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## Section 1

Conversational AI and LLM chatbots are everywhere, making life easier and conversations smarter. But have you ever wondered about the energy they consume? Every chat, every request, and every response requires computing power—and that means real-world energy use.

**Did you know** that with just 5 prompts you could power a 1 W device like a small speaker for 1 hour💡

**That makes us curious.**

How aware are you of conversational AI's resource consumption? This short survey will take **less than five minutes**, and your insights will help us understand public awareness about conversational AI's environmental impact.

This survey is a part of the research project "**Designing towards higher user awareness: UI strategies for reducing conversational AI energy consumption**" at the School of Computer Science (HSI) of the University of Applied Sciences and Arts Northwestern Switzerland (FHNW).

Our aim is to better understand how people use conversational AI or LLM chatbots, shed light on their environmental impact, and discover what features might help to use them more sustainably. Therefore, your voice matters!

*The survey will be open for a month, **from 18.03.2025 to 18.04.2025**.*

*You can complete it anonymously; if you'd like to see the results, please leave your email address at the end.*

Note that we will use the terms "**conversational AI**" and "**LLM chatbot**" interchangeably in this survey.

👉 Start the survey now!

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## Section 2 Usage Patterns - Part 1

*First, tell us about your experience and habits when using conversational AI tools.*

1. Q1: How would you describe your overall technical proficiency?\*
- a. Beginner (little to no technical knowledge)
- b. Intermediate (comfortable using technology for basic tasks)
- c. Advanced (can code or work with AI tools)
2. Q2: Which of the following best describes your familiarity with conversational AI (e.g., ChatGPT, Bard, Claude, etc.)?\*
- a. I've never heard of them (no familiarity)
- b. I've heard of them but never used them (aware, but not a user)
- c. I've used them occasionally (infrequent user)

- d. I'm a regular user (frequent user)
- e. I'm an advanced user (heavy/integrated usage)

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### Section 3 Usage Patterns - Part 2

*Now, we would like to get to know your conversational AI usage in more detail.*

3. [Q2=c,d,e]  
How frequently do you use conversational AI tools? (single-select)\*
  - a. Several times a day
  - b. A few times a week
  - c. A few times a month
  - d. Once a few months
4. [Q2=c,d,e]  
What types of conversational AI services do you use? (please select all that apply)\*
  - a. Text-based AI (e.g., ChatGPT, Google Bard)
  - b. Image/Video generation AI (e.g., DALL·E, MidJourney, Runway)
  - c. Code assistance (e.g., GitHub Copilot, Tabnine)
  - d. AI-driven search engines (e.g., Perplexity, Google Search AI)
  - e. Speech recognition/assistants (e.g., Siri, Alexa, Google Assistant)
  - f. Other (please specify)
5. [Q2=c,d,e]  
How do you mainly work with LLMs? (single-select)\*
  - a. I use tools, like ChatGPT, Claude, etc., directly
  - b. I directly interact with the LLMs via API or custom integrations
  - c. Other (please specify)
6. [Q2=c,d,e]  
What are your primary reasons for using LLM chatbots? (please select all that apply)\*
  - a. Searching for information
  - b. Research & learning
  - c. Creative writing/content generation
  - d. Coding assistance
  - e. Entertainment & casual conversations
  - f. Personal organization (e.g., summarizing, scheduling)
  - g. (please specify)
7. [Q2=c,d,e]  
Roughly how much time do you spend actively using such tools or interacting with LLMs **on a typical day**? (single-select)\*
  - a. Less than half an hour
  - b. Half-one hour
  - c. 1 - 2 hours
  - d. More than 2 hours
  - e. I am not sure how to measure my usage

- f. I don't see the necessity to track my time spent
8. [Q2=c,d,e]  
Which device do you primarily use to access LLM chatbots? (single-select)\*
- a. Desktop/Laptop
  - b. Smartphone
  - c. Tablet
9. [Q2=c,d,e]  
Do you use a paid license for access to an LLM chatbot (e.g., ChatGPT Plus, Copilot Pro)? (single-select)\*
- a. Yes
  - b. No, but I thought about it
  - c. No, I don't see the reason for it currently
  - d. No, I never will
10. [Q2=c,d,e]  
How important are LLM chatbots in your daily workflow? (single-select)\*
- a. Essential
  - b. Useful but not critical
  - c. Nice to have, but rarely needed
  - d. Not important

