

UX in the Age of AI: Building the Skills of Tomorrow





/ AI Prompt Transforming Skills for Tomorrow's Designers

Sticking to the old ways is akin to crafting buggy whips in the era of Teslas.

Jakob Nielsen, co-founder of Nielsen Norman Group

Yes, we know, AI is having its “moment”, and its kind of like when the World Wide Web (WWW) burst into the scene back in the 90s and suddenly everyone could have access to the internet.

In today's fast-paced world, we are already witnessing the influence of AI in business, technology, and society. Especially within the UX playground where it's a bit of a touchy, but thrilling subject.

The real deal? UX roles must treat AI as a **skilled work buddy** whose core strengths consists on performing repetitive tasks that require zero to very little expertise, processing or analyzing data, and quickly generating outputs. It might seem like AI can do it all, but the human touch is still significant to achieve high quality results.

In this bite-sized report we want to kickstart the conversation on **the skills that will keep UX roles relevant, as AI is added into the mix as a new tool to elevate the game.**

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To consolidate and merge the material we used [Chat GPT](#). For all images we used [Midjourney](#). For the color palette selection we used [Colors](#). For referencing and bibliography we used [Quillbot](#).

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/ AI Prompt Human
Fingerprint, Tech

The Human Touch in the AI Era

Staying relevant

As AI tools continue to refine themselves, it's becoming increasingly essential for UX roles to:

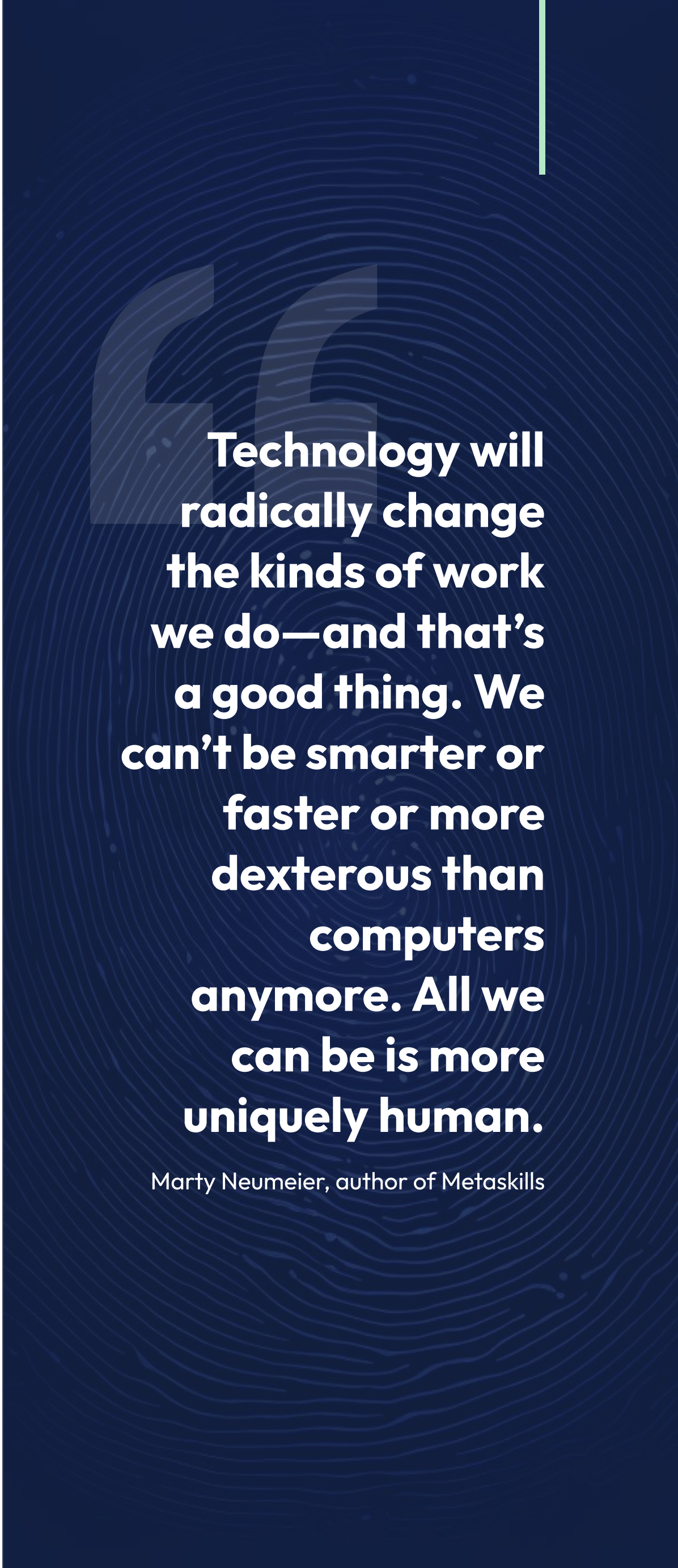
Adapt and expand their skill sets. According to the "[State of UX 2023](#)" report published by UX Collective, hiring managers tend to prioritize candidates who can wear multiple hats over those with hyper-specialized skill sets. This means there has been a shift towards the importance of embracing a generalist approach, especially as AI technology continues to evolve. Designers must strive to acquire complementary and contrasting skills that can enhance their roles.

