

1 One Is Not Enough: How People Use Multiple AI Models in Everyday Life

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5 People increasingly use multiple Multimodal Large Language Models (MLLMs) concurrently, selecting each based on its perceived
6 strengths. This cross-platform practice creates coordination challenges: adapting prompts to different interfaces, calibrating trust
7 against inconsistent behaviors, and navigating separate conversation histories. Prior HCI research focused on single-agent interactions,
8 leaving multi-MLLM orchestration underexplored. Through a diary study and semi-structured interviews ($N = 10$), we examine how
9 individuals organize work across competing AI systems. Our findings reveal that users construct primary and secondary hierarchies
10 among models that shift over usage context. They also develop personalized switching patterns triggered by task aggregation to
11 adjust effort and latency, and output credibility. These insights inform future tool design opportunities, supporting users to coordinate
12 multi-MLLM workflows.

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14 CCS Concepts: • Human-centered computing → Empirical studies in HCI.

15

16 Additional Key Words and Phrases: Multimodal Large Language Models (MLLMs), Multiple AI Models, Diary study

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1 Introduction

23 AI assistants have become ubiquitous productivity tools, with ChatGPT¹, Gemini², and Claude³ now supporting
24 diverse tasks including writing [5], programming [15], and health information seeking [20]. As these Multimodal Large
25 Language Models (MLLM)—AI systems capable of processing text, images, and code—have matured, people have begun
26 adopting multiple platforms concurrently rather than relying on a single provider [8]. This multi-MLLM practice arises
27 because each system offers distinct strengths: individuals select specific models for particular capabilities, such as one
28 for logical reasoning and another for creative generation [14, 21]. Strategically utilizing specific model capabilities has
29 emerged as a practical skill for optimizing individual workflows and achieving high-quality outcomes [5, 14]. With
30 MLLMs evolving rapidly and multi-platform use becoming routine, users increasingly mix and match models within
31 a single task to leverage their complementary strengths [4, 7]. Yet coordinating across multiple competing MLLM
32 platforms introduces cognitive overhead that existing research has not fully addressed [9].

33 Prior work on multi-device ecologies shows that people face friction when transferring context across platforms [9].
34 This context-delegation between platforms challenge intensifies with AI systems, which require users to adapt to
35 prompting styles [21], calibrate expectations against inconsistent behaviors [13], and manage divergent conversation
36 histories [11, 16]. Foundational HCI research has examined trust calibration [10, 18] and collaborative dynamics [6]

37¹<https://chatgpt.com/>

38²<https://gemini.google.com/>

39³<https://claude.ai/>

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53 within single-agent interactions. However, these frameworks assume a stable human-AI dyad rather than scenarios in
 54 which individuals switch between competing systems [12]. Recent studies of generative AI adoption in professional
 55 contexts focus on individual tool use rather than cross-platform orchestration [17]. Consequently, we have limited
 56 empirical understanding of how people develop strategies to allocate tasks, reconcile conflicting outputs, and maintain
 57 coherent workflows across multiple MLLM platforms.
 58

59 This study addresses this gap through a four-day diary study and semi-structured interviews examining how users
 60 organize and coordinate multiple MLLMs in everyday practice. We contribute: (1) an empirical characterization of the
 61 roles and relational hierarchies users assign to different MLLM systems, and (2) a taxonomy of coordination strategies
 62 users employ to manage cross-platform workflows. These findings offer design implications for tools that support users
 63 navigating an increasingly heterogeneous AI landscape. Two research questions guide our inquiries:
 64

- 65 • **RQ1)** What mental models do users construct when distributing tasks across multiple MLLMs?
- 66 • **RQ2)** What strategies do users develop to coordinate their interactions across multiple MLLM platforms?
 67

68 2 Methodology

69 2.1 Diary Study and Post-study Interview

70 To examine how people organize and coordinate multiple MLLMs in everyday practice, we conducted a qualitative design
 71 study that combines diary documentation with follow-up interviews, following recent methodological frameworks
 72 for evaluating AI tool adoption in-situ [3]. Over four days, participants logged their MLLM use through a web-based
 73 diary interface, submitting an entry each time they used an MLLM. Each entry recorded the model used, the rationale
 74 for selection, the prompt content, satisfaction, and emotional state, providing in-the-moment accounts of model
 75 coordination (see Appendix A). After the diary period, we conducted follow-up interviews (3 in-person, 7 remote) to
 76 further examine participants' model choices and workflow strategies. Interviews were facilitated by two researchers,
 77 with one lead researcher attending all sessions to ensure protocol consistency; questions probed perceived capabilities,
 78 role assignments, and workflow organization. Our study was approved by the Institutional Review Board.
 79

