will be transformed by AI.

## 可能會實現完全自動化的用戶體驗技術

## UX Techniques That Will Likely See Full Automation

人工智慧的日益複雜將使許多手動活動變得完全自動化。依賴常規創建和處理文本信息的用戶體驗研究活動將是最先受到影響的。本節涵蓋包含的內容。

Increased sophistication of AIs will allow many manual activities to become fully automated. UX research activities that rely on routinely creating and processing textual information will be some of the first affected. This section covers what 's included.

## 常規可用性研究

### Routine Usability Studies

這些將大部分是自動化的。這已經是過去十年的趨勢，所以在這一點上應該不足為奇。從編寫可用性研究腳本到創建初始原型以收集基本可用性研究的用戶反饋，一切都是例行公事，並且基於常見、完善的模式。與 RITE 研究相比，常規可用性研究的價值也有些有限，正如我在 1 美元原型：移動用戶體驗設計和快速創新的現代方法（1）中所論證的那樣。快速迭代測試和評估（RITE）方法可能幾乎完全超越可用性研究，成為一種更具戰略性和生產力的替代方案，它利用了機器和人類最擅長的領域。我在第 19 章「RITE，人工智慧研究的基石」中詳細介紹了 AI RITE 技術的現代使用者體驗。

These are going to be mostly automated. This has already been the trend for the past decade, so it should come as little surprise at this point. Everything from writing a usability study script to creating the initial prototype for collecting user feedback for basic usability studies is routine and based on common, well-established patterns. Routine usability studies are also of somewhat limited value compared to RITE studies, as I have argued in *The \$1 Prototype: A Modern Approach to Mobile UX Design and Rapid Innovation* (1). Rapid Iterative Testing and Evaluation (RITE) methodology will likely almost entirely eclipse usability studies as a more strategic and productive alternative that leverages what both machines and humans do best. I cover modern UX for AI RITE techniques in detail in Chapter 19, “RITE, the Cornerstone of Your AI Research.”

## 例行 NPS 研究和調查

### Routine NPS Studies and Surveys

這些日常任務同樣需要不斷減少的人為干預。從撰寫調查問題到分析數據，再到創建簡報和提出建議，人工智慧現在完全可以勝任處理基礎知識的任務。

These routine tasks are likewise going to require ever-diminishing human intervention. From writing survey questions to analyzing data to creating presentations and making recommendations, AI is now more than up to the task of handling the basics.

## 收集和整理研究數據

### Collecting and Organizing the Research Data

這項任務將成為我們職業中最徹底改變的領域之一。在人工智慧出現之前，我們需要使用 Dovetail 等工具和專職人員手動標記和標記研究、組織、分解和管理儲存的錄音等。然而，新的人工智慧功能能夠整理和報告數據，以及創建具有各種見解的酷炫親和圖。更重要的是，執行策略洞察和匯總同樣將自動化，任何產品經理（PM）都可以使用自然語言來查詢跨越多年的廣泛深入見解資料庫。將舊數據導入新的人工智能工具應該沒有問題。雖然這些工具一開始會很昂貴，但它們的廣泛普及和明顯的實用性將很快使定價具有競爭力。可以將其視為 Pendo，但具有定性見解、自然語言查詢功能、副駕駛和自動完成功能——到目前為止，我們在書中討論的所有內容。

This task is going to be one of the most radically altered areas of our profession. Up to the point of emergence of AI, we required manual tagging and labeling of studies, organizing, breaking up, and managing stored recordings, etc., using tools like Dovetail and dedicated personnel. However, the new AI capabilities are capable of collating and reporting data, as well as creating those cool affinity diagrams with insights of various kinds. Even more significantly, executive strategy insights and rollups will likewise be automated to the point where any product manager (PM) could use natural language to query a wide-ranging database of deep insights spanning multiple years. There should be no issues importing old data into the new AI tools. While the tools will be expensive at first, their wide popularity and obvious utility will quickly make the pricing competitive. Think of this as Pendo but for qualitative insights, with natural language query capability, copilots, and autocomplete—everything we've been talking about in the book so far.

## 定量和定性見解的三角測量

### Triangulation of Quantitative and Qualitative Insights

不僅僅是孤立的定量洞察挖掘，定量和定性洞察三角測量的聖杯（以及相應的新穎洞察和產品能力生成）將成為每個新項目的常態。好消息是，這應該可以最大限度地減少“牛仔”總理不負責任地在寵物項目上花費數百萬美元的情況。壞消息是，如果這是您的專長，您可能需要重新調整。

More than just the isolated quantitative insight mining, the holy grail of triangulation of quantitative and qualitative insights (and the corresponding novel insight and product capability generation) will become the norm for every new project. The good news is that this should minimize the “cowboy” PM’s irresponsibly spending millions on pet projects. The bad news is that you may need to retool if that was your specialty.

如果基於文本的常規工作流程是您的主要行業，我強烈建議您重新設計為“研究自動化主管”，或者提高我在這裡提到的一些更複雜的用戶體驗研究的技能。

If routine text-based workflows are your main trade, I highly recommend re-tooling as a “studies automation supervisor” or upskilling to some of the more sophisticated flavors of UX studies I mention here.