Imagine you excel in prototyping; why not consider learning research skills to gain valuable user insights that can significantly improve your design? Or perhaps you could explore project management or dive into the intricacies of human psychology. The key is to not only be proficient in your core strengths but to continually strive for improvement in areas where you may not have prior expertise.

As the renowned author Yuval Noah Harari, known for his book "Sapiens," wisely said on a [recent interview](#): "The most important aptitude is to have an open mind and the ability to reinvent yourself repeatedly throughout your life."

Move away from the "feature-driven" mindset.

Let's say you want to add an AI chatbot to a banking app, will this decision enhance user engagement? Perhaps there are alternative ideas that could achieve the same goal more effectively. But, rather than quickly thinking about 30 different ideas, we have to remember that the true value of a feature lies in how it addresses the underlying problem, satisfies user needs, and aligns with both business and user objectives over time. This should be the primary focus before diving into feature development, as the task of producing design outputs (features, design systems, prototypes) has a very high chance of being automated by AI tools.



Technology will radically change the kinds of work we do—and that's a good thing. We can't be smarter or faster or more dexterous than computers anymore. All we can be is more uniquely human.

Marty Neumeier, author of Metaskills

/ AI Prompt Human Fingerprint, Tech

We think that's why it's crucial to shift away from a feature-centric mindset and instead prioritize essential skills like problem-solving and a deep understanding of the "why" throughout the design process. These are areas where human input holds substantial and lasting value.

Train and develop meta-skills. Meta-skills are "innate, timeless, higher-order skills that create adaptive learners; able to succeed whatever the future brings" (Skills Development Scotland, 2021).

01. The Human Touch in the AI Era

This concept has been around for a decade and has maintained its relevance, thanks to the ongoing Fourth Industrial Revolution, characterized by connectivity, automation, and ever-evolving technological advancements.

Back in 2013, designer and writer Marty Neumeier, in his book "Metaskills", proposed an intriguing perspective. He argued that we're not facing a job crisis but rather a talent crisis. It's not that our problems are too difficult, but that our skills are too basic. Humans need to equip themselves to handle non-linear and ambiguous challenges. Neumeier identified five talents – **feeling, seeing, dreaming, making, and learning** – that he believed would empower individuals in an era marked by relentless technological innovation.

What's fascinating about these meta-skills is their transferability. They mostly fall under what we wrongly call "soft" skills, when in reality, they are power skills that accentuate the uniqueness of human beings. These skills are what will keep us at the forefront, accelerate our success, and prevent us from becoming obsolete.



/ AI Prompt Human, walk, future, technology, footprint

Meta-skills

Diagram based on Marty Neumeier's five talents for the "Robotic Age"

FEELING

Empathy
Communication
Human connections and collaboration
Emotional intelligence
Self-awareness

SEEING

Systems thinking
Evidence-based
Strategic

DREAMING

Storytelling
Curiosity
Critical thinking
Applied imagination

MAKING

Initiative
Mastering the design process

LEARNING

Adaptive
Self-teaching

01. The Human Touch in the AI Era



/ AI Prompt AI and human working together, future

ChatGPT can match the top 1% of human thinkers in how many ideas it can produce and the originality of these ideas.