80 2.2 Participants

81 We recruited ten adults (6 female, 4 male; aged 23–29, $M = 26.1$, $SD = 1.60$; see Table 1) who met two criteria: (1)
 82 regular use of at least two MLLM services and (2) practical experience in using different models complementarily for
 83 personal or professional projects. This ensured that all participants possessed sufficient familiarity with cross-platform
 84 coordination. Participants were compensated approximately \$35 USD in local currency.
 85

91 Table 1. Self-reported Participant Demographics and MLLM Models Used
 92

ID	Age	Gender	Occupation	MLLM Models Used	Other AI Services Used
P1	26	M	Graduate student in Computer Science	ChatGPT, Gemini, Perplexity	Cursor
P2	27	M	Wildlife photographer	ChatGPT, Gemini, Claude	
P3	29	F	Graduate student in Industrial Design	ChatGPT, Gemini, Claude	
P4	25	F	Graduate student in Electrical Engineering	ChatGPT, Gemini	
P5	23	F	Graduate student in Electrical Engineering	ChatGPT, Gemini, Perplexity	Copilot
P6	25	F	Engineer / Software Developer	ChatGPT, Gemini, Claude, Samsung Gauss	
P7	27	F	Visual Development Designer	ChatGPT, Gemini, Claude	Copilot, Adobe Firefly, Freepik
P8	26	M	Full-stack Developer	Gemini, Claude	Antigravity
P9	27	M	Graduate student in Industrial Design	ChatGPT, Gemini	
P10	26	F	Graduate student in Industrial Design	ChatGPT, Gemini, Claude	

105 2.3 Data Collection and Analysis

106 We collected 129 diary entries ($M = 12.9$, $SD = 3.41$) and conducted 10 post-study interviews (duration: $M = 34.0$,
 107 $SD = 3.4$ minutes). Interviews were audio-recorded, transcribed, and translated into English. Three researchers
 108 conducted an inductive thematic analysis following Braun and Clarke [2]. We iteratively developed a shared codebook,
 109 generated expanded codes, and consolidated them into 11 final codes and four subthemes, which were synthesized into
 110 two overarching themes: (1) Individual MLLM Hierarchy Structures and (2) Cross-Platform Coordination Strategies. The
 111 coding process was iterative, with all authors holding regular discussions to resolve discrepancies and reach consensus.
 112

113 3 Findings

114 Our findings show that participants employed diverse, personalized ways of using and coordinating MLLMs. In the
 115 following section, we present: (1) the hierarchy structures participants formed across models, and (2) the strategies they
 116 used to navigate and coordinate multi-MLLM workflows.

117 3.1 Individual MLLM Hierarchy Structures

118 3.1.1 *Different Hierarchy Across Personal and Work Contexts.* When coordinating multiple MLLMs, all ten participants
 119 chose to utilize the primary model and turned to one or more secondary models as needed. The primary model was used
 120 for frequent, core tasks, while secondary models were used for verification (P2, P3, P5, P7), refinement (P3, P6, P9, P10),
 121 or more specialized needs (P2, P4, P5, P6, P7, P9, P10). However, its configuration shifted with context—particularly
 122 between personal and professional use. Across participants, we identified three recurring hierarchy patterns that
 123 describe how model roles were arranged across personal versus work contexts (see Figure 1).

