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AI:10

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WHAT'S HOT

HOW AI IS SET TO EVOLVE IN 2022

OBSERVABILITY – How AI will enhance the world of monitoring and management

HEADLINE NEWS IN A FLASH

- Remember IBM's amazing Watson AI? Now it's desperately trying to sell it off.
- As well as chatting to you, can AI chatbots now tell how you're feeling too?
- Farmer-Free Autonomous Tractor
- The Debut of Uncanny AI-Generated Stock Photo Models
- Researchers Claim to Have Developed AI Capable of Replacing Criminal Prosecutors
- Data Scientists Say They've Developed Algorithms to Predict the Next Coup Attempt

HOW A.I. IS SET TO EVOLVE IN 2022

Machines are getting smarter and smarter every year, but artificial intelligence is yet to live up to the hype that's been generated by some of the world's largest technology companies. AI can excel at specific narrow tasks such as playing chess but it struggles to do more than one thing well. A seven-year-old has far broader intelligence than any of today's AI systems, for example.

"AI algorithms are good at approaching individual tasks, or tasks that include a small degree of variability," Edward Grefenstette, a research scientist at Meta AI, formerly Facebook AI Research, told CNBC. "However, the real world encompasses significant potential for change, a dynamic which we are bad at capturing within our training algorithms, yielding brittle intelligence," he added.

AI researchers have started to show that there are ways to efficiently adapt AI training methods to changing environments or tasks, resulting in more robust agents, Grefenstette said. He believes there will be more industrial and scientific applications of such methods this year that will produce "noticeable leaps."

While AI still has a long way to go before anything like human-level intelligence is achieved, it hasn't stopped the likes of Google, Facebook (Meta) and Amazon investing billions of dollars into hiring talented AI researchers who can potentially improve everything from search engines and voice assistants to aspects of the so-called "metaverse." Anthropologist Beth Singler, who studies AI and robots at the University of Cambridge, told CNBC that claims about the effectiveness and reality of AI in spaces that are now being labeled as the metaverse will become more commonplace in 2022 as more money is invested in the area and the public start to recognize the "metaverse" as a term and a concept. Singler also warned that there could be "too little discussion" in 2022 of the effect of the metaverse on people's "identities, communities, and rights."

Gary Marcus, a scientist who sold an AI start-up to Uber and is currently executive chairman of another firm called Robust AI, told CNBC that the most important AI breakthrough in 2022 will likely be one that the world doesn't immediately see. "The cycle from lab discovery to practicality can take years," he said, adding that the field of deep learning still has a long way to go. Deep learning is an area of AI that attempts to mimic the activity in layers of neurons in the brain to learn how to recognize complex patterns in data.

Marcus believes the most important challenge for AI right now is to "find a good way of combining all the world's immense knowledge of science and technology" with deep learning. At the moment "deep learning can't leverage all that knowledge and instead is stuck again and again trying to learn everything from scratch," he said. "I predict there will be progress on this problem this year that will ultimately be transformational, towards what I called hybrid systems, but that it'll be another few years before we see major dividends," Marcus added. "The thing that we probably will see this year or next is the first medicine in which AI played a substantial role in the discovery process."

DEEPMIND'S NEXT STEPS

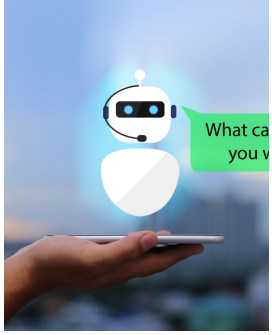
One of the biggest AI breakthroughs in the last couple of years has come from London-headquartered research lab DeepMind, which is owned by Alphabet. The company has successfully created AI software that can accurately predict the structure that proteins will fold into in a matter of days, solving a 50-year-old "grand challenge" that could pave the way for better understanding of diseases and drug discovery. Neil Lawrence, a professor of machine learning at the University of Cambridge, told CNBC that he expects to see DeepMind target more big science questions in 2022.

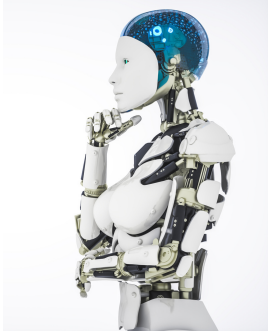
Language models — AI systems that can generate convincing text, converse with humans, respond to questions, and more — are also set to improve in 2022. The best-known language model is OpenAI's GPT-3 but DeepMind said in December that its new "RETRO" language model can beat others 25 times its size.