## 將得到徹底增強的用戶體驗技術

### UX Techniques That Will Be Radically Augmented

儘管基於人工智慧的自動化受到媒體的大部分關注，但最大的收益通常來自使用人工智慧工具來增強當前流程以提高速度和效率。從戰略上講，人工智慧最好被認為是「擴增智慧」而不是「人工智慧」（參見第 23 章「使用者體驗已死。AI 的使用者體驗萬歲！這種機器增強將在許多領域表現出來，包括用戶體驗研究和設計領域。

Although AI-based automation receives the lion’s share of media attention, the biggest gains often come from using AI tools that augment the current processes to increase speed and efficiency. Strategically, AI is best thought of as “augmented intelligence” instead of “artificial intelligence” (see Chapter 23, “UX Is Dead. Long Live UX for AI!”). This machine augmentation will show itself in many areas, including those of UX research and design.

## 競爭分析

### Competitive Analysis

人工智慧可能會從根本上改變競爭分析，人工智慧可以快速從文件、影片幀和畫外音中挖掘單一螢幕截圖，以提取相關螢幕並對功能進行逆向工程猜測。然而，與任何基於文本的東西不同，我預計這種特殊功能將需要更長的時間才能上線，並且將在一段時間內保持專有性。這意味著，雖然競爭分析明天不會完全自動化，但它將發生根本性的改變：研究人員將採用更複雜的研究工具並加快查找和報告的過程。同樣，我預計這種研究將成為常規，並且由於最終的自動化以及勞動力成本和完成所需時間的減少，任何嚴肅項目都需要。將資料收集分散到許多小型、獨立的非即時人工智慧代理之間，將透過並行執行緒加快情報收集和分析速度。可能需要數小時甚至幾分鐘才能完成，而不是花費數週時間。然而，競爭分析將不再完全自動化典型的 NPS 研究，而是人工智慧增強，人類和機器密切合作，盡各自最擅長的事情，在看似不相關的資料之間實現創造性的飛躍，並推斷出超越我們人工智慧目前的複雜性水平。

Competitive analysis is likely to be radically altered by AI that can quickly mine individual screenshots from documentation, video frames, and voiceovers to pull out relevant screens and reverse-engineer a guess at the functionality. However, unlike anything text-based, I anticipate that this particular capability will take longer to come online and will remain proprietary for some time. This means that while competitive analysis will not become fully automated tomorrow, it will be radically altered: the researcher will employ more sophisticated research tools and speed up the process of finding and reporting. Again, I anticipate that this kind of study will become routine and required for any serious project due to eventual automation and a decrease in labor cost and time required to complete. Splitting data gathering among many small independent non-real-time AI agents will speed up intelligence gathering and analysis through parallel threading. Instead of taking weeks to complete, it might take hours or even minutes. However, instead of fully automating a typical NPS study, the competitive analysis will become AI-augmented, with humans and machines working closely together, doing what each does best to make creative leaps between seemingly unconnected data and to extrapolate beyond the current level of sophistication of our AI.

## 識別新的用例

### Identification of Novel Use Cases

與人類核心技能密切相關的是商業技能。如前所述，人工智慧工具可能會大大增強新的賺錢方式、尋找利潤豐厚的市場機會和獨特的利基產品，人工智慧工具將能夠根據競爭分析指出新的機會和市場效率低下。這種類型的人工智慧增強業務分析將成為任何業務需求文件

( BRD ) 的標準，幫助高階主管快速、更有信心地做出決策。

Closely related to the core human skills are business skills. Identifying new ways to make money, find lucrative market opportunities, and unique niche offerings will likely be heavily augmented by AI tools, which will be able to point out novel opportunities and market inefficiencies based on competitive analysis, as already mentioned earlier. This type of AI-augmented business analysis will become the norm for any business requirements document (BRD) that will help executives make decisions quickly and with increased confidence.

## RITE 研究

### RITE Studies

RITE 研究同樣將發生根本性和永久性的改變。( RITE 足夠重要，值得在下一篇討論中單獨列出一章。

RITE studies are likewise going to be radically and permanently altered. (RITE is important enough to warrant its own chapter, coming up next.)

由於需要高水準的增強，了解如何使用人工智慧並擁有相關經驗的研究人員和設計師很可能會利用新技術來提高他們的工作效率。這是新出現的「人工智慧耳語者」專業類別，他們能夠輕鬆熟練地使用新的人工智慧增強技術來完成各種研究任務。

Because of the need for a high level of augmentation, researchers and designers who understand how to work with AI and have experience doing so will most likely take advantage of the new technology to make their work considerably more efficient. This is the newly emerging specialty class of “ AI whisperers, ” comfortable and proficient with using the new AI-augmentation technology for all kinds of research tasks.

## 將變得越來越有價值的用戶體驗技術

### UX Techniques That Will Become Increasingly Valuable

隨著人工智慧自動化或增強日常使用者體驗活動，人工智慧難以理解和模擬的某些技能的價值將大幅增加。其中包括本節中列出的用戶體驗技能。

With AI automating or augmenting routine UX activities, certain skills that AI will have a hard time understanding and simulating will drastically increase in value. Among those will be UX skills which are listed in this section.

## 核心技能

### Core Skills

我們不能再將與人類打交道稱為“軟技能”——它們正在迅速成為“核心技能”，並且變得越來越有價值。我們已經看到了舊的“三合一”模式，其中開發人員、PM 和用戶體驗人員在小團隊中工作，研究、識別和構建新功能，迅速演變成“四合一”模型，此外還包括數據科學家和人工智能專家，這些人需要創建基本的新人工智能驅動的產品特性和功能。

We can no longer call dealing with humans “soft skills” —they are fast emerging as “core skills” and they are becoming increasingly valuable. We are already seeing the old “three in a box” model where Devs, PMs, and UX folks work in small teams to research, identify, and build new functionality quickly evolving into “four in a box” models, additionally including data scientists and AI specialists among the people needed to create the essential new AI-driven product features and functions.

