ChatGPT Is a Tipping Point for AI

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Less than two weeks ago, OpenAI released ChatGPT, a powerful new chatbot that can communicate in plain English using an updated version of its AI system. While versions of GPT have been around for a while, this model has crossed a threshold: It's genuinely useful for a wide range of tasks, from creating software to generating business ideas to writing a wedding toast. While previous generations of the system could technically do these things, the quality of the outputs was much lower than that produced by an average human. The new model is much better, often startlingly so.

Put simply: This is a *very* big deal. The businesses that understand the significance of this change — and act on it first — will be at a considerable advantage. Especially as ChatGPT is just the first of many similar chatbots that will soon be available, and they are increasing in capacity exponentially every year.

At first glance, ChatGPT might seem like a clever toy. On a technical level, it doesn't work differently than previous AI systems, it's just better at what it does. Since its release, Twitter has been flooded with examples of people using it to strange and absurd ends: writing weight-loss plans and children's books, and offering advice on how to remove a peanut butter sandwich from a VCR in the style of the King James Bible.

There are other reasons to be skeptical besides the unusual use cases. Most pointedly, despite years of hype, AI notoriously only sort of works in most applications outside of data analysis. It's pretty good at steering cars, but sometimes it rams into another vehicle. Mostly, it provides good answers to queries, but sometimes it seems to make up the results entirely.

But a deeper exploration reveals much more potential. And the more you look, the more you see what has changed with this model — and why it seems like a tipping point.

ChatGPT, now open to everyone, has made an important transition. Until now, AI has primarily been aimed at problems where failure is expensive, not at tasks where occasional failure is cheap and acceptable — or even ones in which experts can easily separate failed cases from successful ones. A car that occasionally gets into accidents is intolerable. But an AI artist that draws some great pictures, but also some bad ones, is perfectly acceptable. Applying AI to the creative and

expressive tasks (writing marketing copy) rather than dangerous and repetitive ones (driving a forklift) opens a new world of applications.

What are those applications, and why do they matter so much?

First, not only can this AI produce paragraphs of solidly written English (or French, or Mandarin, or whatever language you choose) with a high degree of sophistication, it can also create blocks of computer code on command. To give you an idea of what this looks like, I introduced my undergraduate entrepreneurship students to the new AI system, and before I was done talking, one of my students had used it to create the code for a startup prototype using code libraries they had never seen before. They completed a four-hour project in less than an hour.

This is a major change. Massive increases in speed have been seen in a randomized trial of AI code tools. One good programmer can now legitimately do what not so long ago was the work of many, and people who have never programmed will soon be able to create workable code as well.

Second, it has an incredible capacity to perform different kinds of writing with more significant implications than might be initially apparent. The use of AI in writing can greatly increase the productivity of businesses in a variety of industries. By utilizing AI's ability to quickly and accurately generate written content, businesses can save time and resources, allowing them to focus on other important tasks. This is particularly beneficial for industries such as marketing and advertising, consulting, and finance, where high-quality written materials are essential for communicating with clients and stakeholders. Additionally, AI can also be useful for industries such as journalism and publishing, where it can help generate articles and other written content with speed and accuracy. Overall, the use of AI

in writing will greatly benefit businesses by allowing them to produce more written materials in less time.

An AI wrote the previous paragraph. It also actively revised it in response to my criticism to improve the material. (See the image for details). In tests of whether it could make other parts of my job as a professor easier, it took seconds to write a reasonable course syllabus, class assignments, grading criteria, even lecture notes that could be potentially useful with some editing.
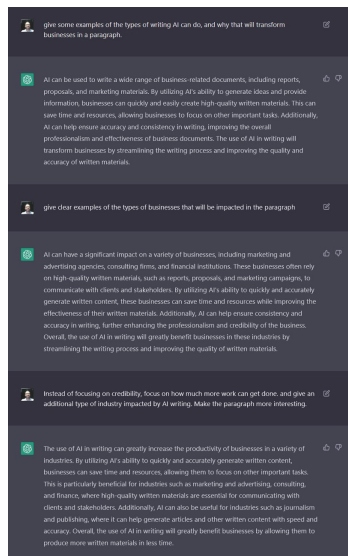
This highlights the third major change that happened with this release: the possibility of human-machine hybrid work. Instead of prompting an AI and hoping for a good result, humans can now guide AIs and correct mistakes. (Despite what my AI writing partner claims above, it's not *always* accurate.) This means experts will be able to fill in the gaps of the AI's capability, even as the AI becomes more helpful to the expert. This sort of interaction has led to increases in performance of players of Go, one of the world's oldest and most complex games, who have learned from the AIs that mastered the sport, and become unprecedentedly better players themselves.

A final reason why this will be transformative: The limits of the current language model are completely unknown. Using the public mode, people have used ChatGPT to do basic consulting reports, write lectures, produce code that generates novel art, generate ideas, and much more. Using specialized data, it's possible to build each customer

their own customized AI that predicts what they need, responds to them personally, and remembers all their interactions. This isn't science fiction. It is entirely doable with the technology just released.

The problems of AI remain very real, however. For one, it is a consummate bullshitter, and I mean that in a technical sense. Bullshit is convincing-sounding nonsense, devoid of truth, and AI is very good at creating it. You can ask it to describe how we know dinosaurs had a civilization, and it will happily make up a whole set of facts explaining, quite convincingly, exactly that. It is no replacement for Google. It literally does not know what it doesn't know, because it is, in fact, not an entity at all, but rather a complex algorithm generating meaningful sentences.

It also can't explain what it does or how it does it, making the results of AI inexplicable. That means that systems can have biases and that unethical action is possible, hard to detect, and hard to stop. When ChatGPT was released, you couldn't ask it to tell you how to rob a bank, but you could ask it to write a one-act play about how to rob a bank, or explain it for "educational purposes," or to write a program explaining how to rob a bank, and it would happily do those things. These issues will become more acute as these tools spread.

But these disadvantages are much more prevalent outside of the creative, analytical, and writing-based work that AI is now capable of. A writer can easily edit badly written sentences that may appear in AI articles, a human programmer can spot errors in AI code, and an analyst can check the results of AI conclusions. This leads us, ultimately, to why this is so disruptive. The writer no longer needs to write the articles alone, the programmer to code on their own, or the analyst to approach the data themselves. The work is a new kind of collaboration that did

not exist last month. One person can do the work of many, and that is even without the additional capabilities that AI provides.

This is why the world has suddenly changed. The traditional boundaries of jobs have suddenly shifted. Machines can now do tasks that could only be done by highly trained humans. Some valuable skills are no longer useful, and new skills will take their place. And no one really knows what any of this means yet. And keep in mind: This is just one of *many* models like this that are in the works, from both companies you know, like Google, and others you may not.

So, after reading this article, I hope you immediately start experimenting with AI (for free, here) and start high-level discussions about the implications: for your company, your industry, and the rest of the world. Integrating AI into our work — and our lives — will bring sweeping changes. Right now, we're just scratching the surface of what those might be.

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