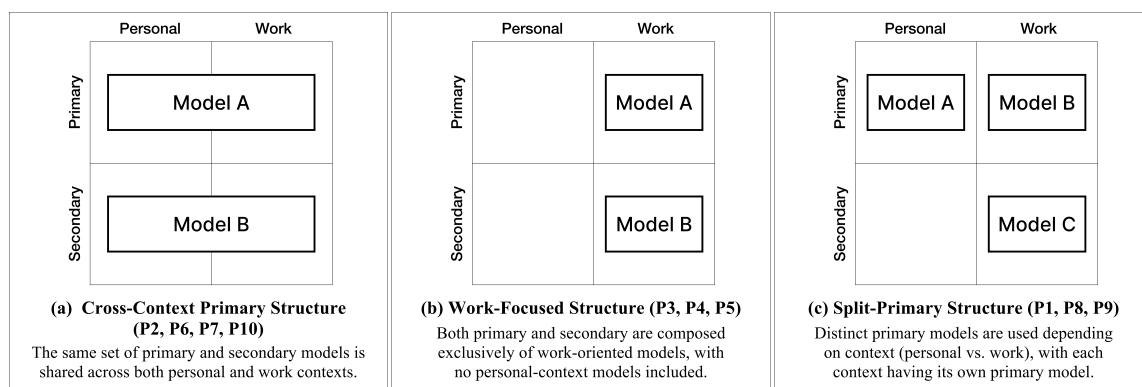


Fig. 1. Three recurring hierarchy patterns: (a) Cross-Context Primay, (b) Work-Focused, and (c) Split-Primary.

147 (a) **Cross-Context Primary Structure** Four participants (P2, P6, P7, P10) centered their workflows around a
 148 single favorite model used across both personal and professional contexts. They perceived the favorite model as a
 149 general-purpose assistant and kept interactions consolidated. Participants framed the preference around familiarity
 150 and accumulated interaction history—describing their favorite model as one that could interpret intent with minimal
 151 re-explanation. P6, for example, used ChatGPT for both emotional support and drafting workplace reports: “*I prioritize
 152 it because of the familiarity... when I ask a question, it already knows what I mean. I don’t have to explain myself too much.*”
 153 While these participants primarily stayed within their go-to model, they occasionally brought in secondary models

¹⁵⁷ when they wanted a second opinion or when a task called for capabilities they associated more strongly with another
¹⁵⁸ system.

¹⁵⁹ **(b) Work-Focused Structure** However, three participants (P3, P4, P5) kept one primary model dedicated to
¹⁶⁰ professional tasks, treating it as a productivity tool. They deliberately did not feel a strong need to use this primary
¹⁶¹ model in personal contexts. P5 said: “*I never use it for personal counseling because I don’t think it would be helpful... it just*
¹⁶² *feels like a waste of time.*” Instead, they brought in secondary models mainly to improve work efficiency—for example,
¹⁶³ to validate outputs, compare responses across models, and catch errors during professional workflows. P3 added: “*I*
¹⁶⁴ *paste what Claude said into ChatGPT and ask: ‘Claude thinks this, what do you think?’ to provoke a debate. I want them to*
¹⁶⁵ *discuss and find a compromise.*”

¹⁶⁶ **(c) Split-Primary Structure** Furthermore, three participants (P1, P8, P9) maintained distinct primary models for
¹⁶⁷ personal versus professional contexts. They typically used a lighter or faster option for low-stakes personal tasks, while
¹⁶⁸ reserving a stronger model for work tasks that demanded higher reliability. P1 explicitly separates his tools based on
¹⁶⁹ the cost of failure: “*For casual queries like pharmacy recommendations or vehicle maintenance, I use Gemini Fast because*
¹⁷⁰ *it’s the quickest and doesn’t require reasoning. But for work, I strictly use the highest-spec model (GPT-5.2) because fixing*
¹⁷¹ *errors from a cheaper model wastes more of my time than the token cost.*” For these participants, secondary models were
¹⁷² primarily considered for task-oriented work needs, whereas personal use tended to remain within the chosen personal
¹⁷³ primary model. P8 elaborated: “*I switch based on the specific feeling I remember from past usage. If the task requires*
¹⁷⁴ *grasping long contexts, I use Gemini. But if the logic is complex, Claude feels smarter, so I use Claude specifically for that.*”

¹⁷⁵ **3.1.2 Factors Shaping Model Hierarchies.** Across our study, participants formed model hierarchies, with the particular
¹⁷⁶ MLLM occupying each role continually shaped by (1) first impressions, (2) expert consensus and social signals, and (3)
¹⁷⁷ costs of model use, as participants re-evaluated their options.