## 便條

### NOTE

這意味著該領域將更加依賴“知識領導者”，他們可以制定計劃、達成共識並執行向消費者交付新產品。這些建立共識、談判以及讓人們在共同努力實現單一目標的同時感覺良好的核心技能不會很快被人工智慧取代，如果有的話。事實上，隨著各種職業將變得更加專業化，人工智慧將變得更加專業化和增強，它們將變得更加突出。

This means that the field will be even more reliant on “knowledge leaders,” who can create a plan, achieve consensus, and execute delivery of the new products to consumers. These core skills of consensus building, negotiation, and making people feel good while working together toward a single goal are not getting replaced by AI any time soon, if ever. In fact, they are going to become ever more prominent as various professions will become even more deeply specialized and augmented by AI.

了解該技術以及利用它來滿足商業和人道主義需求的能力將是這群用戶體驗者的關鍵。  
(請參閱本書第 4 部分有關核心技能重要性的更多信息。)

Understanding the technology and the ability to leverage it for business and humanitarian needs will be key to this cohort of UXers. (See more on the importance of core skills in Part 4 of this book.)

## 工作坊促進

### Workshop Facilitation

研討會促進同樣不會很快自動化或增強。促進腦力激盪、開發新穎的想法以及從多種相互衝突的意見中達成共識將成為人工智慧不太可能以任何明顯方式增強的寶貴人類技能。

Workshop facilitation is likewise not going to be automated or augmented any time soon. Facilitating brainstorming, developing novel ideas, and driving consensus from multiple conflicting opinions will become a valuable human skill that AI is unlikely to augment in any appreciable way.

## 形成性研究、田野研究、民族誌和直接觀察

### Formative Research, Field Studies, Ethnography, and Direct Observation

這些基於觀察的基本研究技術同樣很難被人工智慧增強或取代。人工智慧尚未能夠有效地使用機器人視覺或將各種感官輸入聯繫在一起，以產生以前未寫下來或基於整合視覺和文字輸入的新穎見解。例如，醫生、水管工、工廠和農業應用等實踐職業工具的用戶研究——簡而言之，任何涉及觀察人們與複雜機械系統或其他人類交互並得出複雜結論的事情——只會隨著常規可用性研究變得完全自動化而變得越來越突出。

These fundamental observation-based research techniques will likewise be very hard for AI to augment or replace. AI has yet to be able to efficiently use robot vision or tie various sensory inputs together to generate novel insights not previously written down or based on integrated visual and textual inputs. For example, user research of tools for hands-on professions such as doctors, plumbers, factory, and agricultural applications—in short, anything that involves observing people interacting with complex mechanical systems or other humans and drawing complex conclusions—will only gain in prominence as routine usability research becomes fully automated.

# 視覺原型設計

## Vision Prototyping

視覺原型設計是一種關鍵技術，它綜合了各種研究投入、市場需求和健康的想像力以及強烈的馬感，以創建顯示新產品或功能願景的原型。（有關視覺原型設計的更多信息，請參閱第 20 章“案例研究：通過視覺原型設計提出棘手的問題”。預設情況下，視覺原型設計涉及創建以前從未做過的新東西，並使用現有的設計系統元件來表達它。這項技能很難建模，也很難自動化。儘管增強可能有助於加快視覺原型的生產速度，但即使在今天，速度也很少成為問題——關鍵是由人類同理心驅動的創意火花，而人工智慧即使不是不可能，也很難複製這種火花。儘管人工智慧可以根據一組指令產生各種各樣的方法，但能夠發現新產品或新功能的正確方向並不是人工智慧可以輕鬆做到的。事實上，如今，它是比較「廢話」的人工智慧功能之一。

Vision prototyping is a key technique of synthesizing various research inputs, market needs, and a healthy dose of imagination with a strong horse sense in order to create a prototype showing a vision of a novel product or feature. (See Chapter 20, “ Case Study: Asking Tough Questions Through Vision Prototyping ” for more on vision prototyping.) By default, vision prototyping involves creating something new that has not been done before and expressing it using the existing design system components. This skill is difficult to model and harder to automate. Although augmentation might be somewhat helpful to speed up the production of Vision Prototypes, speed is rarely an issue even today—the key is the creative spark driven by human empathy that is difficult, if not impossible, for AI to replicate. Although AI can generate a great variety of approaches based on a set of instructions, being able to spot the right direction for a new product or feature is not something that AI can do easily. In fact, today, it is one of the more “ bullshit ” AI features.

## 增強執行策略

### Augmenting the Executive Strategy

最後，參與增強執行戰略的用戶體驗人員同樣會沒問題。儘管各種研究報告可能是自動化和大量增強的，但在所有這些數據的大海撈針中找到一個想法將比以往任何時候都更加困難。

Finally, UX staff involved in augmenting the executive strategy will likewise be fine. Although various research reports may be automated and heavily augmented, finding that needle of an idea in a haystack of all that data will be harder than ever.

## 便條

## NOTE

有效的執行策略建議需要在了解使用者體驗獨特適合的技術、業務用例、市場成長方向、消費者需求、同理心和人類價值觀的交叉點進行多學科分析。

Effective executive strategy advice requires multidisciplinary analysis at the intersection of understanding the technology, business use cases, market growth direction, consumer demand, empathy, and human values that UX is uniquely suited for.

