

The Application of AI to Facilitate Job Crafting Behavior in Employees

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ABSTRACT

While the application of artificial intelligence has been steadily gaining traction and commerciality, it has chiefly been used to foster a positive rapport with clientele, enhance customer satisfaction, and amplify consumer loyalty. The deployment of AI-driven technologies has certainly allowed firms to have an inflated bottom line however, the concentration on employees has been lacking. Consequently, the current research has employed a qualitative research design with thematic analysis as its investigative tool to explore insights into how AI can facilitate job crafting behaviors that will ultimately result in an improved employee experience. Key findings indicate that artificial intelligence can be instrumental in encouraging job crafting among employees in numerous ways. Firstly, under task crafting, by assuming control of repetitive and monotonous tasks, AI allows employees to engage in creative and innovative activities of their preference. AI, further, significantly shortens the time that a particular task requires to attain completion, allowing employees more time to engage in activities of their choice. Secondly, under skill crafting, AI emerged as a significant tool that facilitates the enhancement of existing design skills and the development of soft skills. AI also resulted as a helpful piece of technology that assists employees in avoiding design fixation. Under relationship crafting, AI led to an increase in social interactions at the workplace and assisted in building credibility and authority. Lastly, under cognitive crafting, AI has proven to be helpful in confidence building. Certain other significant themes emerged during the investigation and have been discussed later on.

Keywords: *Artificial Intelligence, Job Crafting, Employee Experience*

The corporate world has always been obsessed with every shiny new piece of technology that materializes (Leung, 2020). Artificial intelligence, as expected, has received the same golden treatment (Albrecht, 2022; Heath, 2024; Polisetty et al., 2023). Artificial intelligence (AI) may be defined as “a system’s ability to correctly interpret external data, to learn from such data, and to use those learnings to achieve specific goals and tasks through flexible adaptation” (Kaplan & Haenlein, 2019, p. 17). Known for its power to shake up board meetings (Halligan 2024; Heath, 2024), artificial intelligence is on the receiving end of the undivided attention from the world’s largest companies as they grind on to determine how artificial intelligence can be employed to boost their sales (Hildebrand &

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Bergner, 2019) and, in turn, their revenue and profits, helping them polish their quarterly and annual reports (Rathore, 2019).

As per the 2024 Artificial Intelligence Index report, AI has been receiving steadily increasing investments each year (Perrault & Clark, 2022). Moreover, AI has become a popular topic of discussion during the earnings calls of the Fortune 500 (Capul, 2024; Perrault & Clark, 2022). When it comes to employee productivity, AI has surfaced as a boon that boosts efficiency and effectiveness (Brynjolfsson et al., 2019; Perrault & Clark, 2022). However, while the applications of AI across industries are numerous and rising, concerns regarding data privacy (Humerick, 2017; Stahl & Wright, 2018) and the creation of deepfakes (Pantserev, 2020) are elevating simultaneously with implications for such important events as national elections (Perrault & Clark, 2022).

Regarding the utilization of artificial intelligence, the applicability of AI transcends the boundaries that separate sectors and industries (Chui et al., 2018). As per the available literature, AI-driven software has been deployed to ease the workloads in sectors such as hospitality (Jabeen et al., 2021; Limna, 2023; Mariani & Borghi, 2021), healthcare (Jiang et al., 2017; Shaheen, 2021), finance (Cao, 2021; Zheng et al., 2019), and education (Holmes & Tuomi, 2022; Zhai et al., 2021) to mention a few. Consequently, the current roles that are experiencing high levels of prevalence and popularity are expected to become redundant in the coming years (Brougham & Haar, 2017). The job requirements and associated skill requirements are also expected to undergo unprecedented modification. However, all these changes are taking place to ensure that companies can continue making supernormal profits (Wolff, 2023). Concerns regarding the application of AI for the benefit of employees are yet to ascend and take precedence over the current concerns of customer satisfaction.

Taking employees into consideration and with AI-based applications being increasingly utilized in all spheres of life, the question arises if AI and associated technologies can be utilized to improve the experience of employees at the workplace. Employees engage in the process of job crafting to improve their experience at their workplace and to enhance the level of harmony between their skills and their job tasks (Tims et al., 2021). Although research studies that investigate the effectiveness of AI-based applications in assisting employees with job crafting do not yet exist, a fair few studies have investigated the effectiveness of AI in completing delegated tasks (Candrian & Scherer, 2022), providing training (Clark, 2020; Poquet & De Laat, 2021), and determining preferences of users based on the data generated from the interaction of users and devices with internet connectivity (Khamaj & Ali, 2024; Qin & Jiang, 2019).

Accordingly, as per the role-based model, AI could assist employees in all forms of job crafting including task crafting, skill crafting, relationship crafting, and cognitive crafting (Wrzesniewski et al., 2013). Taking into consideration the resources-based model of job crafting, AI can assist employees in expanding structural resources by providing numerous training provisions, enabling them to upgrade their skills (Tims et al., 2012). AI can also help employees increase challenging job demands by suggesting stimulating tasks after analyzing patterns in data to determine employees' tastes and preferences. Lastly, employees may utilize AI to reduce hindering job demands that induce boredom by delegating underwhelming tasks to AI. When it comes to applications in the workplace, the results of this research would be directly applicable in the organizational context and can help firms in designing the workplace and improving employee experience.

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While there is a scarcity of literature specifically addressing AI-based job crafting, there are academic and industry opinions, admittedly at an elementary level, regarding each of the sub-elements of job crafting. These sub-elements include the impact of artificial intelligence on task delegation and the modification of the range of tasks one is able to perform (task crafting), the skills an employee is able to develop (skill crafting), and the kind of relationships the employee forms at the workplace (relationship crafting). Cognitive crafting, on the other hand, remains considerably more vague and entirely unexplored.

Task crafting, for example, involves altering the range and scope of tasks, and AI has the potential to significantly influence this aspect by automating routine tasks and allowing employees to focus on more complex and creative activities (Tschang & Almirall, 2021; Tyson & Zysman, 2022). Existing studies suggest that AI can assist in identifying and delegating monotonous tasks, thus enabling employees to engage in preferred work. This could enhance job satisfaction and productivity which is beneficial for employees and firms alike.