Study ran by The University of Montana, 2023

Embracing AI in Your Work

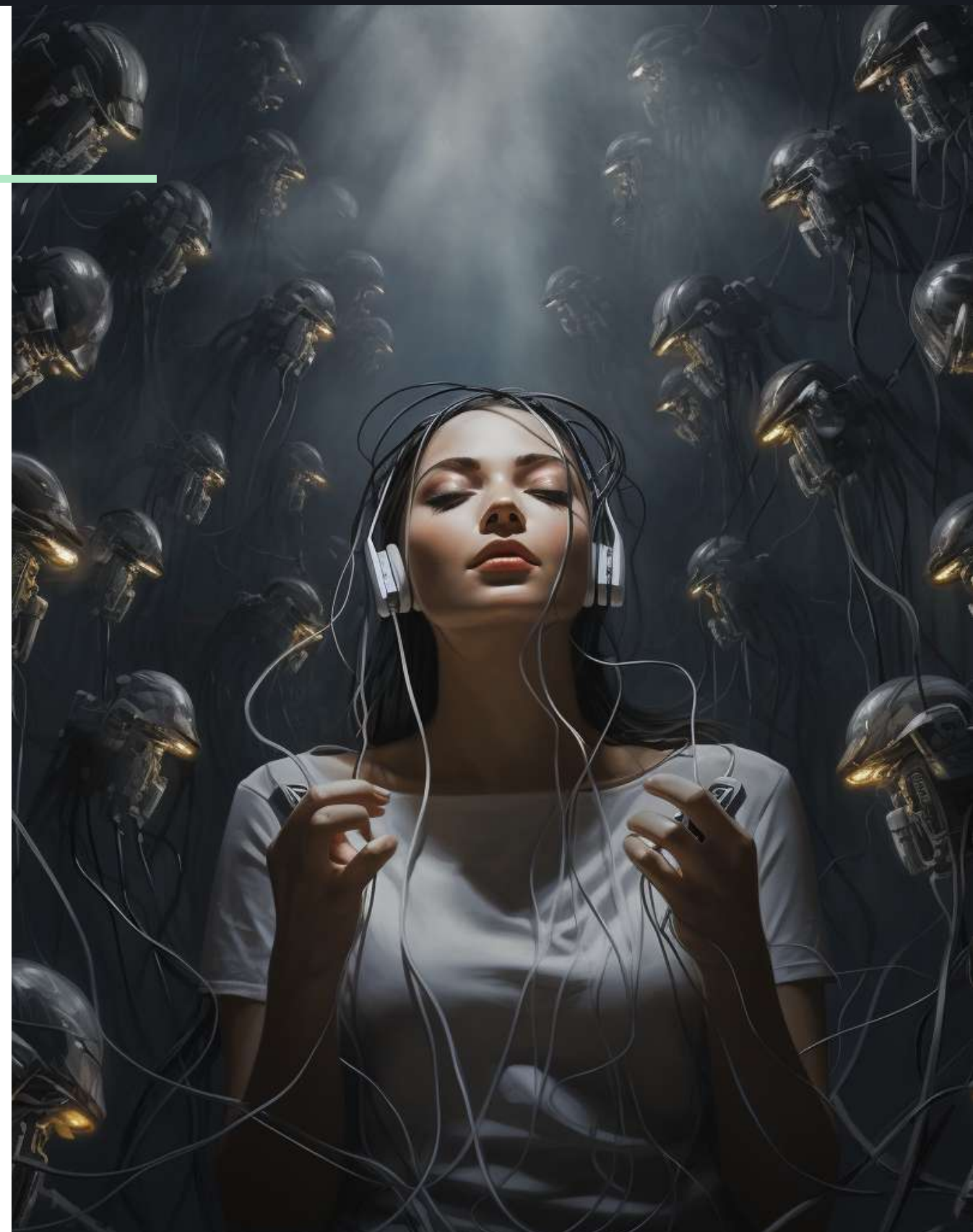
We believe that the path to the future is paved for those who master the art of harnessing AI tools and refining AI-generated outputs. Jakob Nielsen highlights a key approach when working alongside AI: we can either let AI take on the role of originator or refiner in our creative endeavors. As the originator, we invite AI to generate ideas from scratch, and then, using our human judgment, we refine and enhance those ideas. On the other hand, as the refiner, we humans take the lead in creating ideas, and we turn to AI for suggestions, improvements, and critical feedback on our work.