任何能夠利用他們對業務和技術的理解並將他們的見解綜合到新穎的解決方案中的用戶體驗人員都會發現他們的技能需求量很大。

Any UXer who can leverage their understanding of business and technology and synthesize their insights into a novel solution will find their skills in great demand.

如果您的主要技能已經屬於這一部分，請歡欣鼓舞！如果沒有，還有時間來增強這種肌肉，但我建議不要等待太久，因為此類工作的競爭可能會很激烈。

If your primary skills already fall into this section, rejoice! If not, there is still time to build up this muscle, but I would advise not waiting too long, as competition for these kinds of jobs will likely be fierce.

## AI廢話

## AI Bullshit

本節代表了用於使用者體驗研究的人工智慧應用程式的一小部分樣本，這些應用程式牽強、超賣、過於複雜或與使用者體驗設計的基本原則背道而馳。

This section represents a very small sample of AI applications for UX research that are far-fetched, oversold, overly complicated, or run contrary to the foundational principles of UX design.

## AI 戰略分析工具，取代理人類提出新穎的想法和商業用例

### AI Strategic Analysis Tools That Replace Humans in Coming Up with Novel Ideas and Business Use Cases

雖然我提到這個 UX 策略應用程序將在不久的將來得到大量增強：

While I mentioned that this UX strategy application will be heavily augmented in the near future:

#### 便條

#### NOTE

人工智慧不能取代經驗、同理心以及對人類需求和慾望的理解。採用 AI 決策而不是人類決策是一個危險且成本高昂的假設，它實際上保證您將為機器人而不是人類構建產品和功能。

AI is not a replacement for experience, empathy, and understanding of human needs and desires. Adopting AI decisions instead of human decisions is a dangerous and costly assumption, and it virtually guarantees that you will be building products and features for robots, not humans.

儘管供應商聲稱相反，但人工智慧無法很快取代您的 CPO 或使用體驗總監。提出其他建議純粹是愚蠢的，類似於出售相當於矽谷蛇油的人工智慧。

Despite the vendor claims to the contrary, AI cannot replace your CPO or UX director any time soon. Suggesting otherwise is pure folly, similar to selling the AI equivalent of Silicon Valley snake oil.

## AI 啟發式分析取代使用者研究和設計

### AI Heuristics Analysis Replacing User Research and Design

套用艾倫·庫珀（Alan Cooper）在他精彩的著作《關於臉》中的話，當機器人跳舞時，我們不會對舞蹈的風格印象深刻，而是對機器人在跳舞的事實印象深刻（2）。

To paraphrase Alan Cooper in his brilliant book About Face, when the robot is dancing, we are not impressed by the style of the dance but by the very fact that the robot is dancing at all (2).

雖然令人印象深刻，但啟發式分析是最基本的使用者體驗設計技能之一。聲稱這個簡單的 ML 函數消除了用戶測試的要求（甚至完全取代了設計人員）純粹是胡說八道。啟發式方法只是研究人員可能想問的問題的指南。這是“指著月亮”，而不是月亮本身（在這種情況下，月亮正在提供客戶真正想要按時、按預算購買的功能性產品）。

While impressive, heuristic analysis is one of the most basic UX design skills. Claiming that this simple ML function removes the requirement of user testing (or even replaces designers altogether) is pure BS. Heuristics are but a guide to what questions the researcher might want to ask. It is a “finger pointing at the moon,” not the moon itself (which, in this case, is delivering a functional product that customers actually want to buy, on time, and on budget).

聲稱僅啟發式方法就能解決所有問題，忽略了現實世界的限制，即可以構建什麼以及為誰構建，這就是為什麼四合一的老虎團隊和對真人的用戶研究本質上是不可替代的，至少在人工智能複雜化曲線的這一點上是這樣。

Claiming that heuristics alone will solve all of the issues ignores the real-world constraints of what can be built and for whom, which is why four-in-a-box tiger teams and user research studies with real humans are essentially irreplaceable, at least at this point in the curve of AI sophistication.

與使用啟發式方法取代用戶研究的想法密切相關的是人工智慧充當「合成使用者」的想法。

Closely related to the idea of using heuristics to replace user research is the idea of AI acting as “synthetic users.”

## 人工智慧充當「合成使用者」以進行可用性研究

### AI Acting as “Synthetic Users” for the Purposes of Usability Research

這個廢話想法目前正在被一些誤導的供應商兜售。訓練人工智慧假裝成用戶並使用該模型來替代實際的用戶研究可能是人工智慧領域最鸚鵡的想法之一。不幸的是，這個非常糟糕的想法在公司高管中越來越受歡迎，他們渴望廢除依賴人類混亂的研究。

This bullshit idea is currently being peddled by a few misguided vendors. Training AI to pretend to be a user and using that model as a replacement for the actual user research is likely one of the most cockamamie ideas to come from the AI field. Unfortunately, this very bad idea is gaining traction among

company executives who are eager to do away with research that is reliant on the messiness of human beings.

## 便條

### NOTE

讓我明確一點：用人工智慧模型取代實際的使用者研究將保證您將為機器人而不是實際客戶建立產品。

Let me make this clear: Replacing actual user studies with AI models will guarantee that you will build products for robots, not for actual customers.