Skill crafting, another vital component, refers to employees looking for opportunities to learn new skills or enhancing existing ones (Bindl et al., 2019). AI-powered training programs and personalized learning platforms can provide tailored skill development opportunities for employees on the basis of their career aspirations (Xiao & Yi, 2020). This not only helps in personal growth but also aligns the employee's skills with the evolving demands of the job.

Relationship crafting involves the interactions and relationships employees build with their colleagues (Bindl et al., 2019). AI can facilitate this by offering tools that improve collaboration and communication (Mustofa et al., 2024a).

Cognitive crafting, which refers to altering the way employees think about their work and perceive the value of their job (Buonocore et al., 2020), is still an unexplored area when it comes to application AI.

Despite these insights, it is crucial to note that none of the existing studies can be considered comprehensive investigations into AI-driven job crafting. Most research to date has focused on one particular aspect rather than rendering a holistic view of how AI can support job crafting in all its forms. This indicates a significant gap in the literature and highlights the need for more in-depth analysis that explores the full potential of AI in facilitating job crafting.

For this study specifically, the focus is on the design industry and the aim is to study the impact of AI on the job crafting behaviours of designers. As would be expected, AI has a multitude of applications in design. Defining design in an operational manner is necessary before further elucidation upon the interaction between design and AI can be put forth. As per the International Council of Design (2022), "Design is a discipline of study and practice focused on the interaction between a person — a 'user' — and the man-made environment, taking into account aesthetic, functional, contextual, cultural, and societal considerations".

Considering the fact that multiple domains of design ranging from graphic to product exist, each field of design has been enthusiastic in its adoption of AI-based software and systems (Shi et al., 2023). For instance, if we were to consider graphic design, we would find evidence of designers engaging in skill crafting by utilizing AI to improve their existing design skills, specifically, skills pertaining to typography, layout, and semiotics (Guo et al.,

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2021; Maheshwari et al., 2019; Zheng et al., 2019). For user experience (UX) and user interface (UI) designers, the opportunities rendered by AI are abundant considering the deployment of AI for creating, at least initial prototypes of, UX and UI of web pages, landing pages (Zhang et al., 2016), smartphone applications (Deka et al., 2017), and similar digital installations.

Ever since AI has gained enough topicality to take over the conversations of today, a fear has permeated the workforce regarding the lack of job security or the elevated possibility of job loss that accompanies the adoption of AI. The design field is no stranger to such possibilities and concerns. However, the majority of researchers are of the opinion that AI would only strengthen the existing capabilities of designers instead of replacing them entirely (Heer, 2019; Sendhoff & Wersing, 2020).

As per the available literature, AI has been of use to designers in four distinct ways (Shi et al., 2023). Firstly, from a purely psychological perspective, AI can help designers understand the perspectives, motivations and general requirements of the people that that designing the applications. When designers are collecting data from research participants about their requirements for a particular product, software or application, the generated data is likely to be vague and and incomprehensible to a certain extent (Xu et al., 2014). As it can be difficult to make sense of the raw data even for designers with years of experience, AI has proven to be of use by helping designers interpret the data and generating insights after examining the raw data regarding user behavior. Search assistance is capable of enhancing the efficiency of initial ideas and prototypes, expediting the overall design process.

Secondly, considering the fact that digital means have gained widespread use over traditional methods of data collection, technological instruments such as cameras and physiological sensors are being utilized to collect user-generated data (Shi et al., 2023). While the amount of data collected has increased substantially, it is difficult to derive all potential insights from this raw data as it potentially contains information that is difficult for the human eye to catch. Further, humans also need much more time to analyze the raw data to generate useful insights. On the other hand, not only is AI capable of capturing useful information that the naked eye would miss but is also capable of processing the data at a much higher speed than the average designer. The AI technology is also capable of generating and processing the data in real-time — while the user is actively engaged with the application.

Thirdly, AI can help designers visualize or illustrate difficult-to-convey ideas by accumulating and integrating a range of materials that are useful for fulfilling a user requirement (Shi et al., 2023). While this initial visualization would be far from the final product that is delivered, it certainly assists the designers in attaining a starting point and conveying their thoughts in a manner that is understandable. Additionally, as previously mentioned, even if the designers forage for these materials themselves, it would take them much more time, energy, and effort to curate materials that would still be limited in comparison to what the AI software would be able to provide at a much faster speed. Designers may also be prone to design fixation that may deter them from inventing innovative solutions to the design problem, an issue that AI is immune to. Conclusively, AI can assist designers in creating novel, innovative solutions that are uniform and adhere to the brand elements at a faster pace.

Fourth, AI can assist designers by rendering a series of iterations of the design, thereby improving the final result (Shi et al., 2023). Considering that AI can now perform the

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necessary iterations, designers can utilize AI to refine their design without conducting multiple rounds of iterations themselves and to create an interface with improved usability. Lastly, AI can be used to test the viability of created visuals against expected preferences of the users. AI can accelerate testing by forecasting user behavior patterns from extensive datasets gathered through large-scale user studies and evaluating how specific designs match these patterns.

METHODOLOGY

Aim

Taking into consideration the applicability of artificial intelligence to predict users' behaviour and preferences, the current study aims to explore the effectiveness of AI-based applications to assist employees in job crafting, thereby improving the employee experience.

Research Objectives

- To investigate if artificial intelligence-based applications assist designers in job crafting.
- To understand if AI-driven job crafting can improve the overall experience of the designers in the workplace.
- To understand the themes that emerge at the intersection of artificial intelligence and job crafting and their implications for future research.

Research Design

The exploratory nature of the study calls for a primarily qualitative approach. To elucidate, qualitative research concerns itself with the in-depth understanding of the processes and phenomena that underlie the structure of the world as we see it. It also enquires into the lived experiences of people and the meaning that people attach to these experiences. While numerous methods of data collection exist under the umbrella that is qualitative research, including but not limited to focus group discussions, in-depth interviews, and observations, for the present study, semi-structured in-depth interviews have been utilized to ensure saturation of the topic under study and the generation of a large number of distinct insights (Aspers & Corte, 2019). The interviews were conducted to determine the satisfaction and engagement levels of employees who have considerable experience in engaging in job crafting through AI-based applications. Further, the current study also investigated the improvements that can be brought about in the AI-based training applications to better facilitate the job crafting process of the employees.