¹⁷⁸ **First-Impression Lock-in** Early experiences with a model often set a reference point that continued to shape later
¹⁷⁹ preferences (P3, P4, P8). For instance, P3 established Claude as their primary writing agent based on a strong initial
¹⁸⁰ impression, contrasting its calm style with ChatGPT’s performative tone: “*ChatGPT felt like it was just showing off with*
¹⁸¹ *fancy words... whereas Claude felt calm, concise, and clear. Since that moment, that impression became solidified, so I still*
¹⁸² *maintain high trust in Claude for writing.*” This lock-in was especially pronounced when the model’s style or reasoning
¹⁸³ process felt aligned with how participants approached the task. P2, a wildlife photographer, favored Gemini because its
¹⁸⁴ image analysis process matched their birdwatching expertise: “*Gemini classifies birds exactly like a birdwatcher would,*
¹⁸⁵ *checking critical points like the beak shape or shin feathers first... The way it structures its observation matches my own*
¹⁸⁶ *thinking process.*”

¹⁸⁷ **Expert Consensus and Social Signals** Some participants (P8, P9) stayed attentive to which models were perceived
¹⁸⁸ as improving or leading, using expert opinions and community discussions as cues for when to re-evaluate their tool
¹⁸⁹ choices. P9 treated expert consensus as a strategic filter, monitoring the market without the burden of constant hands-on
¹⁹⁰ testing: “*I can never know better than those AI researchers... So I just trust their reviews. If they say on LinkedIn that a*
¹⁹¹ *model is rising, that becomes my only standard.*” Others (P2, P3, P7, P10) reported trying models after hearing positive
¹⁹² recommendations from people around them. In contrast, P1 deliberately bypassed social trends and relied strictly on
¹⁹³ technical performance evidence: “*I don’t look at social reactions. I only trust objective benchmarks like SWE-bench... If a*
¹⁹⁴ *new model scores higher, I switch immediately because relying on an inferior tool wastes my time.*”

¹⁹⁵ **Costs of Model Use** Model preferences were sometimes shaped less by perceived performance, as they balanced
¹⁹⁶ task suitability against recurring subscription fees or usage costs (P1, P5). For example, P1 offloads trivial daily queries

209 to Gemini Fast Mode to minimize operational costs, noting that the financial burden of his high-frequency usage
210 necessitates strict budget management “*My usage volume is huge... I already spend over 10 dollars a day. If I calculate that*
211 *monthly, it is an enormous amount, so cost is a very critical factor in my choices.*”

213 214 3.2 Cross-Platform Coordination Strategies

215
216 3.2.1 *Switch Model with Purpose.* Participants developed strategies to coordinate their interactions across multiple
217 MLLM platforms, switching intentionally by assigning different task stages to different models, adjusting effort and
218 latency to task demands, and cross-checking credibility-critical information.

219 **Assigning Models to Specialized Roles** A common coordination strategy was to break a task into stages and
220 assign each stage to the model perceived as strongest for that subtask (P2, P5, P6, P7, P9)—for example, ideation with
221 one model, drafting with another, and polishing or refinement with a third. P6 described this transition for their SOP
222 writing workflow: “*I initially brainstormed all my ideas with ChatGPT... it had really nice suggestions. But for the writing*
223 *style, I took the same essay from ChatGPT and put it in Claude for the polishing.*” This sequential switching reflected a
224 deliberate choice to leverage different models’ strengths at different points in the workflow.

225 **Managing Effort by Task Difficulty** Three participants (P1, P5, P9) also switched models based on the scale and
226 difficulty of the immediate task to maximize efficiency. This was a deliberate choice to avoid over-investing effort
227 or waiting for a slow, high-performance model to complete a trivial job. P9 switched between modes within a single
228 service to manage latency, treating them as agents with different speeds and ranks: “*If I require logical flow, I use Gemini*
229 *Thinking Mode. But to change just one word in the result, I switch to Fast Mode immediately... It feels like handing a trivial*
230 *task to a faster, lower-ranked entity who doesn’t need to think deeply.*”

231 **Cross-Checking for Credibility** When information needed to be reliable, participants (P2, P3, P5, P7) adopted a
232 cross-checking strategy by switching across platforms to verify outputs and reduce hallucination risk. This strategy was
233 often implemented as a simple one-step verification: participants took the initial output to another model to confirm
234 key claims. While many participants relied on this single-step check, P7 used a three-stage sequence (ChatGPT →
235 Gemini → ChatGPT) to locate evidence and then return to the original model to assess validity: “*I paste ChatGPT’s*
236 *output into Gemini and ask it to find supporting evidence. Then, I feed that evidence back into ChatGPT and ask: ‘Is this*
237 *evidence actually correct?’... It is essentially a three-stage validation process.*”

238 3.2.2 *Don’t Migrate, Iterate Instead.* Rather than migrating across platforms, some participants sought to improve
239 output quality by iterating with a single model. They described two reasons for this choice: (1) the model already knew
240 their context, making switching costly; and (2) when outputs fell short, they sometimes located the source of failure in
241 their own input specification rather than model capability, leading them to revise and clarify their requests instead of
242 migrating.

