

Artificial Intelligence - Scary Good 2023 - The Year AI Goes Mainstream



Andrew McNally, Chief Executive Officer

Can Artificial Intelligence replace fund managers?

Artificial intelligence (AI) has the potential to aid human fund managers in their decision-making process and improve their efficiency, but it is unlikely that it will fully replace them. Fund management involves a variety of tasks, such as portfolio construction, risk management, and client communication, which require human judgement, intuition, and emotional intelligence. AI can assist with tasks such as analysing market data, identifying trends, and generating investment ideas, but it cannot replicate the full range of skills and expertise that human fund managers bring to the table. It is more likely that AI will be used as a tool to augment the work of human fund managers, rather than replacing them entirely.

OK, I confess, I didn't write the last paragraph. I typed my opening question, with a little apprehension, into what is the latest Silicon Valley phenomenon, ChatGPT. GPT stands for Generative Pre-Trained Transformer and is a chatbot launched in November last year. It was built by OpenAI, an artificial intelligence research laboratory first set-up and funded in 2015 by Elon Musk, who's now left the organisation, and some of Silicon Valley's most successful tech entrepreneurs. It was established, in their words, to develop AI to benefit humanity as a whole and recognises many of the dangers the technology might present. Given its ethos, OpenAI was initially a non-profit organisation, although that was diluted somewhat in 2019 when Microsoft invested an additional one billion dollars, albeit with a profit cap.

If you haven't heard of ChatGPT already, you soon will. Within one week of launch it had one million active users, making it the fastest roll-out in Silicon Valley history. Atlantic magazine described it as "The breakthrough of the year" for 2022 and Elon Musk himself, having seen the platform in action, tweeted "This is scary good, we are not far from dangerously strong AI".

The chatbot, although only a beta version, is astonishing to use and its command of language is remarkable. Try asking it to write a poem on chess in the style of Donald Trump or testing it with more mundane requests - its suggested recipe for eggs benedict was just fine.

It's not without fault though, the current version has numerous technical limitations. For example, the model's formal training was completed in 2021 and so many of its responses are not based on up-to-date information; in addition, many of its conclusions are simply wrong, particularly problematic as its language is so convincing that most users are, reportedly, still likely to believe them.

Although many of these technical problems will be ironed out with later releases, the ChatGPT phenomenon is also raising concerns at a grander level. High school students, for example, are already submitting essays written on the platform and so educationalists are worried, understandably, about the impact this might have on writing and critical thinking skills. Imagine an economics student, for example, being asked to write an essay outlining the main causes of inflation (see the AI Essay at the End of this article) - it wouldn't be awarded a Grade A by any means, but it breaks the back of the challenge and offers a good structure that the student could in-fill with a few examples.

On Complex Issues

The inflation essay highlights a more fundamental challenge for this technology, however. Although it is coherent and serves, to a point, the immediate needs of the economics student, it doesn't question or go beyond the bounds of its existing body of knowledge. This will, at best, limit its use when considering more complex and nuanced issues and, at worst, hinder the development of human understanding.

Ultimately ChatGPT's response to any query or requested task is based on what it has been fed, either by OpenAI or by its users. It is not connected to the internet, but works from a massive corpus of texts in numerous languages. It does not, therefore, challenge the conclusions that can only be drawn from this data set. It cannot challenge the premise of a question, or the assumptions behind the answers its dataset can provide. In fact, the technology behind ChatGPT, arguably, pours concrete on established understanding and hinders the dissent which is, most often, at the genesis of human progress. If OpenAI had existed in 1914 it would, no doubt, have been able to navigate Newtonian ideas with ease, but would it have played any meaningful role in the creation of Einstein's theory of General Relativity?

The chatbot is built on top of OpenAI's GPT-3.5 set of so-called Large Language Models and is finessed with deep-learning techniques such as supervised and reinforcement learning, both of which use human "trainers" to improve the models' performance. As OpenAI continues to gather data from ChatGPT users, that is now also used to train the language models and build the database driving the platforms responses. One feature of this ongoing training is that users can upvote and downvote ChatGPT's output. This could, in theory,

lead to an extreme form of group-think, which makes it difficult for dissenters (innovators) to be heard. Moreover, queries are filtered through OpenAI's moderation API to prevent offence. If the definition of "offence" is too broad, this might make it difficult for the platform's base of knowledge to develop in a healthy way. - George Bernard Shaw's "Unreasonable Man" might not get a look in.

To test ChatGPT on a more complex subject I picked the most challenging issue the investment industry is likely to face in 2023, the future of ESG. Having become a cornerstone of our industry since the acronym appeared in a UN report in 2004, there's a growing backlash against it, particularly in the US.

