

Reflection on Human-Centered AI (HCAI)

Human Centered AI (HCAI) is the process of utilizing artificial intelligence with humans placed as the priority. It does not attempt to replicate humans, replace human thinking, or make machines that think like humans. This chapter discusses how computers and humans are not the same kind. Instead, humans are creative, feel emotions, can experience life through culture, and have responsibilities that no computer program can truly emulate. Technology should simply be our "supertool" that helps us perform at a higher capacity instead of trying to be human. The internet, email, cell phones, and digital libraries are all examples of how technology allows us to do more than we could before without taking away our ability to create.

I agree with that statement because AI works best when assisting humans rather than autonomously. There's a reason doctors, teachers, lawyers, etc. are humans: empathy, morals, individual experience, and responsibility. AI may be able to read through thousands of articles in seconds but they still require an intended use, data, and boundaries created by humans. Remaining involved in critical decision-making (primarily ones that concern health, education, law, and public safety) allows us to limit bias as much as possible.

Broadly speaking, AI researchers can adopt either a rationalist or empiricist philosophy when creating intelligent systems. Rationalists argue that reason is the primary source of intelligence, while empiricists argue for experience. Machine learning exemplifies empiricism in AI because knowledge is acquired through exposure to data. Rationalist systems use hard-coded rules and facts with logical inference to solve problems. On the other hand, empiricist systems identify patterns through "experience" with training data, rather than rules created by humans.

I feel like the empiricist view has had more dominance in our modern day uses of AI. I think this is because many problems our AI systems try to solve are just too hard to approach with hardcoded rules. There are so many different ways words, pictures, voices, and humans can vary that it is nearly impossible to predict. Machine learning allows AI to make these connections that programmers might not even think to specify. I do think AI that learns from data should still be bound by morals set by humans though.

ChatGPT is an example of an empiricist system. ChatGPT wasn't explicitly coded with answers to potential questions. Rather, it learned relationships between words by training on massive datasets of text. It then uses those relationships to formulate answers. Its knowledge is gained from experience with datasets as opposed to a coded set of logical rules. As a result, ChatGPT is flexible enough to answer questions, summarize data, help us write, and explain concepts on a wide range of topics. However, it also demonstrates why we need HCAI. ChatGPT shines when it is used to help people, not replace them. We are still the ones judging its answers, checking for accuracy, applying common sense, and making decisions. It closely resembles the point of this chapter which explains how we should be using computers to enhance our capabilities, not try and make them think like only humans can.

In summary, Human-Centered AI recognizes that technology is a tool that can and should augment people, taking care not to conflate human and artificial intelligence. While empiricism has led to many of our largest and most successful AI systems today, their utility will derive from how they are used to assist intelligence, not replace it. Moving forward, AI should focus on human and AI collaboration to ensure we continue to empower human innovation, responsibility, and decision-making.

References

Human-centered AI | Oxford academic. (n.d.). <https://academic.oup.com/book/41126>