這個主題非常關鍵，值得在本章後面的側邊欄“航行深淵：合成人工智能用戶研究工具的陰暗面”。

This topic is so critical that it deserves its own sidebar, “ Navigating the Abyss: The Dark Side of Synthetic AI User Research Tools, ” later in this chapter.

## 使用人工智慧建立您的角色

### Build Your Persona Using AI

對於聲稱「使用人工智慧建立你的角色」的廢話工具也是如此。

The same goes for bullshit tools that claim to “ Build your persona using AI. ”

角色建立過程的關鍵部分是團隊成員的共識建立、討論和教育。使用人工智慧更快地到達那裡並不會為您帶來任何優勢。這有點像跳過所有乏味的假期，急於看照片（3）。同樣，您試圖縮短最重要的部分，這表明對用戶體驗過程的價值完全缺乏理解。

The key part of the persona-building process is the consensus-building, discussion, and education of the team members. Using AI to get there faster does not buy you any advantage. It ’ s a bit like skipping all the tedium of vacation in a rush to see the photographs (3). Again, you are attempting to shortcut the most important part, which shows a complete lack of understanding of the value of the UX process.

更多的是矽谷的蛇油，主要吸引那些急於勾選“用戶體驗框”的容易上當受騙、缺乏經驗的商人。我的加州同事現在真的應該更清楚，而不是試圖兜售這種動力。（有關這一重要主題的更多信息，請參閱本章末尾凱瑟琳·坎貝爾（Kathryn Campbell）的觀點，“當人工智能為研究增加價值，以及當它造成嚴重破壞時”。

It's more of the Silicon Valley snake oil that appeals chiefly to gullible inexperienced business people in a rush to check the “UX box.” And my California colleagues should really know better by now than to try and peddle such drivel. (For more on this important topic, see Kathryn Campbell’s perspective, “When AI Adds Value to Research, and When It Wreaks Havoc” at the end of this chapter.)

## 最後的話

### Final Words

雅各布·尼爾森（Jakob Nielsen）在他的 AI for UX 爐邊談話中稱 AI 為“心靈的叉車”，並表示在他的研究中，在工作中使用 AI 的 UX 專業人士的工作效率提高了 40%（4）。雅各布·尼爾森（Jakob Nielsen）與凱特·莫蘭（Kate Moran）的討論呼應了本章中的許多主題，包括我們用與機器人交談取代用戶研究的奇怪痴迷，我在本章後面的側邊欄“航行深淵：合成人工智能用戶研究工具的陰暗面”中進一步探討了這一點。

In his AI for UX Fireside Chat, Jakob Nielsen called AI “the forklift for the mind” and said that in his studies, UX professionals who used AI in their work became 40% more productive (4). Jakob Nielsen’s discussion with Kate Moran echoes many of the themes in this chapter, including our bizarre obsession with replacing user research with talking to robots, which I further explore in the sidebar “Navigating the Abyss: The Dark Side of Synthetic AI User Research Tools,” later in this chapter.

人類需求的研究需要對技術的理解、對業務需求的了解以及對客戶的同理心。良好的用戶研究還需要保持你的眼睛和耳朵（最重要的是，你的心）敞開，尋找眾神偶爾認為適合為我們增光添彩的創意火花。如果外包你的研究就像外包你的假期，那麼用人工智能取代這個創作過程就像外包你的假期……給一堆機器人。

Research of human needs requires an understanding of technology, knowledge of business needs, and empathy for the customer. Good user research also requires keeping your eyes and ears (and, most importantly, your heart) open for that creative spark that the gods occasionally see fit to grace us with. If

outsourcing your research is like outsourcing your vacation, then replacing that creative process with AI is like outsourcing your vacation ... to a bunch of robots.

相較之下，「人工智慧充當使用者」的一個極好用例是我們的朋友兼前同事瑪德琳·勒（Madeleine Le）所說的「小林丸」（因《星際爭霸戰》（5）而出名）——這是對研究人員的「雙贏」培訓練習，人工智慧也許可以假裝是一個脾氣暴躁的人類客戶，他決心不惜一切代價未能通過可用性測試，並試圖使缺乏經驗的研究人員失去平衡（有點像人工智慧驅動的斯塔特勒和華爾道夫布偶）。現在這確實可能是一個非常有趣的產品！回想一下我們在第2章中對人工智慧用例的討論。“小林丸 AI 研究員培訓師”是另一個例子，為什麼用例對人工智能驅動的產品成功比本書中的其他任何內容都更重要！

In contrast, an excellent use case for “AI acting as users” is what our friend and former co-worker Madeleine Le has termed a “Kobayashi Maru” (of Star Trek fame (5))—the “no win” training exercise for researchers, where AI could perhaps pretend to be a cranky human customer who is determined at all costs to fail the usability test and tries to unbalance the inexperienced researcher (kind of like AI-driven Statler and Waldorf of the Muppets). Now that might make a very intriguing product indeed! Recall our discussion of AI use cases in Chapter 2. The “Kobayashi Maru AI Researcher Trainer” is yet another example why use cases matter more to AI-driven product success than anything else in this book!

## 在深淵中航行：合成人工智慧使用者研究工具的陰暗面

### NAVIGATING THE ABYSS: THE DARK SIDE OF SYNTHETIC AI USER RESEARCH TOOLS

我們目睹了名副其實的人工智慧工具和研究論文，它們希望冒充用戶，並且通常限制與任何了解產品使用方式的活著的人交談的需要。此類人工智慧「工具」包括像 Synthetic Users（6）這樣的公司，他們自豪地宣傳「使用者研究。沒有用戶。

We are witnessing a veritable barrage of AI tools and research papers looking to impersonate users and generally limit the need to talk to anyone alive who knows anything about how the product will be used. This category of AI “tools” includes companies like Synthetic Users (6), who proudly advertise “User Research. Without the Users.”