Sample

The sample of this study consisted of eleven designers who had been utilizing AI in their daily work tasks in different capacities. The data was collected until the point of saturation for the study was reached and no new insights were being generated from individuals being interviewed. The sampling technique employed was convenience sampling given the difficulty in acquiring study participants. While numerous (50+) potential participants were contacted, the majority of them either were hesitant to attend an online meeting with a stranger, or were not able to make time for a 30+ minute online meet. Hence, the 11 participants who agreed to participate were finally interviewed over the course of one month.

Data Collection

For the purpose of data collection for this study, a set of semi-structured interview questions was prepared that was based upon the theory of job crafting as propounded by Jane Dutton

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and Amy Wrzesniewski. The questions prepared underwent a thorough examination by an experienced professional in the field of organizational psychology. Furthermore, some inspiration for the questions was also obtained from the Job Crafting Questionnaire published by Slemp and Vella-Broadrick (2013) to ensure credibility and accuracy of the questions.

Procedure

Once enough participants for the study were acquired, the data collection process commenced by conducting semi-structured interviews at the participant's convenience. A recording device, high-quality smartphone, along with the in-built video recording mechanism was used to record the conversation after gaining explicit consent from the participant. Following the interview, participants were debriefed regarding the study's objectives and were provided an opportunity to ask any questions that they had about the study.

Data Analysis

To ensure that the maximum number of quality insights are derived from the raw data generated from the interviews, the data analysis method called thematic analysis was used for this research. Thematic analysis is not restricted to identifying the frequency with which a certain word or phrase presents itself in the data. It goes beyond the elementary counting to investigate the latent (implicit) and manifest (explicit) themes or ideas that emerge once the data has been transformed into an analyzable form. In the present study, all the themes that emerged in the raw data were first identified and then codified. Following the codification process, the codes were assigned to the passages or chunks of data that represented the themes associated with the codes. The entire process of data analysis was carried out using the qualitative data analysis software called MAXQDA. Once emergent themes were identified, an association between the literature and the data collected were done and are presented in the results section of the study.

RESULTS

The current analysis has been carried out at two levels. First is a surface-level analysis, also called as semantic analysis where manifest (explicit) themes are presented as is, that is, at face value. Second is the analysis and interpretation of deeper, underlying themes, that are not explicitly stated, referred to as latent analysis. All the themes presented below are corroborated by passages from the transcripts and the type of analysis and interpretation is mentioned alongside each theme.

The major themes that have been identified from the textual data generated are “Research & Inspiration”, “Meeting Summarization”, “Email & Communication Assistance”, “Creative & Preferred Tasks”, “Documentation & Writing Tasks”, and “Increased Productivity” under the parent theme of task crafting. Under the umbrella of skill crafting, three emergent themes, namely, “Soft Skill Development”, “Design Skills Enhancement”, “Design Fixation”, and “Medici Effect” have been grouped. For relationship crafting, the following themes have been identified — “Social Time at Work”, and “Credibility & Authority”. Lastly, “Confidence” and “Positive Outlook” are the identified themes that have coalesced under the parent theme of cognitive crafting.

Task Crafting

Research & Inspiration. All of the participants have been using artificial intelligence for brainstorming, research, and inspiration purposes. Designers use artificial intelligence to get a starting point on their project. If they need to create a graphic, for example, they would use AI to get sample graphics to get ideas for their own project.

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P: Mostly, what I'm using AI nowadays is to, is in the research phase mostly, when I need a lot of ideas I need to present. It helps me expand what I'm working on, right? If I have two ideas, I can drill down into them, expand them, and have a more comprehensive difference between two groups that I had, you know, before I might have had ideas that were half baked. And as I go, it fleshed out, but right now it's more of, the structure can be done. (Participant 3, Pos. 9)

When it comes to design, AI tools like Midjourney and platforms like Mobin and Dribbble are used to take inspiration for design elements, though the designs produced by AI are often only a starting point and require further work to fit specific project needs.

P: AI is great for inspiration. But I cannot use those in my designs. Even now, the designs that I have ever worked on and not just my current company, but others startups that I have worked for or other places that I've worked, there has never been a design directly made from AI, that an AI has come up with and that has directly moved to development. That's not how it works. It's not possible, AI is very preliminary, like I was saying how it's just for ideation. (Participant 10, Pos. 15)

Creative & Preferred Tasks. Now with AI in the picture, designers are able to focus on the tasks that they would like to focus on and can delegate certain repetitive and monotonous tasks to AI tools available to them. 9 out of the 11 participants mentioned being able to focus on tasks of their preference since the integration of AI at their workplaces.

R: Now that you are able to do your work faster, for example, creating personas which used to take you hours and now you can get that done in minutes, are you able to focus more on the tasks that you would like to focus on?

P: Yeah, absolutely.

R: All right. And what are those tasks exactly? What are the kind of tasks that you like to spend your time on and are able to do now?

P: As a designer, I would like, I would love to work on more ideas. So, whenever there's a problem and the problem has to be solved through a feature introduction in the app, I need to figure out what feature that would be. So, now I go to ChatGPT and ask what elements of the feature I would need. Then it gives me a list. So, I can test all those elements out quickly. But designing those features and trying them out and testing them out is something I like to do as a designer. So, as a designer, you like to create and you like to innovate. So, the creation and innovation part stays with me. But basic structure, the initial prototypes, which helps the process, is done by the AI. That's how I can focus on my part of the job more. (Participant 6, Pos. 62-65)

Increased Productivity. AI has also increased the speed by which they are able to finish their assigned duties. As stated by all of the 11 participants interviewed, the work that previously required hours to be completed, can now be finished in considerably less time.

R: Would you say that the use of AI tools has helped you you know do your work faster and has let you have more free time?

P: From the perspective of UX design, a little bit of yes or no, because as a UX designer, I do not have to create sit and create personas and think and validate them. So I can create four to five personas immediately on ChatPT and Gemini, validate with each other and get a persona done within like 30 minutes, which used to take me like three to four hours and then get validated with people around. (Participant 6, Pos. 53-54)

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Email and Communication Assistance. 2 out of the 11 participants claimed to have used artificial intelligence to assist them in drafting emails while all others have claimed to use AI for various forms of communication such as speeches and presentations.