243 **No Resetting the Relationship** Four participants (P2, P4, P6, P10) sometimes chose to stick with a familiar model
244 because re-establishing background and personal context elsewhere felt more costly than any likely performance gain.
245 P2 avoided switching away from Gemini for personal hobbies, noting that retraining a new model on his specific
246 persona would require excessive effort: “*Gemini knows I’m crazy about birds... but Claude would just think I’m a weirdo. I*
247 *could theoretically spend a whole day taming Claude to understand my context, but that is just too annoying.*”

248 **Blame the Prompt, Not the Model** When results were unsatisfying, participants (P1, P8, P9) sometimes focused on
249 improving how they prompted rather than blaming the model, iterating until the output met their needs. P9 described
250 this mindset explicitly, comparing poor prompting to user error in driving: “*Being unsatisfied after lazy prompting is*

*261 like a bad driver claiming a Tesla is a bad car... I just need to steer it better." P1 similarly framed prompt refinement as a
 262 debugging exercise, iterating on prompts and test cases with the same model until the output met their requirements:
 263 "If the result is unsatisfactory, it is usually because I gave insufficient information. So I don't switch; I just provide more test
 264 cases and grill the model until it passes the criteria."*

267 4 Discussion

*268 Our findings show that participants managed MLLM ecosystems through hierarchical organization and deliberate
 269 coordination rather than relying on a single assistant [4]. Across contexts, users treated models as an evolving repertoire:
 270 they assigned primary and secondary roles, re-evaluated these roles in response to shifting signals (e.g., first impressions,
 271 social cues, and costs), and developed routines for switching, verification, and effort allocation. Whereas much prior
 272 work has emphasized single-system use [1, 19], our results highlight cross-model coordination as an ongoing practice
 273 of orchestrating an AI ecosystem. Building on this, we highlight two design opportunities. First, tools could better
 274 support multi-model use by being workflow-aware, preserving the user's task structure and context while helping
 275 them choose an appropriate model for the situation at hand. For instance, we can design a system that users could
 276 be able to move from ideation in one model to drafting or polishing in another without having to reconstruct the
 277 task framing or re-specify key constraints each time. This would let users leverage complementary strengths with
 278 less friction when switching. Second, memory partitioning could help users to protect distinct model contexts. While
 279 existing solutions offer a binary choice between full retention and total loss, this approach is considered unoptimal for
 280 supporting granular memory management [13]. For example, topic containers could segregate histories by domain
 281 (e.g., "Coding," "Health," "Creative") within a single interface. This selective context portability would advance beyond
 282 Amershi et al. [1]'s transparency guidelines toward user-controlled curation.*

289 5 Limitations and Future Work

*290 We acknowledge two primary limitations that motivate future work. First, our participants were primarily in their
 291 twenties (N=10) and drawn from a limited range of occupations; while this sample size is appropriate for qualitative
 292 inquiry, broader age groups and more diverse professional backgrounds would help assess how model hierarchies and
 293 coordination practices vary across populations and domains. Second, our four-day diary captured everyday patterns
 294 but not longer-term dynamics (e.g., shifts after major updates); longitudinal work could track how releases or pricing
 295 changes reshape preferences over time.*

300 6 Conclusion

*301 We presented a qualitative study of how users navigate and coordinate across multiple MLLMs. Through a diary study
 302 and follow-up interviews, we characterized (1) how participants structured model hierarchies across personal and
 303 professional contexts and (2) the coordination strategies they used across platforms. This work is timely because, as
 304 MLLM ecosystems evolve rapidly, users increasingly need practical skills for selecting, combining, and validating
 305 model outputs in everyday practice. Our findings offer an empirical account of how users orchestrate multiple models,
 306 complementing prior human–AI interaction work that has primarily examined single-system use. These results point
 307 to design opportunities for helping users adapt to evolving AI ecosystems by supporting effective model selection,
 308 cross-model coordination, and reliability-oriented use.*