It's clear that by 2024 UX roles will need to incorporate AI as a skill in their portfolios. Concerning this matter, the ability to proficiently describe and explain our AI-driven work, both the reasons and process behind it, will be absolutely essential. Let's approach this partnership with diligence and optimism, recognizing that technology is advancing at a pace beyond our wildest imaginations.

02

Risks & Limitations

Knowing that Artificial Intelligence and Machine Learning are here to stay, we'll gradually come to appreciate that the real value lies in **emphasizing meta-skills** more prominently. These skills, which machines can never replace, are becoming heavily important. That's why we've decided to focus on exploring the possible downsides of heavily depending on AI in one of the most human-centric facets of the design process: **User Research.**



/ AI Prompt Human being scene in technology field, vertical, empathy

A recent study conducted by the **Norman Nielsen Group**, which assessed various AI-powered tools, highlighted specific limitations and potential pitfalls when utilizing AI in the research phase of digital product design. In this study, researchers fed raw data to AI systems that had already undergone human analysis, with the aim of comparing AI-generated results with those of their human counterparts. Here's a sneak peek at their discoveries:

1. AI tools generally lack the capability to process visual input, confining their analysis to text-based transcripts.

Usability testing, a practice that involves observing user-product interactions while participants describe their actions and thoughts, yields valuable insights.

When various AI tools assessed this, they exclusively relied on the transcript for analysis, overlooking essential participant behavior details and treating the participant's ideas as unquestionable truth.

2. Unclear summaries and vague recommendations due to lack of context.

The outcomes and advice provided by AI-driven tools may be influenced by a lack of context. Although we ourselves can provide all the context that is necessary, some tools in the study didn't accept background information such as the study goals, research questions or previous insights.

These results in the presentation of insights without any sense of priority.

Without an understanding of the study's objectives, the system can't discern what holds the utmost importance or relevance to the researcher. **Context plays a crucial role in decision-making and is closely linked to potential risks associated with those decisions.**

3. Biases. AI systems may reduce bias in some ways. Nonetheless, when employing AI-powered tools, us humans should remain vigilant about the potential presence of bias when analyzing those results. The study highlights notable forms of bias:

Confirmation bias which entails the tendency for individuals to selectively process information that aligns with their pre-existing beliefs, often disregarding contradictory data, particularly when the matter is significant or personally relevant.

Anchoring bias involves relying heavily on the initial piece of information received as a reference point for subsequent judgments, irrespective of its accuracy, influencing decisions across various domains.

According to the article "[Towards a Standard for Identifying and Managing Bias in Artificial Intelligence](#)" there are 3 groups of Artificial Intelligence biases and 51 different sub-categories, **we recommend recognizing the possible types of human bias listed in this article.**

We think it's crucial to note another form of human bias:

02. Risks & Limitations

Automation bias, is characterized by humans favoring recommendations from automated decision-making systems while dismissing contradictory information from non-automated sources, even if the latter is accurate, which can impact decision-making across industries.

4. Lack of citation and validation. When generating quotes and recommendations, tools lacked the capability to pinpoint the source of information, such as quoting a specific session, time-stamping it, or linking it to the referenced clip. This can pose challenges for individuals seeking accurate answers, as it diminishes result accuracy.

Particularly, in the study, some of the tested tools failed to differentiate between the researcher's notes and the session transcript, highlighting an ethical concern in research reporting. It's crucial always to distinguish between our interpretations or assumptions and the participants' actual statements and action.

Other related concerns, outside the study and affecting beyond the research stage:

5. Lack of human touch. While Artificial Intelligence (AI) is great at automating tasks, it can't replace human creativity and empathy. AI can help with certain design tasks, but we must keep the human values of designers which will help understand emotions, cultural differences, and personal experiences that AI might struggle to grasp.

6. Privacy related issues. The utilization of Artificial Intelligence in UI/UX Design leads to the automated accumulation and examination of extensive user data, giving rise to apprehensions regarding privacy and the potential for data breaches.



/ AI Prompt Prisoned mind

Design professionals and product proprietors hold the responsibility of guaranteeing the ethical and transparent collection and management of all information. This entails adhering to established best practices and regulatory frameworks.