Catherine Breslin, a machine learning scientist who used to work on Amazon Alexa, thinks Big Tech will race toward larger and larger language models next year. Breslin, who now runs AI consultancy firm Kingfisher Labs, told CNBC that there will also be a move toward models that combine vision, speech and language capability, rather than treat them as separate tasks.

Nathan Benaich, a venture capitalist with Air Street Capital and the co-author of the annual State of AI report, told CNBC that a new breed of companies will likely use language models to predict the most effective RNA (ribonucleic acid) sequences. "Last year we witnessed the impact of RNA technologies as novel covid vaccines, many of them built on this technology, brought an end to nation-wide lockdowns," he said. "This year, I believe we will see a new crop of AI-first RNA therapeutic companies. Using language models to predict the most effective RNA sequences to target a disease of interest, these new companies could dramatically speed up the time it takes to discover new drugs and vaccines."

SOURCE: CNBC



REMEMBER IBM'S AMAZING WATSON AI? NOW IT'S DESPERATELY TRYING TO SELL IT OFF

IBM's infamous Watson artificial intelligence once beat two Jeopardy champions out of $1 million. But now, Axios reports, Big Blue is putting up the healthcare portion of the much-hyped algorithm up for sale once again. In fact, it's not even the first time that IBM has tried — unsuccessfully — to unload the project, in yet another sign that corporate expectations for AI are continuing to crash into reality. The sale, if it actually goes through this time, would affect millions of patients and entire government healthcare strategies. The computer and tech corporation spent more than $4 billion acquiring multiple healthcare companies to build up IBM Watson Health. But now it's asking just $1 billion, according to Axios, meaning it's comfortable with a loss of billions.

Source: futurism

AS WELL AS CHATTING TO YOU, CAN AI CHATBOTS NOW TELL HOW YOU'RE FEELING TOO?

The automated answering service, trained using a human voice, is capable of breaking down sentences into sounds and tones so it can talk back and read a caller's emotional state. Five9, the company behind a new answering machine, claims their new technology - which uses AI to break down sentences into sounds and tones - will bring big savings to companies on personnel costs. The key to making the caller experience satisfactory is using a human voice to train the AI. "At the end of the day people are going to understand that they are talking to a machine, they are going to understand that they are talking to software," Callan Scheballa, a project manager with Five9, explained.

Source: euronews

FARMER-FREE AUTONOMOUS TRACTOR

John Deere, easily the most important heavy farming equipment manufacturer in the world, announced a massive new step in that direction: a fully autonomous version of its 8R tractor. Farmer not required. This particular product is an autonomous version of its 8R tractor, used examples of which are listed at between $300,000 and $500,000, depending on features and options. But this version will have, according to Real Agriculture, six pairs of cameras for obstacle detection and a neural net artificial intelligence system, which are AI systems modeled after biological brains and are capable of learning. The system as a whole will be not dissimilar from self-driving cars such as Tesla, although the comparatively simpler task of row-cropping means that it can be operated right now without any driver at all. The system will also be able to take readings of soil quality and composition.

Source: modernfarmer

THE DEBUT OF UNCANNY AI-GENERATED STOCK PHOTO MODELS

Panther Media is in partnership with VAIsual and this new AI-generated model technology is part of the first phase of this collaboration. "Our portrait library contains an ever-growing volume of diverse faces, ages, ethnicities, and genders…We are aggressively working on our next phase of development and will shortly begin generating full-body images of humans." Panther Media's CEO Robert Walthers echoed these sentiments concerning the future of stock photography modeling and AI-generated subjects. As for stock photography models and photographers, they might have to find themselves a new line of work if AI really does become the dominant force in this area. While high-end fashion photography and areas like it are likely to remain the purview of professional models and photographers, who knows what the future holds for everything else.

Source: lightstalking

RESEARCHERS CLAIM TO HAVE DEVELOPED AI CAPABLE OF REPLACING CRIMINAL PROSECUTORS

The team from Chinese Academy of Sciences claims that the machine can determine a crime and file a charge solely based on a verbal description of what happened, thus being able to "replace prosecutors in the decision-making process to a certain extent". In order to bring the AI program to a level where it can file charges with such impressive accuracy, researchers spent five years between 2015 and 2020 training it using over 17,000 different criminal cases. The unnamed AI bot can reportedly charge suspects using 1,000 different "traits" derived from human-described case documentations. Legal experts are also wondering who will take responsibility if the AI ever makes a mistake. Despite its impressive 97 percent charging accuracy, there is always a risk of a mistake, and no one really knows who will be blamed.