Considering that drafting continuous emails and ensuring that all the processes are streamlined and documented while making sure that all concerned stakeholders are kept informed can be an exhaustive, time consuming and repetitive task like the participants in this study have mentioned. Hence, the assistance that artificial intelligence provides has not only reduced the time employees spend in continuously communicating with their colleagues but has also allowed them to become more concise and effective in getting their point across.

P: And from my perspective, there are many other AI tools which, you know, I use in order to, you know, make things simple for me, let's say, you know, sometimes my person has to follow up invoices or I have to follow. So, we have to put it in a, you know, let's say diplomatic manner. Okay. Where we go to chat GPT, we do it in, you know, short sentences and make it, you know, in not aggressive or not, you know, what to say, calm manner, but, you know, like affirmative and very rigid manner that, you know, we need it cleared and so on, so forth. Right. Which it is able to do quite well. (Participant 2, Pos. 11)

R: And how would you say that since the introduction of AI, your work, how has it changed? What are the tasks that you are able to do now that you weren't able to do before? And what are the tasks that you don't have to do anymore?

P: Writing emails, I mean, writing emails is something I don't really do nowadays. Because only that for now, creating presentations also to some extent, but you can say maybe 50% or 50%. I'll also make some changes on top of it, creating presentations also. (Participant 4, Pos. 26-27)

Documentation & Writing Tasks. Similar to drafting emails and other forms of communication, artificial intelligence has been instrumental in helping designers complete their other writing-based tasks.

R: Has there been any role of AI in easing your work?

P: Yeah, I have not used AI much in my day to day work.

R: Okay. But however much you have, is there any significant or any noticeable change for you?

P: Yes, it does improve my writing skills. Definitely. And it helps me you know, writing content, writing a document, making an MOM also is a pain point so it has helped with that. (Participant 7, Pos. 14-17)

Meeting summarization. 2 out of the 11 participants mentioned that AI has been helpful in summarizing key meeting points for them when they are not available to attend the meeting.

P: So, one of the application that we use is called Fireflip AI, which is kind of just a meeting summarization tool. So we can basically just connect with a meeting as, I'd say, a user, definitely listens to the conversation that two, three or more like, multiple people are having. And it transcribes it into text and according to the text, it kind of summarizes, then, it sends you an email of what all have been discussed in the meeting and who all were active. So that becomes very helpful for me because at times I'm not able to join certain meetings, but I do want to get that update and getting an update from a human, most of the time they just give keywords on what all was discusses. But [in case of AI] contextual clarification tends to be quite better. (Participant 1, Pos. 20)

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Skill Crafting

Design Skills Enhancement. Participants in the study noted that while their use of AI hasn't directly improved their design skills, it has helped them develop in other ways. One way is that AI tools has allowed the designers to test their skills and identify if improvements are needed.

R: Do you feel that the use of AI tools has enhanced your overall skill level?

P: As a designer, if I say, then the skills that I need to have are ideation, innovation, creativity, solving problems and functionality. These are the skills that I need to have as a good designer. These skills can only be enhanced by me, but I can test if my skills are in the right direction or not. (Participant 6, Pos. 72-73)

A noteworthy observation is that artificial intelligence has prompted the participants to take up training courses to better adapt to the AI software that are currently in use.

P: I did take one course, which was by Vaibhav Sinistry Growth School. Last year they came up with this boot camp, I think where they taught, you know, everything which has been released in AI field, which happened last year in June. So I took that up, learned things, I shared the credentials to my team members, they also went through it, you know, it was related to video, audio, visual, which is AI, sorry, MidJourney, you know, text to audio, text to image and all those things. So we got a good idea about all those things and things from there, which will really help us now. (Participant 2, Pos. 16-17)

Soft Skills Development. Artificial intelligence has also been of use to participants in the development of soft skills or communication skills to be specific. Participants have talked about using artificial intelligence to enhance their vocabulary, tonality and structure.

R: Have you ever used to any AI software to improve your existing skills, whatever they might be?

P: So, I go for, you know, I go for the public speaking every single day. Oh, today was also a public speaking conference for the full day. So that's why I got late. Yeah. So again tomorrow, we'll have a public speaking conference. So, for that sometimes I need help writing something, some speech, so it gives me points on how to write speech, what kind of content should be there, what kind of point is there. So in a way, yep, that, and sometime how to do an impromptu speech. So it will give you points. You can try audio method or something like that. So that's all it is there. And sometime, it helped me with the, you know, practice with my speech. (Participant 11, Pos. 93-98)

Medici Effect. A slightly unrelated, but significant, theme that has emerged in the context of skill crafting is the future skill requirements for designers as the collaboration between designers and artificial intelligence intensifies. 3 out of the 11 participants mentioned the need to acquire skills from sister industries in order to become better designers and stay on top of things. Such integration of relatively unrelated skills results in a medici effect that eventually leads to better results for all the stakeholders involved. A similar trend is expected to become the norm in the near future.

R: What, according to you, are the skills that designers would need to cope with how AI is progressing?

P: This thought has been lurking in my mind like since, like last one and a half years. I recently attended a workshop by MadRasters where we had the product designer, I think from, Microsoft Game. And he was talking about how product designers are supposed to like help, like not just push pixels, now they have to become the QA engineers or the testers. (Participant 5, Pos. 38-39)

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R: All right. So you mentioned about how it is necessary for designers to know how AI works and how API (Application Programming Interface) works. So do you think these are the skills that are necessary for designers to learn for their future collaboration with AI?

P: For sure. So a trend that I have seen is like product managers and product designers roles, like sort of merging. Right. And more is expected out of a product designer, for sure. So yeah, like having those skills and like having that business acumen, and you like, I would prefer a person who knows what those numbers mean, and why they are solving some problem over the other, for sure. (Participant 5, Pos. 53-54)

Design Fixation. As discussed in the literature review, designers may be subject to design fixation, that is, a particular way of designing, using specific elements of design and not being able to look beyond them. 2 of the 11 participants interviewed are of the opinion that AI can assist with design fixation by helping them become aware of their biases and preferences.

