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AI:10

GET INSIGHTS ON AI UNDER 10 MINUTES

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HEADLINE NEWS IN A FLASH

- A big4 launches Studio to build metaverse experiences with AR, VR, IoT and 5G
- AI-generative art predicted to be next trend for NFT sector
- Facts be damned: Rising use of emotional language like 'feel' and 'believe' has helped displace rational thought in 'post-truth era'
- Samsung develops in-memory computing for AI chips
- Teenage Wunderkinds Build School Project to Predict Crypto Gains With AI
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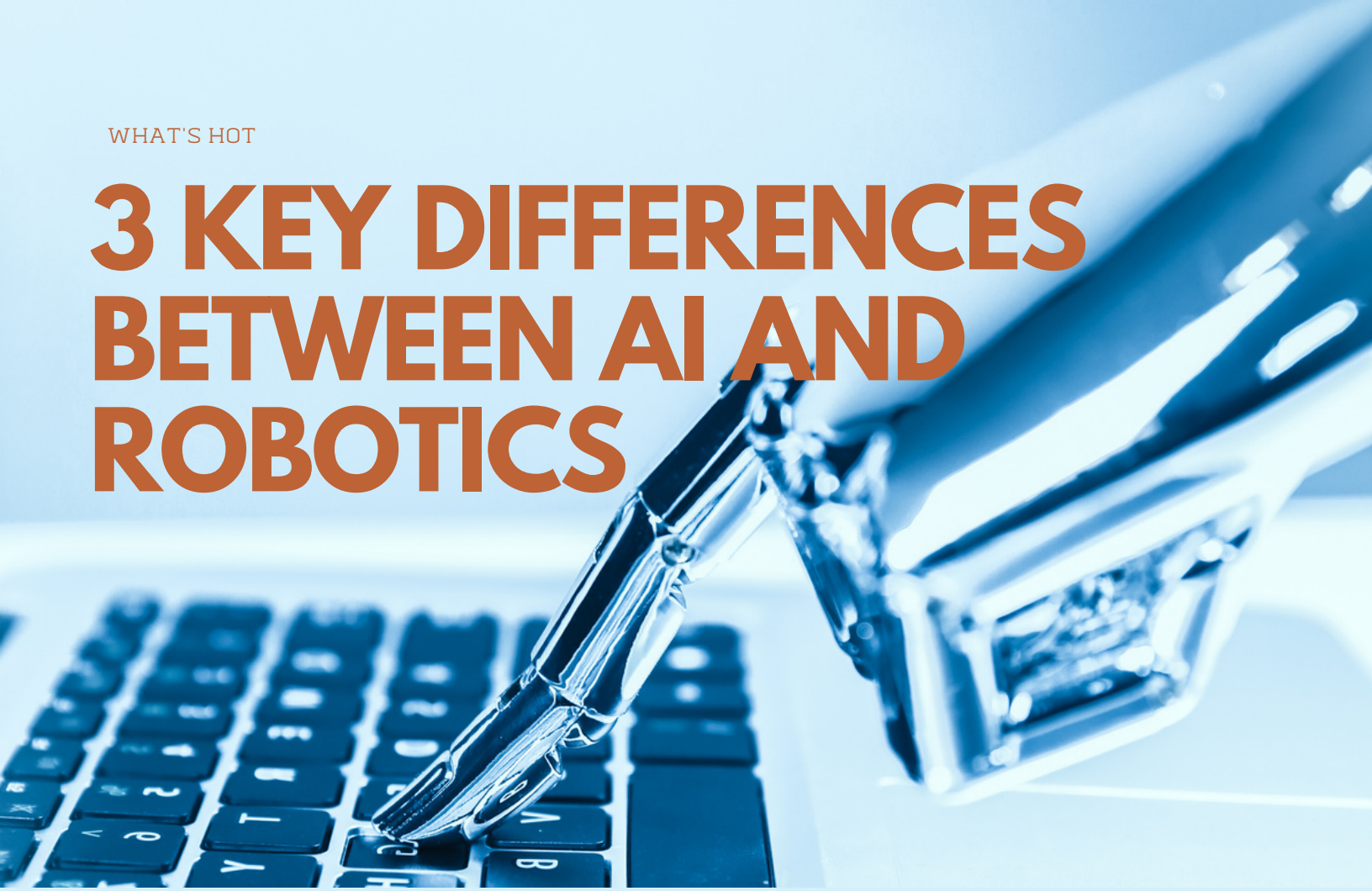
WHAT'S HOT