Source: odditycentral

DATA SCIENTISTS SAY THEY'VE DEVELOPED ALGORITHMS TO PREDICT THE NEXT COUP ATTEMPT

By marrying historical data with information on everything from inclement weather to economic shifts and even disruptions in transit patterns, this type of modeling relies on the notion that warning signs will present themselves — and that if artificial intelligence algorithms can be trained to recognize them, researchers may be able to act as canaries in the coal mine to head off events like January 6 in US. So far, two of the organizations profiled by the Post — the University of Central Florida-based CoupCast and the ACLED nonprofit — have had a pretty good track record, with the latter warning in October 2020 that there was an increased risk of attack on a federal building.

Source: futurism

OBSERVABILITY

How AI will enhance the world of monitoring and management

The more the enterprise transitions from a mere digital organization to a fully intelligent one, the more data executives will come to realize that traditional monitoring and management of complex systems and processes is not enough.

What's needed is a new, more expansive form of oversight – which lately has come to be known as "data observability."

THE WHAT AND THE WHY OF OBSERVABILITY

The distinction between observability and monitoring is subtle but significant. Monitoring allows technicians to view past and current data environments according to predefined metrics or logs. Observability, on the other hand, provides insight into why systems are changing over time, and may detect conditions that have not previously been considered. In short, monitoring tells you what is happening, while observability tells you why it's happening.

To fully embrace observability, the enterprise must engage it in three different ways. First, AI must fully permeate IT operations, since this is the only way to rapidly and reliably detect patterns and identify root causes of impaired performance. Secondly, data must be standardized across the ecosystem to avoid mismatch, duplication and other factors that can skew results. And finally, observability must shift into the cloud, as that is where much of the enterprise data environment is transitioning to as well.

Observability is based on Control Theory, according to Richard Whitehead, the chief evangelist at observability platform developer, Moogsoft. The idea is that with enough quality data at their disposal, AI-empowered technicians can observe how one system reacts to another, or at the very least, infer the state of a system based on its inputs and outputs.

The problem is that observability is viewed in different contexts between, say, DevOps and IT. While IT has worked fairly well by linking application performance monitoring (APM) with infrastructure performance monitoring (IPM), emerging DevOps models, with their rapid change rates, are chafing under the slow pace of data ingestion. By unleashing AI on granular data feeds, however, both IT and DevOps will be able to quickly discern the hidden patterns that characterize quickly evolving data environments.

This means observability is one of the central functions in emerging AIOps and MLOps platforms that promise to push data systems and applications management into hyperdrive. New Relic recently updated its New Relic One observability application to incorporate MLOps tools to enable self-retraining as soon as alerts are received. This should be particularly handy for ML and AI training, since these models tend to deteriorate over time. Data observability helps account for changing real-world conditions that affect critical metrics like skew, staleness of data as well as overall model precision and performance regardless of whether these changes are taking place in seconds or over days, weeks or years.

AUTOMATION ON STEROIDS

Over the next few years, it is reasonable to expect AI and observability to usher in a new era of "hyperautomation", according to Douglas Toombs, Gartner's vice president of research. In an interview with RT Insights, he noted that a fully realized AIOps environment is key to Gartner's long-predicted "Just-in-Time Infrastructure" in which datacenter, colocation, edge, and other resources can be compiled in response to business needs within a cohesive but broadly distributed data ecosystem.

In a way, observability is AI transforming the parameters of monitoring and management in the same way it changes other aspects of the digital enterprise — by making it more inclusive, more intuitive and more self-operational. Whether the task is charting consumer trends, predicting the weather or overseeing the flow of data, AI's job is to provide granular insight into complex systems and chart courses of action based on those analyses, some of which it can implement on its own and some that must be approved by an administrator.

Observability, then, is yet another way in which AI will take on the mundane tasks that humans do today, creating not just a faster and more responsive data environment, but one that is far more attuned to the real environments it is attempting to interpret digitally./

Source: venturebeat

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