313 References

- 314 [1] Saleema Amershi, Dan Weld, Mihaela Vorvoreanu, Adam Fourney, Besmira Nushi, Penny Collisson, Jina Suh, Shamsi Iqbal, Paul N. Bennett, Kori
 315 Inkpen, Jaime Teevan, Ruth Kikin-Gil, and Eric Horvitz. 2019. Guidelines for Human-AI Interaction. In *Proceedings of the 2019 CHI Conference
 316 on Human Factors in Computing Systems* (Glasgow, Scotland Uk) (*CHI '19*). Association for Computing Machinery, New York, NY, USA, 1–13.
 317 doi:10.1145/3290605.3300233
- 318 [2] Virginia Braun and Victoria Clarke. 2006. Using thematic analysis in psychology. *Qualitative Research in Psychology* 3, 2 (2006), 77–101.
 319 arXiv:<https://doi.org/10.1191/1478088706qp063oa> doi:10.1191/1478088706qp063oa
- 320 [3] Jenna Butler, Jina Suh, Sankeerti Haniyur, and Constance Hadley. 2025. Dear Diary: A Randomized Controlled Trial of Generative AI Coding
 321 Tools in the Workplace . In *2025 IEEE/ACM 47th International Conference on Software Engineering: Software Engineering in Practice (ICSE-SEIP)*. IEEE
 322 Computer Society, Los Alamitos, CA, USA, 319–329. doi:10.1109/ICSE-SEIP66354.2025.00034
- 323 [4] Butler, Jenna, Jaffe, Sonia, Janßen, Rebecca, Baym, Nancy, Hecht, Brent, Hofman, Jake, Rintel, Sean, Sarrafzadeh, Bahar, Sellen, Abigail, Vorvoreanu,
 324 Mihaela, and Teevan, Jaime. 2025. *Microsoft New Future of Work Report 2025*. Technical Report MSRTR-2025-58. Microsoft Research. <https://aka.ms/nfw2025>
- 325 [5] H. Dang, J. Lehman, and D. Buschek. 2024. Choice Over Control: How Users Write with Large Language Models Using Diegetic and Non-Diegetic
 326 Prompting. In *Proceedings of the CHI Conference on Human Factors in Computing Systems*. ACM, New York, NY, USA.
- 327 [6] Katy Ilonka Gero, Tao Long, and Lydia B Chilton. 2023. Social Dynamics of AI Support in Creative Writing. In *Proceedings of the 2023 CHI Conference
 328 on Human Factors in Computing Systems* (Hamburg, Germany) (*CHI '23*). Association for Computing Machinery, New York, NY, USA, Article 245,
 329 15 pages. doi:10.1145/3544548.3580782
- 330 [7] Xinyi Hou, Yanjie Zhao, and Haoyu Wang. 2025. LLM Applications: Current Paradigms and the Next Frontier. arXiv:2503.04596 [cs.SE] <https://arxiv.org/abs/2503.04596>
- 331 [8] Imagining the Digital Future Center. 2025. *Close Encounters of the AI Kind: Main Report*. Technical Report. Elon University. <https://imaginethedigitalfuture.org/reports-and-publications/close-encounters-of-the-ai-kind/close-encounters-of-the-ai-kind-main-report/> Accessed: 2026-01-21.
- 332 [9] Tero Jokela, Jarno Ojala, and Thomas Olsson. 2015. A Diary Study on Combining Multiple Information Devices in Everyday Activities and Tasks.
 333 In *Proceedings of the 33rd Annual ACM Conference on Human Factors in Computing Systems* (Seoul, Republic of Korea) (*CHI '15*). Association for
 334 Computing Machinery, New York, NY, USA, 3903–3912. doi:10.1145/2702123.2702211
- 335 [10] Rafal Kocielnik, Saleema Amershi, and Paul N. Bennett. 2019. Will You Accept an Imperfect AI? Exploring Designs for Adjusting End-user
 336 Expectations of AI Systems. In *Proceedings of the 2019 CHI Conference on Human Factors in Computing Systems* (Glasgow, Scotland Uk) (*CHI '19*).
 337 Association for Computing Machinery, New York, NY, USA, 1–14. doi:10.1145/3290605.3300641
- 338 [11] Q. Vera Liao, Daniel Gruen, and Sarah Miller. 2020. Questioning the AI: Informing Design Practices for Explainable AI User Experiences. In
 339 *Proceedings of the 2020 CHI Conference on Human Factors in Computing Systems* (Honolulu, HI, USA) (*CHI '20*). Association for Computing Machinery,
 340 New York, NY, USA, 1–15. doi:10.1145/3313831.3376590