Warren Buffet, when faced with a proposal to make Berkshire Hathaway report extensively on its ESG credentials, described it as "asinine" and Elon Musk went as far as to call it a "scam". At a more practical level, a growing list of US state treasurers have blacklisted banks who use ESG metrics when determining funding costs, arguing that they penalise essential industries such as oil, gas, steel and transportation.

This backlash is rooted in the belief that the activities of investment firms, banks and other corporations should not be driven by political agendas set elsewhere, often outside of a democratic process. It was a concern raised already in 1970 by Milton Friedmann in his New York Times article "The Social Responsibility of Business is to Increase Its Profits" in which he argued that a CEO who pursues a social agenda beyond their business remit is in effect imposing a tax on its shareholders and employees – Friedmann saw this as "taxation without representation". His argument has been picked up by biotech entrepreneur Vivek Ramaswamy whose 2020 Wall Street Journal article, "Stakeholders" vs. the People, argued that it should be "Citizens—not the church, not corporate leaders, not large asset managers— [that] define the common good through the democratic process".

So as ESG comes up against some fundamental challenges I wondered how OpenAI would "think" about these, and so I simply asked it, "What are the main flaws in ESG?".

Once again, its response was articulate and coherent. It succinctly described what ESG is and went on to outline several "structural" flaws; the lack of consistency and standardization, the subjectivity when assessing ESG factors, the limited coverage, the lack of transparency in the way ESG data is reported and so on.

What it didn't do was explore the deeper, more fundamental, questions now being asked by politicians and industry practitioners alike. It answered the questions within the confines of the ESG framework and, given how the algorithm works, this makes sense. If most of the ESG information within OpenAI corpus of text was created by the ESG industry, then the model is overwhelmingly likely to create an answer based on that information. Moreover, if users asking that question are supportive of ESG then they are more likely to upvote responses which are unquestioning of ESG's fundamental legitimacy. In effect, "dissenting" challenges, as we now see emerging, are suppressed on the system.

Impact

Whatever the limitations of ChatGPT, this is the year AI goes mainstream. Moreover, the current release is a toddler in technology terms, GPT-4 is expected by the end of 2023 and the chatbot itself is rumoured not to be the best one in the OpenAI stable.

For now at least, some knowledge workers might rightly become anxious. Ask it to write a programme in Python to monitor the price of S&P 500 constituents, no problem (it even explains how the programme works) or ask it to draw up a simple Loan Note Agreement, easy (although it does recommend talking to a lawyer for more complex agreements).

The biggest threat, however, might be faced by Alphabet - OpenAI's Chief Scientist, Ilya Sutskever was formerly Google's expert on machine learning. As ChatGPT doesn't have access to the internet it cannot, for now at least, replace a search engine. For many straightforward queries, however, it is much more efficient than a search engine - whereas Google returns a list of links, from which the user needs to find the most useful, ChatGPT answers questions and responds to requests directly. Even if these straightforward queries only make up a small portion of overall queries, then that could spell trouble for Google whose revenue overwhelmingly comes from adverts on searches. Moreover, Microsoft is reportedly looking to integrate the technology behind ChatGPT into its own search engine Bing, Google's smaller competitor.

The competitive threat aside, the newcomer might also create another problem for Google. If the Web is rapidly filled with AI generated content, a portion of which is factually incorrect, then it will be more difficult for Google to fulfil its core mission of returning the most appropriate answers to each query. The blogging site, Substack, has already banned material produced by GPT and it is for this reason that Alphabet itself is cautious about launching its own AI driven chatbot, Lamda (Language Model for Dialogue Applications).

At the very least it will change the way many people think and work, in some cases it will replace them altogether. Likewise, it will in time impact the efficiency and competitive position of many corporations, not just in technology but everywhere.

Whatever this technology disrupts, however, the need for critical thinking will remain as complex issues appear, requiring more nuanced analysis. Moreover, for human progress to continue we will always need dissent, dissent both liberates and stimulates our thinking, and it does so whether it's right or wrong.

What are the main causes of inflation?

Inflation is a sustained increase in the general price level of goods and services in an economy over a period of time. When the general price level rises, each unit of currency buys fewer goods and services; consequently, inflation reflects a reduction in the purchasing power of money – a loss of real value in the medium of exchange and unit of account within an economy. A chief measure of price inflation is the inflation rate, the annualized percentage change in a general price index (normally the consumer price index) over time.

There are several main causes of inflation:

Demand-pull inflation: This occurs when there is an increase in demand for goods and services that exceeds the available supply. As a result, prices increase to balance out the demand and supply. Demand-pull inflation can be caused by a number of factors, such as an increase in population, an increase in disposable income, and an increase in government spending.

Cost-push inflation: This occurs when the cost of production increases, leading to an increase in prices. This can be caused by a number of factors, such as an increase in the cost of raw materials, an increase in wages, and an increase in taxes.

Monetary inflation: This occurs when the supply of money increases faster than the supply of goods and services. This can be caused by the central bank printing more money or by the government running large budget deficits.