3 KEY DIFFERENCES BETWEEN AI AND ROBOTICS

SECTOR FOCUS

THESE ARE THE 5 COVID-DRIVEN AI TRENDS THAT ARE CHANGING HEALTH CARE

3 KEY DIFFERENCES BETWEEN AI AND ROBOTICS



Robots may replace about 800 million jobs globally in the future, making about 30% of all occupations irrelevant. Also, only 7% of businesses don't use AI currently but are looking into it. Stats like these scramble people's heads and make them believe that robots and AI are one and the same, which has never been the case.

There are several differentiating factors between AI and robotics, but the three enlisted here enable people to clearly understand them.

CONCEPTUAL DIFFERENCE

The basic definition of AI revolves around enabling machines to make complex decisions autonomously. The hardware and software tools based on AI can solve complex real-world problems by analyzing vast quantities of data and finding patterns not visible to humans in it. Machine learning and reinforcement learning fine-tune the analytical capabilities of such applications over time. Therefore, AI-based applications possess a limitless capability of becoming better at the tasks they perform.

This is how AI works—using various kinds of data as reference to improve its working over a period of time. As stated earlier, the bigger the dataset, the better an AI-based tool will perform in terms of operational speed and accuracy.

In simple words, robotics can be defined as a technological branch that deals with the design, development and construction of robots. These machines are programmable and interact with other devices or humans through actuators and data collection sensors. Robots can be used to perform autonomous or semi-autonomous tasks. Certain robots—such as telerobots—are entirely non-autonomous as their functioning needs to be controlled via human operators. As you can see, rule-based robots do not "think" and make decisions.

DIFFERENCES IN DEGREE OF AUTOMATION

People at the topmost positions in organizations need to be aware of the kind of technology they need for their business operations. The ones who are not technologically savvy may be unable to tell the difference between automation and robotics.

Plain automation involves the use of software, devices, sensors or other technologies in combination to execute tasks that would normally be done by an individual or a group of workers. The complexity of the device combination depends on the type of operation that is being automated. Automation can be of two kinds—software automation and industrial automation.

Software automation involves devices programmed to complete repetitive tasks using maths and logic. Software automation can include Graphic User Interface automation used to test computer programs.

Additionally, software automation also includes Business Process Automation (BPA)—the use of standard automation tools to improve customer service quality or minimize costs. BPA integrates software applications, personnel and hardware tools to streamline business operations. Robotic Process Automation (RPA) involves software robots, or bots, to write computer programs like human programmers. RPA works on the basis of programmed scripts. Intelligent Process Automation (IPA) involves the use of AI to make software applications more intuitive and “human-like.” In IPA, bots use past data as reference to perform actions more intelligently than the software automation devices that use a rule or script-based working mechanism.

Industrial automation involves the usage of robots to control and manage heavy industrial operations—such as product packaging, warehouse management and manufacturing. While robotics also dabbles with automation, it also combines with other fields—mechanical engineering, computer science as well as, in many cases, AI. AI-driven robots can perform functions and tasks expected of them autonomously with machine learning algorithms. AI robots can be explained better as intelligent automation applications in which robotics provides the body while AI supplies the brain. Industrial automation, AI and robotics also involve other technologies such as computer vision and NLP. As a result, AI robots can perform several tasks without human intervention, such as spotting an object on the floor of a warehouse and placing it where it should be.

Although standard automation robots are used for several kinds of business tasks already, the robots which autonomously operate with AI algorithms will optimize the future of organizational operations.

DIFFERENCES IN ADAPTABILITY

AI brings robotics into new territories, such as the concept of self-aware robots. Normally, robots are just machines made out of metal, sensors, cables and several electronics. So, they do not possess the "sixth sense" which humans possess when someone approaches them. The combination of AI and robotics, machine learning and sensory tech enables the creation of situationally aware robots that can "sense" the presence of humans around. Such robots possess the sense of smell, spatial proximity and responsiveness to stimuli. AI also is useful to make robots nearly as dexterous as humans. AI also allows robotics developers to create concepts such as Sophia, one of the world’s most renowned social robots. Apart from autonomous thinking, decision-making and mobility, Sophia also possesses abilities to determine the emotions of people and engage with individuals in interactive, human-like conversations.