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#### **Section 4 Environmental Awareness**

*Now, we would like to explore your knowledge and perceptions of the energy use and environmental impact of conversational AI*

11. On a scale of 1–5, how concerned are you about the environmental impact of technology in general? (single-select)\*
- a. 1 = Not concerned at all
  - b. 5 = Extremely concerned
12. Are you aware that LLM chatbots consume significant energy and have a massive environmental impact? (single-select)\*
- a. Yes. I am well aware
  - b. I am somewhat aware
  - c. No, I did not know
13. Compared to a typical Google search, how much energy do you believe a single ChatGPT prompt consumes roughly? (single-select)\*
- a. Less energy than a typical Google search
  - b. About the same amount of energy as a Google search

- c. Around 2× more energy
  - d. Around 5× more energy
  - e. Around 10× more energy
  - f. I'm not sure / I can't estimate
14. How many ChatGPT queries do you think use roughly the same amount of energy as to fully charge an iPhone 14 (from 0% to 100%)? (single-select)\*
- a. About 20 queries
  - b. About 50 queries
  - c. About 100 queries
  - d. About 1'000 queries
  - e. About 10'000 queries
15. Do you agree that LLM chatbots should generally be optimized to reduce energy consumption? (single-select)\*
- i. 1 = Strongly disagree
  - ii. 5 = Strongly agree
16. Currently, AI companies don't disclose a lot of information about the energy consumption of their models. Do you think AI companies should be more transparent about the environmental impact of their models and products?
- a. 1 = Strongly disagree
  - b. 5 = Strongly agree

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### **Section 5 Reimagine Conversational AI/chatbots**

*Finally, we'd love your input on potential sustainability features and how they might influence your usage.*

17. On a scale of 1-5, how important is the environmental impact of conversational AI in your decision to use any such services??\*
- a. 1 = Not important at all
  - b. 5 = Extremely important
18. Would you like LLM chatbots to provide an "Eco Mode" that reduces computational power for less demanding queries? (single-select)\*
- a. 1 = Not at all interested
  - b. 5 = Extremely interested
19. Would you prefer to use an LLM chatbot that demonstrates a smaller carbon footprint, even if it is slower or less feature-rich? (single-select)\*

- a. 1 = Do not prefer at all
  - b. 5 = Strongly prefer
20. How important is it for you to see energy consumption information related to your conversational AI usage? (single-select)\*
- a. 1 = Not important at all
  - b. 5 = Extremely important
21. If such usage information was provided, would it influence how you use LLM chatbots? (single-select)\*
- a. 1 = It would have no influence
  - b. 5 = It would strongly influence
22. Would you like to set limits on your LLM chatbot usage based on environmental impact? (single-select)\*
- a. Yes
  - b. No
  - c. Unsure
23. Would you be agree to pay a small fee or donation to offset the carbon emissions of your LLM chatbot usage? (single-select)\*
- a. 1 = Strongly disagree
  - b. 5 Strongly agree
24. Do you have any other thoughts on how conversational AI could be optimized for sustainability? (Open-ended text box)
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## **Section 6 About you**

*Before wrapping everything up, please tell us a bit about yourself.*

25. Which age group do you belong to? (single-select)\*
- a. 18–29
  - b. 30–44
  - c. 45–60
  - d. Above 60
26. What is your gender?\*
- a. Male
  - b. Female
  - c. Divers
  - d. Other (please specify)

27. Which of the following best describes your current role in your organization? (single-select)\*

- a. Student / Intern
- b. Academic / Researcher / Educator
- c. Developer / Engineer
- d. Data Scientist / Analyst
- e. Manager / Team Lead
- f. Consultant / Advisor
- g. Operations / Administrative
- h. Non-technical / Business-focused
- i. Other (please specify)

28. In which business domain are you primarily working currently? (single-select)\*

- a. Education / Academia
  - b. Software / IT Services
  - c. AI / Machine Learning
  - d. Finance / Banking
  - e. Healthcare / Life Sciences
  - f. Manufacturing / Industry
  - g. Government / Public Sector
  - h. Marketing / E-commerce
  - i. Media / Entertainment
  - j. Nonprofit / Social Sector
  - k. Other (please specify)
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***That's it, thanks a ton!***

If you're interested in receiving the results of this survey please leave your email below.