P: I have seen throughout my life, there could be, let's say, could be biasness. And let's say if I decided to create a poster, I might have certain affinity to certain colors, certain type of character, but it is obviously being able to generate visuals. (Participant 1, Pos. 4)

P: With so many AI tools available, you know, I keep myself in check. I'm keeping my biases towards certain things in, you know, under control, I'm, you know, able to understand the product, understand the brand properly. (Participant 9, Pos. 56)

Relationship Crafting

Social Time at Work. The social time that the employees are able to enjoy at work is subject to numerous factors other than the efficiency of AI in helping them complete their tasks. Nonetheless, 6 out of the 11 designers mentioned that AI has allowed them to enjoy more social time and that the implementation of AI has also improved the quality of their social life at work.

R: So you already mentioned that now you are able to focus more on the design aspects of things since the introduction of AI as it has allowed you to delegate the repetitive tasks to the AI software. Can you tell me a bit more about the tasks that you're able to focus on now and how that has enhanced your quality of life at your workplace?

P: Yeah, in terms of if I say quality of life at workplace. So I primarily do the design work. So other members of my team are like the product managers and senior designers. And of course, reviewing the design, when it's like, okay, this is good, good enough for development. I had to like recheck it. I have to make sure. the visuals that we are using, the words that we are using, it's kind of, again, like relevant. But so while I'm doing, while I used to, you know, like manually write the words and see that the sounds good, it was quite time consuming. And my kind of co-worker, they, like, they had to wait for me to finish the task. And sometimes they used to do the same thing, like while waiting, they used to like go out, drink tea, you know, just mid break, like mid work break, and social ice cream, which I used to miss out. So I believe like these, these small things are something definitely.

R: Yeah, I understand. So would you say that your social life at your work has improved since the introduction of AI?

P: I personally would say so. Yes. Although If I have to give a number to it, it could be quite negligible, because it's like a very like, I get barely get like 15, 20 minutes

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extra by not really thinking much about it, or depending on AI. But yeah, definitely I do feel I get more time, of like, more break times, I do get, I have to worry less and because I worry less about it. I'm able to open up better, I'd say. (Participant 1, Pos. 29-32)

Further, there have also been instances where conversations opened up and projects were launched just because of the progressive integration of AI in the workplace.

R: Has been instances where, since you are able to delegate some of your tasks to AI, that you are able to engage with more people at your workplace? I wanted to know if that has happened for you at all.

P: I think it's just like talking to people about what's possible. And so we did end up deciding that we'll create an app that is wrapped around AI and I think that for that project I was chosen just because I was dabbling into UI, sorry, my bad, AI a little bit. So I trained some AI software for that specific project. But that didn't take off, so I'm not allowed to talk about it, but yeah, for sure. Yeah, but it did manage to get me into a project. Yeah. So I think that opportunity opened up just because of AI. (Participant 5, Pos. 59-60)

However, a fair few designers also mentioned that while AI has allowed them to complete their tasks faster than ever before, it has also resulted in them being expected to take up more projects.

R: So since you mentioned that you were able to do your work faster, are you also able to spend more time with your colleagues, maybe in social events, now that you are able to, you know, do your work faster than you used to before?

P: So even if AI comes and does my entire job, I will get another task to complete, which is why it is not possible to have any free time in a corporate setup. Even if it's Saturday Sunday, you're working on a Saturday or Sunday. This is something like, even AI cannot help it. (Participant 6, Pos. 95-96)

The socialization aspect where employees are able to spend with each other also depends on their mode of working. In case of remote work, which has become quite common in the last few years, the impact of artificial intelligence on relationship crafting has not been very visible in terms of the community time spent amongst colleagues.

R: Do you think that you are able to interact with more people since you have started using AI? Like maybe conversations about AI or how it should be used or now you have more free time so you are able to engage more with your colleagues. Anything like that?

P: No, I would not say that's happening because we work in remote, we are in a remote culture. So I don't think that's helping me out in doing all these things. (Participant 7, Pos. 54-55)

Pressure to Use AI Tools. Another associated sub-theme that has emerged is the top-down-driven pressure on employees to make increasing use of AI tools to boost productivity and ultimately the profits for the firm.

P: In our team, the head of design and senior leadership, they keep pushing us to try using you know, all those AI related software to increase the speed of your output. (Participant 11, Pos. 12)

Authority & Credibility. Artificial intelligence has also allowed certain participants to build more authority and credibility in their workplaces by providing evidence and a theoretical

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background that validate their ideas. 2 out of 11 participants mentioned using AI to render support for the ideas that they were putting forth, helping them garner respect at their workplace.

P: Being a mid-level designer, the setup, the organization, expects me to have some kind of authority and specialization over the designs and to have a rationale behind everything that I pitch. So having a rationale for seven designs is a little gimmicky rather than having rationale for one concrete design. And I can now validate it with better, I can validate it better with AI. Now I have heatmaps to test the assumptions. I have proofs, you can say. If I just pitch one idea which solves the problem also with rationale and quantitative and qualitative answers, then as a mid-level designer that gives me an authority. Whenever she comes with an idea next, we do not need to rethink it. We can believe on her and we can let the feature go live. So that authority has come in with AI that I can just, I do not have to depend on seniors to test my ideas anymore. (Participant 6, Pos. 81)

Cognitive Crafting

Confidence. Associated with the authority and credibility theme that was discussed under relationship crafting, now, while presenting their work, designers feel confident in the viability of their ideas and proposals.

R: Has there been any change in the type of work that you do now that you are using AI? Maybe the tasks have changed?

P: I think with AI, I am working like a designer more than I was before. I'm able to solve bigger problems than I was able to before. With a better timeline, with more clarity, with a better solution. AI helps me think of a lot of different scenarios that in my mind before would have been unknowns. So, with the unknowns ironed out more, I have more confidence over the solutions I'm proposing. (Participant 3, Pos. 23-24)

Positive Outlook. All of the designers interviewed have a very positive attitude toward the continued collaboration between artificial intelligence and the design industry. Contrary to popular belief and the fear surrounding the prospect of AI taking over jobs, the participants in this study feel that as long as you grow and develop your skills, there will be no impact of artificial intelligence on one's ability to attain or retain their job.