還存在許多關於基於人工智能的卡片分類所謂的“成功”的論文（7）。

Numerous papers also exist on the supposed “ success ” of AI-based card sorting (7).

我想，在新冠疫情以及我們現在作為一個物種所經歷的孤獨和孤立的持續流行之後，躲起來只與機器人交談的願望應該不足為奇。然而，正如丹尼爾·克蘭普在電影《小魔怪2》（8）中所說的那樣：

I guess the desire to hide away and only talk to robots should not be surprising in the wake of the COVID pandemic and the ongoing epidemic of loneliness and isolation we have now experienced as a species. However, as Daniel Clamp famously said in the movie Gremlins 2 (8):

It wasn ’ t a place for people anyway. It was a place for things. You make a place for things ... things come.

或者，換句話說，如果你在設計系統時只與機器人交談，你最終會設計一個供機器人使用的系統。

Or, to put it another way, if you are only talking to robots while designing a system, you will end up designing a system for robots to use.

首先，與人交談的全部意義在於弄清楚他們會覺得什麼有用和快樂。出於對黑客帝國的熱愛，與機器人交談來進行研究而不是真人有什麼意義？

The whole point of talking to people in the first place is to figure out what they would find useful and joyful. What, for the love of the Matrix, is the point of talking to a robot to do your research instead of a real person?

您的客戶，而不是人工智慧，應該成為您創新流程的中心。

Your customers, not AI, should be at the center of your innovation process.

你不必像奧普拉那樣成為專家面試官，但以同理心、同情心和一定的創造性服務心態與用戶交談是我們行業的主要內容。這就是我們成為人類的的原因，是將我們與機器區分開來的細線。讓我們停止試圖越過這條線。讓機器處理它們最擅長的事情，讓人類處理同理心、同情心和創造性的傾聽。

You don ’ t have to be an expert interviewer like Oprah, but talking to users with empathy, compassion, and a certain creative service mindset are the staples of our industry. It ’ s what makes us human beings, the fine line that separates us from machines. Let ’ s stop trying to cross that line. Let the machines handle what they do best, and let humans handle empathy, compassion, and creative listening.

使用 AI 進行使用者研究不僅效率低下，而且對體驗有害，正如 Baymard Institute 的這篇論文所證明的那樣：測試 ChatGPT-4 的「使用者體驗審核」顯示 80% 的錯誤率和 14-26% 的可發現率（9）。

Using AI for user research is not only unproductive, but it 's actively harmful to the experience, as this paper from Baymard Institute demonstrates: Testing ChatGPT-4 for “ UX Audits ” Shows an 80% Error Rate & 14 – 26% Discoverability Rate (9).

雅各布·尼爾森（Jakob Nielsen）是研究人工智慧工具主題的領先使用者體驗專家之一，他在最近的一篇部落格文章中這樣說（10）：

Jakob Nielsen, one of the leading UXers tackling the topic of AI tooling, had this to say in a recent blog post (10):

AI cannot substitute for user research with real users. It can give you plentiful ideas for issues to look for in a usability study, but it can 't predict what your customers will actually do. For better or worse, humans are very unpredictable beings. Even more important, these AI tools are currently mimicking their understanding of “ typical ” human behaviors. Your specific user groups likely have very different backgrounds, needs, and motivations than the “ typical human ” —that 's the whole reason we conduct research with our own users.

Or as Pavel Samsonov so eloquently says in his recent UX Collective article (11):

There is one more very important difference between an LLM and a customer: The LLM can 't buy your product.

就我而言，允許人們為了用戶研究的目的而「逃離」與其他人交談的工具開發路線應該被完全放棄。

As far as I 'm concerned, the line of tool development that allows people to “ escape ” talking to other humans for the purposes of user research should be completely abandoned.

偌。。。你今天和你的客戶談過嗎？為什麼不呢？

So ... did you talk to your customers today? Why not?

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## 觀點：當人工智慧為研究增加價值時，以及何時造成嚴重破壞

### PERSPECTIVE: WHEN AI ADDS VALUE TO RESEARCH, AND WHEN IT WREAKS HAVOC

作者：凱瑟琳·坎貝爾

By Kathryn E. Campbell

您可以將哪些使用者研究任務委託給生成式人工智慧？我喜歡開玩笑說，它可以取代一個中等敏銳的研究實習生，或者一個剛接觸所研究行業的產品經理。它可以直接提出有關用戶喜歡和做什麼的問題，然後將他們的回答總結為主要主題。它做這些事情的速度非常快，而且相當好（有一些很大的警告）。

What user research tasks can you entrust to Generative AI? I like to joke that it can replace a moderately sharp research intern, or a Product Manager who is new to the industry being studied. It can craft direct questions about what users like and do, and then summarize their responses into major themes. It does those things very quickly, and reasonably well (with a few big caveats).