- 341 [12] Helena Lindgren. 2025. Emerging Roles and Relationships Among Humans and Interactive AI Systems. *International Journal of Human–Computer
 342 Interaction* 41, 17 (2025), 10595–10617. arXiv:<https://doi.org/10.1080/10447318.2024.2435693> doi:10.1080/10447318.2024.2435693
- 343 [13] Ewa Luger and Abigail Sellen. 2016. "Like Having a Really Bad PA": The Gulf between User Expectation and Experience of Conversational Agents.
 344 In *Proceedings of the 2016 CHI Conference on Human Factors in Computing Systems* (San Jose, California, USA) (*CHI '16*). Association for Computing
 345 Machinery, New York, NY, USA, 5286–5297. doi:10.1145/2858036.2858288
- 346 [14] Jonas Oppenlaender, Rhema Linder, and Johanna Silvennoinen. 2025. Prompting AI Art: An Investigation into the Creative Skill of Prompt
 347 Engineering. *International Journal of Human–Computer Interaction* 41, 16 (2025), 10207–10229. arXiv:<https://doi.org/10.1080/10447318.2024.2431761>
 348 doi:10.1080/10447318.2024.2431761
- 349 [15] A. Sarkar, A. D. Gordon, C. Negreanu, J. Poetzsch-Heffter, S. S. Ragavan, and B. Zorn. 2024. CollabCoder: A Lower-barrier, Live-coding Environment
 350 for Learning to Code with AI. In *Proceedings of the CHI Conference on Human Factors in Computing Systems*. ACM, New York, NY, USA.
- 351 [16] Sangho Suh, Bryan Min, Srishthi Palani, and Haijun Xia. 2023. Sensecape: Enabling Multilevel Exploration and Sensemaking with Large Language
 352 Models. In *Proceedings of the 36th Annual ACM Symposium on User Interface Software and Technology* (San Francisco, CA, USA) (*UIST '23*). Association
 353 for Computing Machinery, New York, NY, USA, Article 1, 18 pages. doi:10.1145/3586183.3606756
- 354 [17] Macy Takaffoli, Sijia Li, and Ville Mäkelä. 2024. Generative AI in User Experience Design and Research: How Do UX Practitioners, Teams, and
 355 Companies Use GenAI in Industry?. In *Proceedings of the 2024 ACM Designing Interactive Systems Conference* (Copenhagen, Denmark) (*DIS '24*).
 356 Association for Computing Machinery, New York, NY, USA, 1579–1593. doi:10.1145/3643834.3660720
- 357 [18] Takane Ueno, Yuto Sawa, Yeongdae Kim, Jacqueline Urakami, Hiroki Oura, and Katie Seaborn. 2022. Trust in Human-AI Interaction: Scoping Out
 358 Models, Measures, and Methods. In *Extended Abstracts of the 2022 CHI Conference on Human Factors in Computing Systems* (New Orleans, LA, USA)
 359 (*CHI EA '22*). Association for Computing Machinery, New York, NY, USA, Article 254, 7 pages. doi:10.1145/3491101.3519772
- 360 [19] Qian Yang, Aaron Steinfeld, Carolyn Rosé, and John Zimmerman. 2020. Re-examining Whether, Why, and How Human-AI Interaction Is Uniquely
 361 Difficult to Design. In *Proceedings of the 2020 CHI Conference on Human Factors in Computing Systems* (Honolulu, HI, USA) (*CHI '20*). Association for
 362 Computing Machinery, New York, NY, USA, 1–13. doi:10.1145/3313831.3376301

- 365 [20] Hye Sun Yun and Timothy Bickmore. 2025. Online Health Information–Seeking in the Era of Large Language Models: Cross-Sectional Web-Based
366 Survey Study. *J Med Internet Res* 27 (31 Mar 2025), e68560. doi:10.2196/68560
367 [21] J.D. Zamfirescu-Pereira, Richmond Y. Wong, Bjoern Hartmann, and Qian Yang. 2023. Why Johnny Can't Prompt: How Non-AI Experts Try (and
368 Fail) to Design LLM Prompts. In *Proceedings of the 2023 CHI Conference on Human Factors in Computing Systems* (Hamburg, Germany) (CHI '23).
369 Association for Computing Machinery, New York, NY, USA, Article 437, 21 pages. doi:10.1145/3544548.3581388

370 Received 20 February 2007; revised 12 March 2009; accepted 5 June 2009
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