R: You mentioned about the fear of a lack of job security because of AI. Can you elaborate more on that?

P: I would, I can't say no to it because, see, I know the most experienced ones will definitely get a job, right, but they would be doing job of like two or three people. I've seen those, like even when we optimized the processes inside our company, we saw that building an app that used to be over a week and now we are building it over two hours. So definitely AI will reduce the number of people working, but I think if you stay on top of it, then it's good for you, like definitely you'll get paid much higher if you know things. (Participant 5, Pos. 47-48)

Significant Themes

Client Trust and Relationship. Artificial intelligence has also been conducive in improving relationships with clients as noted by 4 out of 11 participants interviewed.

R: And what are these tasks specifically that you're able to focus on more now, like the tasks that you actually like to do? Can you tell me more about that?

P: I think that the biggest thing is the reduction in waste of time, because when I know what we are making and the client has an idea, because the communication was a big gap before, because I can't tell someone that this is my sketch, this is the

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wireframe, and it will look something like this, it will evoke these emotions and hope the client will be able to visualize it the same way I am. That doesn't work. So they get anxious. So with, with these, you know, quick ways to create visuals, I can now have mock ups and, you know, it's easier for the client to visualize what I am trying to tell them when they have something to see in front of them, which has colors, which is much more polished. (Participant 3, Pos. 27-28)

P: Also image generation using MidJourney, that's one more thing which I already spoke about. It has helped in, you know, generating more accurate images, which clients have liked. (Participant 2, Pos. 14)

Cost-cutting Measure. As per the 5 out of the 11 participants interviewed, artificial intelligence has and will continue to be utilized as a cost cutting measure. As a number of tasks can now be delegated to artificial intelligence, agency and business owners do not need to hire a huge workforce, allowing them to reduce their costs.

R: What do you think are the drawbacks of AI for design industry?

P: So I have two perspective here. Let's say if I was an employee working somewhere. And second thing is I'm a business owner where I have to run a profitable agency, and my employees are designers. I like to talk about, you know, from business perspective side first. So AI, I see, it is going to be quite helpful. And, you know, I see that my, I don't have to like hire, let's say 10 people. Now even seven people can do the work of those 10 people. Okay. So that's one big difference. (Participant 2, Pos. 36-37)

Creativity. The impact of artificial intelligence on creativity is another theme that has emerged from the data analysis. 3 out of the 11 participants interviewed are of the opinion that dependency on AI-driven tools brings down the levels of creativity of the designer.

P: So last year, in the early months, there were a lot of negative statements about AI, as in it's ruining the creative space. It's affecting the creative agencies or industry. Because now people are able to generate visuals by themselves. A lot of posts are based on it. Similarly, it has affected fashion as well, because now people simply generate a dress with AI and get it [3D] printed. Some people do see it as challenge and it does affect original creativity. (Participant 1, Pos. 56)

P: Maybe creativity, it impacts your levels of creativity if it's something that you're relying on it too much, it does. (Participant 4, Pos. 37)

High Costs of AI. AI-powered tools can be too expensive for the designers to purchase and use. The cost of the AI tools, especially the premium versions, determine their accessibility.

P: Previously it was called Visuals AI. So, Visuals AI has been taken up by Neurons and now it is only accessible to corporates and it costs a huge lump sum amount. So, our company is not yet able to afford it, but when we used it, we used to have very good AB testing results. (Participant 6, Pos. 50)

P: Nothing is free by the way. That's a bigger pain point. As we are a bootstrap company, we don't get a premium account of all these AI tools. (Participant 7, Pos. 59)

P: Basically, as a freelancer and as a designer, we try to move forward on free tools as much as we can. (Participant 8, Pos. 15)

Originality of Results. Along with the costs that AI tools incur, another factor that obstructs the usage of AI is the originality of the results it renders. Considering that the same artificial intelligence tools are available to, practically, everybody in the world, the results that the

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tools are able to generate are not unique or original and everyone who enquires about a particular topic receives a very similar response with only minor details changed.

P: When we're using AI and I want a logo with a medical sign. The logo that I have picked, other 50 people would have picked the same logo. Originality is not there. So we don't use AI much. It is just for basic work. (Participant 7, Pos. 58-59)

Data Privacy. As AI-driven tools are becoming increasingly assimilated in people's daily lives, concerns regarding data privacy have skyrocketed and this concern has been highlighted by 3 of the 11 participants interviewed.

P: And that data is definitely not secure. So, obviously, whatever we search, whatever we ask or whatever prompts we give, be it something fun, be it just for casual AI chatting, AI able to create or the parent company of that AI platform is able to create a persona or profile for us. According to that profile, likely it influences what we see on social media or just media. Obviously, it affects our content consumption as well.

P: But if you can say the AI, we can say there is a positive way, but there are more negative impacts going on in India. We have deepfake, and the data is not safe. And the government is doing nothing on it, I will say. There need to be more regulations. (Participant 8, Pos. 29).

Financial and Career Benefits. It appears that irrespective of the type of entity, AI has primarily assisted in designers and firms take on more work. In the below mentioned excerpt, the participant mentioned that they are able to work with multiple startups, courtesy of AI.

R: But would you say that AI has helped you have more free time so that you can focus on other things?

P: Are you talking about me only?

R: Yeah. Your personal experience.

P: Obviously. I just said I'm working for multiple startups. (Participant 9, Pos. 49-52)

Feeling Economy. A key theme that relates to the concept of a feeling economy discussed in the literature review section has been identified.

P: What you can do is be human. Okay. See industrial revolution came. People, they lost their jobs. But there were people who were smart enough to take that risk, try something else. Yeah, we have now. So maybe we can focus on the bigger things or focus on the things that machine can't do or focus on, you know, just building relationships so that people who can't use this machine can learn to use this machine. (Participant 9, Pos. 76-77)

DISCUSSION

The basic premise of the current study is to understand if AI can facilitate job crafting behaviors at the workplace and improve the work experience of employees. Numerous studies have investigated the applicability of artificial intelligence to determine users' patterns of behavior and preferences for job roles. As such, the current study has attempted to understand if the same methods of understanding users can be applied to employees and if, as a result, AI can help employees better identify their needs and ultimately engage in job crafting endeavors in such a manner that the result is an improved employee experience.