# 任務人工智慧做得很好

## Tasks AI Does Well

機器學習在尋找模式方面非常出色。生成式人工智慧更進一步，為我們提煉出這些模式為基於文字的資訊提煉。提取和總結見解是大多數研究的關鍵步驟，您確實應該考慮利用一個好的人工智慧工具來實現這一步驟。在研究中使用人工智慧的一些良好用例包括：

Machine Learning is magnificent at finding patterns. Generative AI takes that a step further and distills those patterns into text-based distillations of information for us. Extracting and summarizing insights is a key step in most research studies, and one you should really consider leveraging a good AI tool for. Some good use cases for using AI in your research include:

- 在開始專案之前進行全面的文獻綜述， Conducting a comprehensive literature review before starting a project,
- 提煉出大量的視頻採訪記錄， Distilling a large number of video interview transcripts,
- 在數千個開放式調查中捕捉關鍵主題， Capturing the key themes across thousands of survey open-ends,
- 掃描和分類作為日記研究的一部分提交的圖像， Scanning and categorizing images submitted as part of a diary study,
- 產生替代問題措辭或測量量表， Generating alternative question wordings or measurement scales,
- 收集快速的重點摘要，以捕捉整體偏好或共識。 Gathering a quick topline summary that captures an overall preference or consensus.

這些是常見的研究需求，在某些情況下，使用 AI 助理可以為您節省數百小時。為什麼不削減一兩個研究職位並用人工智慧取而代之呢？一方面，有許多任務是人工智慧根本無法完成的，也不太可能很快取代。另一方面，人工智慧偶爾會產生虛假或極具誤導性的結果，這會讓你看起來很糟糕。

These are common research needs, and in some circumstances using an AI assistant could save you hundreds of hours. Why not just cut a research position or two and replace them with AI then? For one thing, there are many tasks that AI simply can't do, and isn't likely to be able to replace any time soon.

For another, AI will occasionally generate false or wildly misleading results that will make you look pretty bad.

## 人工智慧失敗的地方

### Where AI Fails

如果您所需要的只是對大量文字或圖形資料進行簡單的總結，那麼人工智慧很可能會提供出色的投資報酬率。但您應該意識到一些潛在的災難性弱點，即使對於我們所描述的有限任務集也是如此。

If all you need is a straightforward summary of a large amount of text or graphic data, AI might well provide an excellent ROI. But you should be aware of a few potentially disastrous weaknesses, even for the limited set of tasks we've described.

## 西方偏見

### Western Bias

人工智慧因過度依賴以北美和歐洲語言編寫的內容而產生偏見。例如，即使您明確搜索有關印度市場趨勢的信息，您看到的結果也將嚴重依賴有關該主題的英語文章，而不是用該國其他 21 種官方語言中的任何一種撰寫的文章。您的全球格局分析可能會完全錯過一個關鍵的區域競爭對手，並且某些地位較高的消費者可能會與那些收入較低、農村地區或在西方媒體中不太突出的消費者相比，他們的代表性可能會過高。

AI is biased by an over-reliance on content written in the languages of North America and Europe. Even if you explicitly search for information about market trends in India, for example, the results you see will be heavily reliant on English language articles about the topic rather than those written in any of the other 21 official languages of the country. Your global landscape analysis may miss a key regional competitor entirely, and certain higher status consumers will likely be over-represented vs. those who are lower income, more rural, or otherwise less prominent in western media.

## 細緻入微的語言

### Nuanced Language

雖然人工智慧正在改進，但通常不能很好地處理幽默、寓言或諷刺。您的人工智慧摘要很可能會從字面上理解某些評論，從而導致令人尷尬的結果。我曾經在一家以高服務費著稱的公司工作。我很高興看到我的調查逐字記錄的情緒得分是“非常積極的”，直到我意識到它為那些寫道：“當然，有什麼理由不喜歡天價費用？！”

While it's improving, AI generally doesn't handle humor, allegory, or sarcasm very well. Your AI summary may well take certain comments literally, leading to embarrassing results. I once worked for a company known for high service charges. I was delighted to see the sentiment score of my survey verbatims was “very positive,” until I realized that it had assigned favorable perceptions to respondents who wrote things like, “Sure, what's not to love about sky high fees?!”

## 幻覺

### Hallucinations

人工智慧仍然經常引用不良來源，混淆使用相似詞語的不相關概念，並且很容易出錯。在麥肯錫 2024 年的一項調查中，23% 的人表示，由於 GenAI 的不準確，他們的組織因使用 GenAI 而遭受了負面後果（1）。

AI still regularly references a bad source, confuses unrelated concepts that use similar words, and just plain gets things wrong. In a 2024 survey by McKinsey, 23% said their organization has experienced a negative consequence of using GenAI due to its inaccuracy (1).

## 人工智慧與優秀研究之間的差距

### The Gap Between AI and Good Research

對於在研究中過度依賴人工智慧，我最擔心的是，不了解研究人員為其工作帶來的技能的利害關係人會認為人工智慧是一種更快、更便宜的替代品。因此，他們將越來越依賴誤導性研究。以下是人工智慧在未來幾年內根本無法取代的一些技能（如果有的話）。

What worries me most about over-reliance on AI in research is that stakeholders who don't understand the skills that researchers bring to their work will think that AI is a much faster, cheaper replacement. As a result, they will rely increasingly on misleading research. Here are a few of the skills that AI simply can't replace in the next few years, if ever.