AI Boosting Design Thinking: From Challenges to Solutions















Design thinking is a modern problem-solving method that puts users first. It's like a GPS for creating great experiences. But, like any journey, it has its roadblocks.

In this section, we'll explore the different stages of design thinking and the problems that can pop up. We'll also see how AI tools can help us tackle these issues.



EMPATHIZE




Understand users' needs and experiences

CHALLENGE	SOLUTION	AI TOOLS
Finding and recruiting the right participants.	Automate the process of finding and sourcing candidates.	   
Collecting and analyzing large volumes of data.	Generate valuable insights and categorizing them for analysis with Natural Language Processing (NLP) algorithms.	       
Insufficient knowledge of particular industries.	Consult AI powered tools to gain insights into industry topics and competitor activities.	 



DEFINE

Debating to take a concrete course

CHALLENGE	SOLUTION	AI TOOLS
Considering the needs and objectives of all stakeholders, including users, and developers.	Consult Large Language Models (LLMs) tools to kickstart the decision-making process. UX roles can discuss various topics according to their needs.	  
A broad problem definition can lack focus, and a narrow one can stifle innovation.		
Uncertainty about the specific features that a product might have.		



IDEATE

Generate creative ideas and solutions to address the defined problem

CHALLENGE	SOLUTION	AI TOOLS
<p>Team members with similar backgrounds or viewpoints, can lead to limit creativity.</p>	<p>Include generative AI in ideation sessions to produce and/or refine a wide variety of ideas for further selection.</p>	
<p>Limited time for brainstorming can hinder the generation of innovative ideas.</p>		



PROTOTYPE

Making high fidelity scenarios to test

CHALLENGE	SOLUTION	AI TOOLS
<p>Create a consistent tone of voice (UX Writing).</p>	<p>Create or refine content with Large Language Models (LLMs) tools, to ensure a clear and consistent microcopy for all elements.</p>	
<p>Meet tight deadlines, while ensuring prototype quality.</p>	<p>Include AI-powered prototyping, to help you speed up the process.</p>	
<p>Include user feedback effectively for quick iterations of an existing product.</p>	<p>Get help of Natural Language Processing tools (NLP) to analyze user feedback.</p>	



TEST

Gather user feedback to refine and improve solutions

CHALLENGE	SOLUTION	AI TOOLS
<p>Creation of notes and summaries from multiple validation sessions can be time-consuming.</p>	<p>Analyze and gather insights from validation faster with the help of Natural Language Processing (NLP) algorithms.</p>	
<p>Tight project schedules can reduce time for analysis and compromise the quality of insights.</p>		

ⁱ Figma has some handy plugins that leverage AI to assist designers in generating wireframes, layouts, and text content, such as: "Wireframe Designer", "WireGen." & "Frontitude". These can be useful tools for speeding the design process and saving time.

TAKEAWAYS

The **UX industry is undergoing a transformative shift**. To ensure their relevance, UX roles must cultivate a harmonious partnership with AI and nurture enduring human skills. Staying up-to-date with the latest tech trends, maintaining a flexible mind, and embracing change are also vital steps in overcoming future challenges.

By seamlessly integrating AI and ML (Machine Learning) into their toolkit, UX roles can optimize their processes and outcomes, ultimately benefiting business success and customer satisfaction.

Here are the key takeaways we'd like to leave you with from this report:

1. Acquire additional skills that can complement your role, broaden your skillset beyond your current knowledge.

2. Develop meta-skills in order to succeed whatever the future brings.

3. Regularly assess and validate AI-generated suggestions.

4. Be aware of the existing biases when using AI tools.

5. Start consuming AI-driven education now.

6. Clearly define objectives and criteria when including AI tools into your design process.

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REFERENCES

1. Schwartz, R. , Vassilev, A. , Greene, K. , Perine, L. , Burt, A. and Hall, P. (2022), Towards a Standard for Identifying and Managing Bias in Artificial Intelligence, Special Publication (NIST SP), National Institute of Standards and Technology, Gaithersburg, MD, [online], <https://doi.org/10.6028/NIST.SP.1270>, https://tsapps.nist.gov/publication/get_pdf.cfm?pub_id=934464 (Accessed September 4, 2023)
2. AI-Powered Tools for UX Research: Issues and Limitations. (n.d.). Nielsen Norman Group. <https://www.nngroup.com/articles/ai-powered-tools-limitations/>
3. Baciu, A. (2023, January 10). Exploring the potential of AI in UX: benefits, risks, and future trends. Medium. <https://uxdesign.cc/exploring-the-potential-of-ai-in-ux-design-benefits-risks-and-future-trends-ed5d3323b8e3>
4. Fard, A. (2022, October 12). AI UX Design: A New Way Of Designing. UX Magazine. <https://uxmag.com/articles/ai-ux-design-a-new-way-of-designing>
5. Donohue, B. (2020, September 17). Josh Seiden: Focus On Outcomes Over Output | Intercom. The Intercom Blog. <https://www.intercom.com/blog/podcasts/josh-seiden-on-why-product-teams-should-focus-on-outcome-vs-output/#different>
6. Nielsen, J. (2023, August 9). AI Is More Creative Than 99% of Humans — on One Metric. <https://jakobnielsenphd.substack.com/p/ai-is-more-creative-than-99-of-humans>
7. Neumeier, M. (2013, January 16). Metaskills: Five Talents for the Robotic Age.
8. Lalli, M. (n.d.). Generative A.I. and the Future of Work. [www.linkedin.com](https://www.linkedin.com/pulse/generative-ai-future-work-mirko-lalli/). <https://www.linkedin.com/pulse/generative-ai-future-work-mirko-lalli/>
9. The State of UX in 2023. (n.d.). UX Trends. <https://trends.uxdesign.cc/>
10. Nielsen, J. (2023, June 22). UX Needs a Sense of Urgency About AI. Jakob Nielsen on UX. <https://jakobnielsenphd.substack.com/p/ux-needs-a-sense-of-urgency-about>
11. Nielsen, J. (2023, September 6). AI's Role in Human-AI Symbiosis: Originator or Refiner. <https://jakobnielsenphd.substack.com/p/human-ai-symbiosis-originator>
12. Defining Design Generalists. (n.d.). Airbnb.Design. <https://airbnb.design/defining-design-generalists/>
13. Nielsen, J. (2023, August 16). UX Portfolio Reviews and Hiring Exercises in the Age of Generative AI. <https://jakobnielsenphd.substack.com/p/ux-portfolio-reviews-hiring-exercises>
14. Ansell, J. (2023, April 18). AI and UX: How to Prepare for the Future of User Experience. Bunnyfoot. <https://www.bunnyfoot.com/2023/04/ai-and-ux-how-to-prepare-for-the-future-of-user-experience/>
15. Larson, J. (2023, May 18). AI and UX design. UsabilityHub. <https://usabilityhub.com/blog/ai-and-ux-design#:~:text=AI%20has%20several%20applications%20in,personalized%20content%20and%20product%20recommendations.>
16. Lee, R. (2023, July 25). 20+ Powerful AI-Based Tools for UX Research Toolkits in 2023. <https://www.userinterviews.com/blog/ai-ux-research-tools>
17. Kariuki, C. (2023, June 26). 8 Best AI UI/UX Design Tools for Lighting Fast Prototypes. Geekflare. <https://geekflare.com/best-ai-ui-ux-design-tools/>
18. Jess, A. (2023, August 15). Revolutionizing User Interface Design: How AI is Elevating the UI Game. <https://www.itmagination.com/blog/revolutionizing-user-interface-design-how-ai-is-elevating-the-ui-game>
19. This is how AI can unlock hidden talent in the workplace. (2022, May 20). World Economic Forum. <https://www.weforum.org/agenda/2021/06/jobs-work-skills-future-automation-ai>
20. Semetaite, J. (2023, March 1). 6 Meta-Skills Candidates Need in 2023 to Work Well with AI. Toggl Blog. <https://toggl.com/blog/meta-skills#:~:text=A%20meta-skill%20is%20a,ability%20to%20solve%20complex%20problems.>
21. Design Council. (2021, April). Beyond Net Zero: A Systemic Design Approach. Retrieved August 8, 2023, from <https://www.designcouncil.org.uk/our-resources/systemic-design-framework/>
22. Skills Development Scotland. (2021, September). A guide to meta-skills across the curriculum. Retrieved August 2023, from <https://www.skillsdevelopmentscotland.co.uk/what-we-do/scotlands-careers-services/education-team/meta-skills-toolkit/guidance-and-support/>



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