Task Crafting

Research and Inspiration. The integration of AI has been particularly instrumental in facilitating brainstorming sessions, conducting comprehensive research on industry standards, and deriving inspiration for the development of prototypes. During brainstorming, designers

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utilized AI-powered tools to determine possible use cases of certain features, generate initial wireframes and prototypes to build upon, and conjure up lists of sample names for brands, businesses, applications, and features.

As design research can be an exhaustive and time-consuming process (Wood, 2021), AI-driven software like ChatGPT and Google Gemini provide designers with an initial standpoint into which they can integrate their unique ideas and build their products. Furthermore, user research also involves repeated iterations as it requires foraging into the field each time a new feature is to be developed. AI-powered tools have also allowed the designers to limit this repetition by generating initial prototypes and user personas.

Designers have also used artificial intelligence to expand on their existing ideas as AI can provide a theoretical background for their ideas, eliminating the need to generate entirely new concepts. AI has also been instrumental in providing structure to ideas allowing designers to communicate meaningfully with stakeholders. However, it is of note that a design prototype generated by an AI-software cannot directly proceed onto the development stage. The prototype must be modified as per the requirements of the project, match the brand elements while maintaining its uniqueness and solving the problem that it is expected to solve.

Creative & Preferred Tasks. Designers can now delegate repetitive tasks to AI-driven software at their disposal. AI-based software has also empowered designers to concentrate on tasks aligned with their preferences and expertise. By automating routine tasks and streamlining processes, AI enables individuals to spend their time on tasks that require creativity. This change not only enhances productivity but also fosters innovation and the exploration of new ideas (Jan Bieser, 2022).

Increased Productivity. There was consensus among participants regarding the ability of AI to speed up tasks and processes. Generative AI is poised to significantly augment human productivity (McKendrick, 2023). According to Accenture (2023), as much as 40% of working hours could be automated or augmented by generative AI. This includes tasks like advising, coding, creative collaboration, and process automation.

Email & Communication Assistance. Participants in the study have utilized AI to help draft emails and other forms of communication such as presentations, thereby engaging in task crafting. AI not only accelerates employees' work by automating communication-related tasks but also guarantees the effectiveness of the communication that takes place. As per Microsoft (2024), by analyzing the context and intent of incoming emails, AI can generate personalized responses that are tailored to the specific needs of the sender. This not only saves time and energy but also ensures that messages are delivered effectively and efficiently. Furthermore, AI can handle routine tasks such as responding with out-of-office notifications or addressing recurring queries, allowing employees to focus on more strategic or complex aspects of their work, which again, facilitates job crafting behaviors.

Documentation & Writing Tasks. AI is capable of assisting employees expand on ideas and provide a concrete structure to the material. As per ClickUp, utilizing AI for documentation streamlines work by automating tasks such as data extraction, formatting, and content organization (Manikandan, 2024). AI also boosts accuracy by identifying inconsistencies and ensuring that the data is factually correct. AI enhances readability by analyzing writing style and suggesting improvements for clarity and conciseness, thereby improving the user

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experience. Additionally, AI-driven software can replace manual data entry and document management tasks, leading to increased cost efficiency.

Skill Crafting

Design Skills Enhancement. AI can assess individuals' skills and provide valuable feedback on areas needing improvement. This is particularly significant in fields like design, where skills such as ideation, innovation, creativity, problem-solving, and functionality are important.

While, for participants in this study, AI has not been a direct training source, it has encouraged them to seek learning opportunities, facilitating skill crafting. For instance, some participants have enrolled in courses to better understand and adapt to the AI software they use.

Soft Skills Development. The study reveals that artificial intelligence (AI) plays a significant role in developing participants' soft skills, particularly, communication. Participants have utilized AI tools to improve their vocabulary, tonality, and speech structure. One of the domains where AI can be of assistance is public speaking, specifically but not limited to, speech writing and impromptu speaking exercises. AI provides structured points and suggestions on content, which helps in creating powerful speeches. Additionally, AI tools offer practice opportunities, helping employees develop their delivery and presentation skills. AI-powered tools designed to assist in building communication skills, such as Poised, are already being developed by numerous firms and are expected to become mainstream in the near future (Deepgram, 2024).

Medici Effect. The Medici Effect refers to the concept of innovation and creativity that arises when different disciplines, cultures, or industries intersect (Johansson, 2017). In the context of the present study, the central idea alters to intend the integration of design specific skills with skills from sister disciplines such as product management and computer science which will ultimately result in better career outcomes for designers as AI becomes increasingly prevalent. The creation of medici effect implies the influence of AI on the requirements of new skills for employees and how AI is prompting designers to broaden their horizons to include skills from other sectors.

Design Fixation. Design fixation refers to the inclination of designers to prefer certain elements of design over others including but not limited to, colour palettes, formats, and themes. As per research, design fixation may prevent designers from coming up with innovative and creative ideas (Alipour et al., 2017).

Participants in the study talked about how AI is assisting them in overcoming and controlling their biases and keeping their affinity towards certain design elements in check, ultimately helping them enhance their existing design skills. Such control enables designers to come up with novel solutions to their problem, resulting in increased efficiency and satisfaction. However, contradicting studies exist that claim that AI may lead to an increased design fixation as the initial images generated by the AI software might be preferred over the subsequent images (Wadinambiarachchi et al., 2024). As such, further research is needed to determine the impact of AI on design fixation.

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Relationship Crafting

Social Time at Work. The assimilation of artificial intelligence (AI) into the workplace has created an expectation that the time saved by delegating tasks to AI-based software would afford employees more social time with colleagues. However, the study findings reveal that various factors beyond just AI accessibility are at play when it comes to the social time at work. By delegating repetitive tasks to AI, employees reported having more time to focus on design aspects and collaborate with team members. Further, the progressive integration of AI in the workplace led to new conversations about project opportunities involving AI. However, some employees expressed concerns about increased workloads and expectations to take on more projects. Additionally, the impact of AI on socialization depends on the mode of work. In remote work settings, where physical interactions are limited, the influence of AI on relationship crafting is less pronounced.