Structural inflation: This occurs when there are bottlenecks or inefficiencies in the economy that prevent the supply of goods and services from increasing at the same rate as demand. This can lead to higher prices as firms try to balance out the demand and supply.

In conclusion, inflation is a complex phenomenon that can be caused by a variety of factors. Understanding these causes is important for governments and central banks as they try to manage the economy and maintain price stability.

Disclaimer:

- These advertising materials contain preliminary information that is subject to change and that is not intended to be complete or to constitute all the information necessary to adequately evaluate the consequences of making any investment. The recipient agrees neither to reproduce or distribute this document in whole or in part, nor to disclose any of its contents.
- This presentation is being provided solely for informational purposes. Equitile makes no representation or warranty (express or implied) with respect to the information contained herein (including, without limitation, information obtained from third parties) and expressly disclaims any and all liability based on or relating to the information contained in, or errors or omissions from, these materials.
- Any forward-looking statements contained in this herein are based on opinions, expectations and projections as of the date made. Equitile undertakes no obligation to update or revise any forward-looking statements and users should check the "as of" dates of all published materials. Actual results could differ materially from those anticipated in the forward-looking statements.
- The recipient should conduct its own investigations and analyses of Equitile and the information set forth in these materials. This presentation does not constitute or form part of, and should not be construed as, any offer or invitation or inducement for sale, transfer or subscription of, or any solicitation of any offer or invitation to buy, any interest in any existing or future fund managed (or to be managed) by Equitile or to engage in investment activity in any jurisdiction nor shall it, or any part of it, or the fact of its distribution form the basis of, or be relied on in connection with, any contract or investment decision whatsoever, in any jurisdiction. Nothing herein should be construed as a recommendation to invest in any securities that may be issued by any existing or future fund managed (or to be managed) by Equitile or as legal, accounting or tax advice.
- Equitile is not responsible for providing a recipient with the protections afforded to its clients and before making a decision to invest in any existing or future fund managed (or to be managed) by Equitile, a prospective investor should carefully review information relating to Equitile and such fund and consult with its own legal, accounting, tax and other advisors in order to independently assess the merits of such an investment. Equitile offers no guarantee against loss or that the investment objectives will be achieved. Investors and any potential investors should be aware of local laws governing investments and should read all the relevant documents including Reports and Accounts, Prospectus and Scheme Particulars as appropriate.
- This is an advertising document. The state of the origin of the Equitile Resilience Feeder Fund is the United Kingdom. In Switzerland, this document may only be provided to qualified investors within the meaning of art. 10 para. 3 and 3ter CISA. In Switzerland, the representative is ACOLIN Fund Services AG, Leutschenbachstrasse 50, CH-8050 Zurich, whilst the paying agent is Aquila & Co. AG, Bahnhofstrasse 28a, CH-8001 Zurich. The basic documents of the fund as well as the annual and, if applicable, semi-annual report may be obtained free of charge from the representative. Past performance is no indication of current or future performance. The performance data do not take account of the commissions and costs incurred on the issue and redemption of units.
- A copy of the English version of the prospectus of the Equitile Global Equity Fund and the key investor information document relating to the Fund is available on <https://www.prescient.ie/media-literature/prescient-global-funds-icav-documents> and <https://www.prescient.ie/media-literature/kiid-documents> and may also be obtained from Prescient Fund Services (Ireland) Limited (info@prescient.ie). Where required under national rules, the key investor information document/the key information document will also be available in the local language of the relevant EEA Member State.
- A copy of the English version of the prospectus of the Equitile Resilience Fund, Equitile Resilience Feeder Fund and the key investor information document relating to the Funds is available at <https://www.equitile.com/invest/professional-investors/european-union?cl=e66b91e1b13759a28dcc982be7055cb6>. Where required under national rules, the key investor information document/the key information document will also be available in the local language of the relevant EEA Member State.
- A summary of investor rights associated with an investment in the Equitile Global Equity Fund shall be available in English from <https://www.prescient.ie/legal-information>.
- A decision may be taken at any time to terminate the arrangements made for the marketing of the Funds in any EEA Member State in which it is currently marketed. In such circumstances, Shareholders in the affected EEA Member State will be notified of this decision and will be provided with the opportunity to redeem their shareholding in the Fund free of any charges or deductions for at least 30 working days from the date of such notification.
- Equitile Global Equity Fund is domiciled in Ireland and authorised and regulated by the Central Bank of Ireland.
- Equitile Resilience Fund and Equitile Investments Ltd are domiciled in the UK and are authorised and regulated by the UK Financial Conduct Authority.

ⁱ In the supervised phase the models are given conversations in which the trainers play both the teacher and the AI assistant. In the reinforcement phase, the trainers rank the AI assistant's responses with the model then being "rewarded" for providing high ranking answers in future conversations.