# 上下文

## Context

人類可能會認識到人工智慧機器人會失去的情況的影響。例如，我們知道，當青少年的父母在房間裡時，採訪青少年可能會得到與他們獨自一人不同的結果。我們知道，人們比其他主題更有可能歪曲某些主題的真相，尤其是對研究人員而言。作為音樂行業的研究人員，我知道與我交談的藝術家可能會猶豫是否要對我公司的一款產品說任何負面的話，因為擔心我們可能不會簽約。由於了解人類和背景，我們並不總是相信受訪者所說的話，而人工智慧則缺乏這種觀點。

A human may recognize the implications of a situation that would be lost to an AI bot. For example, we know that interviewing a teenager when their parent is in the room will likely result in different findings than if they were alone. We know that people are more likely to bend the truth about some topics than others, especially to a researcher. As a researcher in the music industry, I understand that an artist I'm speaking with may be hesitant to say anything negative about one of my company's products for fear that we might not sign them. As a result of understanding humans and context, we don't always take what a respondent says at face value, while AI lacks this perspective.

One way to add strategic UX value to an AI product design is to bring to the table a detailed understanding of the usage contexts, and carefully probe whether the model is adequately taking these contextual variables and nuances into account.

—Paul Bryan

## 注目

## Observation

同樣，當參與者的行為與他們所說的內容不符時，人類也會注意到。我已經看到數百次研究參與者宣稱一項任務是“簡單的”，即使在眯著眼睛、靠近屏幕、皺起眉頭或點擊屏幕上多個不相關的觸摸點時也是如此。研究人員將觀察這些差異，並對其進行調查並在他們的發現中註明它們。機器也很少能做到這兩點。

Similarly, humans will note when a participant's behavior doesn't match what they're saying. Hundreds of times I've seen research participants declare that a task is “easy,” even while squinting,

leaning closer to the screen, furrowing their brow, or tapping on multiple unrelated touch points on a screen. Researchers will observe these discrepancies and both probe on them and note them in their findings. A machine will rarely do either.

## 頓悟時刻

### The Aha Moments

在尋找共同主題時，會遺失的一個項目是感興趣的異常值。每個研究人員都能回憶起一個讓他們大吃一驚的陳述，一個出乎意料的調查結果，一個讓他們思考的偶然觀察。人類不僅尋求模式，還尋求新奇。當我們遇到意想不到的事情時，我們不會將其視為超出預測模式。相反，我們開始創建可以解釋該結果的假設。在飛行中，我們有時會更改腳本以測試這些新出現的假設。我們能夠以一種快速、迭代的方式進行快速、迭代的學習，而受過尋找和預測司空見慣的訓練的法學碩士根本無法以同樣的敏捷方式轉向。

One item that 's lost when looking for common themes is the outlier of interest. Every researcher can recall a statement that took them by surprise, a survey result that was unexpected, a casual observation that got them thinking. Humans seek not just patterns, but novelty. When we encounter something unexpected, we don't disregard it as falling outside of the predictive pattern. Instead, we start creating hypotheses that would explain that result. On the fly, we sometimes change our script in order to test these emerging hypotheses. We are capable of rapid, iterative learning in a way that a LLM trained to look for and predict the commonplace simply can't pivot to with the same alacrity.

## 摘要

### Summary

人工智慧可以表現得像你在大學時約會過的那個非常有魅力、不穩定的人。前一刻絕對令人著迷，下一刻又令人憤怒。在很多任務中，它可以提供巨大的價值，節省您的時間，並有助於避免乏味帶來的倦怠。另一方面，有時情況非常糟糕，可能會讓您失去工作。投資報酬率如何？

AI can act like that really charismatic, flaky person you dated in college. Absolutely enchanting one moment, and infuriating the next. There are so many tasks where it offers enormous value, saves you time, and helps avoid the burnout that comes with tedium. On the other hand, there are times when it's

so bad that it could cost you your job. How's that for an ROI?

我們在這裡指出的一些差距將通過時間和金錢來解決。模型有望得到更好的訓練，以減少區域偏見，並探索和反映更多的上下文信號。此類培訓成本高昂，將首先關注高價值領域。不同行業的進展可能參差不齊。同樣，雖然計算機能夠觀察視覺線索，但與當今的人工智能工具相比，常規判斷人類參與者的行為何時與他們的話不符的設備和計算能力在複雜性方面取得了一大進步。目前，最好假設人工智慧工具將使研究人員更快、更有效率，但幾乎不會過時。

Some of the gaps that we've pointed out here will be addressed with time and money. Models will hopefully be better trained to reduce regional biases and to explore and reflect more contextual signals. Such training is costly and will focus on areas of high value first. Progress may be uneven across different industries. Likewise, while computers are capable of observing visual cues, the equipment and computing power to routinely tell when a human participant's actions don't match their words is a big step up in terms of sophistication from where AI tools are today. For the time being, it is best to assume that AI tools will make researchers faster and more productive—but hardly obsolete.

## 參考

## Reference

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## 關於凱瑟琳·坎貝爾

## About Kathryn E. Campbell

Kathryn 在用戶體驗研究、數據科學和數字戰略方面擁有 20 多年的經驗。她目前領導華納音樂集團的研究，為全球唱片藝術家、獨立唱片公司和歌迷開發數字產品和工具。此前，Kathryn 領導 Instagram 的誠信研究，負責用戶安全和指導提要排名、搜索和推薦的機器學習算法。

Kathryn has more than 20 years experience in UX research, data science, and digital strategy. She currently leads research for Warner Music Group, developing digital products and tools for global recording artists, indie labels, and fans. Previously Kathryn led Integrity Research for Instagram, where she was responsible for user safety and the machine learning algorithms guiding feed ranking, search and recommendations.