Pressure to Use AI Tools. The integration of AI at work has led to a new dynamic where employees are expected to not only perform better but also continuously adopt new AI tools to enhance productivity. This pressure, often led on by the top management, reflects the growing focus on leveraging AI technologies to improve efficiency and, ultimately, boost profits for the firm. Such pressure to make increasing use AI tools can have negative implications for employee well-being and job satisfaction.

Authority and Credibility. Artificial intelligence (AI) has not only transformed workflows and productivity but has also played a significant role in enhancing authority and credibility. The ability to validate ideas using AI tools has enabled individuals to garner respect and establish themselves as authoritative figures within their organizations. Participants in the study emphasized the importance of having a rationale behind their ideas, particularly in roles that require specialization and expertise, such as design. By utilizing AI-generated insights to validate their ideas and provide quantitative and qualitative evidence, participants have been able to reinforce the credibility of their proposals.

Cognitive Crafting

Confidence. This theme, closely associated with the authority and credibility discussed in the context of relationship crafting, highlights how AI empowers employees to feel more assured in the viability of their ideas and proposals. Participants in the study expressed a sense of transformation in their roles and responsibilities since incorporating AI into their workflow. With AI's assistance, employees perceive themselves as functioning more effectively in their roles, particularly in problem-solving capacities. Utilizing AI tools enables employees to carry out thorough research, analyze data, and test hypotheses, thus validating the effectiveness of their approaches, building their confidence.

Furthermore, the growth of confidence in individual work extends to teams and organizational culture. As employees become more confident in their abilities and ideas, it cultivates a positive workplace atmosphere and enhances workplace experience for employees.

Positive Outlook. Despite widespread fears about AI potentially displacing jobs, all designers interviewed expressed a positive attitude towards the continued integration of AI in their field. They believe that as long as individuals focus on personal growth, skill development, and keeping up with industry trends, AI will not negatively impact their ability to secure or maintain employment. The participants are of the view that while AI will

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displace jobs to a certain degree, new jobs will sprout and people who make the effort will be able attain job offers.

Significant Themes

Client Trust & Relationships. Participants mentioned that AI technologies have played a crucial role in improving client relationships by improving communication, visualization, and presentation. By using AI-powered tools for generating visuals, prototypes, and mock-ups, designers can provide clients with a clearer understanding of their design in the initial stages of the entire process, thereby reducing misunderstandings and anxiety that the clients may experience. Furthermore, AI-enabled image generation tools, such as Midjourney, contribute to the creation of high-quality and accurate visuals that clients are able understand, leading to increased satisfaction.

Cost Cutting Measures. Participants noted that AI enables tasks to be delegated more efficiently, reducing the need for a large workforce and ultimately leading to cost savings for agencies and businesses. While such advantages may be good for business growth, they also pose disadvantages in terms of job security for employees.

Creativity. There is a growing concern that excessive dependence on AI tools can result in a diminished level of creativity for designers. The participants are of the view that the usage of artificial intelligence to generate creative materials, such development can overshadow original creativity and lead to the homogenization of results.

High Costs of AI. The high cost of AI-powered tools emerged as a barrier for designers, particularly for those working in firms with smaller budgets or as freelancers. As AI tools, especially their premium versions can be expensive, especially across geographies, many employees are unable to access them, limiting their ability to engage in job crafting and incentivizing the development of affordable solutions.

Originality of Results. Given that AI tools are widely available, they often generate similar results for similar queries. Such homogenization can hurt the market value of designers' work and can make it harder for them to stand out. Conclusively, while AI can be useful for basic tasks, its limitations in producing truly original content mean that designers must still rely on their own creativity and expertise to deliver unique and innovative designs.

Data Privacy. A rising concern among employees using AI is how the AI software is collecting their data and how that information is potentially being exploited. There is a fear that personal and professional data could be misused resulting in breaches of privacy and identity theft. Participants expressed the desire for stricter government control over the usage of AI tools to ensure online security of users.

Financial & Career Benefits. Contrary to expectations, AI hasn't reduced workloads for designers. Instead, it has enabled them to take on more projects, leading to higher revenue and career growth. Freelancers, consultants, and employees alike have gained increased opportunities and profitability. Whether AI reduces workload depends on the individual and management. If employees use their free time to accept more projects or if management expects them to handle additional tasks, AI won't lighten the load.

Feeling Economy. As AI takes over more cognitive and technical tasks, a shift from the thinking economy to the feeling economy may be witnessed. Hence, designers may

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increasingly be required to develop soft skills and focus on relationship-building and emotional intelligence. One participant suggested that the future of design work might involve more human interactions, relationship building and mentoring roles. This shift brings to light the human skills that cannot be automated such as empathy, communication, and the ability to build and maintain relationships.

CONCLUSIONS

While the current research study has made clear that AI is likely to have a positive impact on employees' job crafting behaviours, future research should explore the long-term impacts of AI on job roles and job crafting within various industries. AI tools have also facilitated the enhancement of design skills by providing feedback and encouraging the development of additional skills like prompt engineering. Future research should look into the integration of AI for learning and development opportunities for employees. Concerning relationship crafting, while AI has the potential to enhance social time and interactions in the workplace by streamlining tasks and fostering collaboration, its impact is influenced by various factors such as workload, project demands, and management initiatives. Future research could explore strategies to increase the positive effects of AI on social dynamics while working on reducing potential drawbacks, particularly in remote work settings where face-to-face interactions are limited.

For cognitive crafting, while there haven't been a huge number of emergent themes, when it comes to job security, apprehensions mixed with hope exist. Designers remain optimistic about the opportunities presented by AI for enhancing their skills and performance. Further research could explore the job opportunities that are likely to arise once the current job roles that are prevalent in the thinking economy are displaced by AI. Lastly, while AI enhances efficiency, productivity, and client relationships, it also raises concerns about creativity, originality, cost, and data privacy. Future research should explore strategies to balance AI integration with the preservation of creativity and originality in design.

Investigating affordable AI solutions and their impact on small businesses and freelancers can provide insights into democratizing AI access. Additionally, examining the long-term effects of AI on job security, workforce dynamics, and data privacy will be crucial. Research on the evolving role of designers in the feeling economy, focusing on the development of interpersonal skills alongside technical expertise, can inform education and training programs. Addressing these areas will help shape a sustainable and equitable future for the design industry in the age of AI.

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Conflict of Interest

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