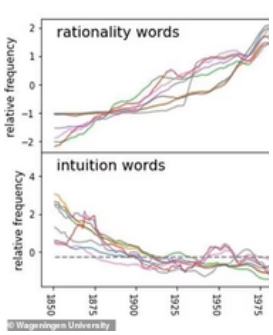
Robots exist to take over the tasks that a human shouldn't have to do. Generally, robots work within strict guidelines to automate tasks and enable humans to focus on the tasks that require intelligence. In other words, standard automation robots do not need to "learn" or make decisions or analyze data while they're being designed, developed, manufactured or while they perform tasks for which they're built. Accordingly, the use cases of robots are limited to tasks such as cleaning, carrying packages from one place to another, lawn mowing and similar others.

AI, on the other hand, is all about humanizing technology as much as possible. AI models are integral in CRM, personal assistants and ERP systems. These tasks are highly complex and require accurate data assessment and decision-making capabilities. Also, decisions need to be made considering a wide range of factors and thousands of terabytes of data. For example, an AI-based procurement management system will evaluate factors such as past material purchase records, operational hours of vendors, the time taken for materials to arrive from each vendor-route combination and other factors. The models used in such a system keep “learning” and improving continuously with time. So, their decision-making and data analysis improve just like humans improve with experience. The combination of AI and robotics capitalizes on the automation aspect of robots and the learning and cognitive aspects of AI models.

AI and robotics form a formidable combination for businesses, smart cities and other areas. AI enables robotic automation to keep improving and performing difficult business operations without a hint of error./

SOURCE: FORBES







A BIG4 LAUNCHES STUDIO TO BUILD METAVERSE EXPERIENCES WITH AR, VR, IOT AND 5G

Deloitte is adding a new capability to its list of consulting services: guide to the metaverse. The company announced its new Dimension10 Studio on Thursday. The service will help customers create "Unlimited Reality" experiences that combine artificial intelligence, augmented reality, virtual reality, Internet of Things architecture and 5G connectivity. The studio team will help clients design, prototype and market test virtual services. Frances Yu, partner, Deloitte Consulting, said that Dimension10 studios is both a virtual and physical space, a business concept, as well as the "maker" engine of the Unlimited Reality services. "The studio is a multidisciplinary team of AI/ML engineers, spatial designers, UX designers, software architects, game developers, XR creators and strategists from across our sector portfolios," Yu said.

Source: Techrepublic

AI-GENERATIVE ART PREDICTED TO BE NEXT TREND FOR NFT SECTOR

While notable, much of the crypto art scene appears to be dominated by cartoons and memes, as projects like CryptoPunks and Bored Ape Yacht Club have taken center stage. Although these projects are some of the most successful to date, a new subset of NFTs is emerging based on advanced technologies and the human imagination. Known as “AI-generative NFTs,” these nonfungible tokens are becoming increasingly popular within the art community, along with those interested in emerging technologies like artificial intelligence, blockchain and the Metaverse. In order to create AI-generative NFTs, one would typically use generative adversarial networks, or GANs. These are algorithms that leverage computers to use data to train models to produce machine-made images resembling art.

Source: cointelegraph

FACTS BE DAMNED: RISING USE OF EMOTIONAL LANGUAGE LIKE 'FEEL' AND 'BELIEVE' HAS HELPED DISPLACE RATIONAL THOUGHT IN 'POST-TRUTH ERA'

A new study suggests we are living in the post-truth era where 'feelings trump facts,' as language has become less rational and more emotional over the past 40 years. A team of scientists found words like 'determine' and 'conclusion' that were popular from 1850 through 1980 have been since been replaced with human experience such as 'feel' and 'believe.' The team also identified another major shift around 2007 with the birth of social media, when the use of emotion-laden language surged and fact-related words dropped. Although the drivers behind the shift cannot be determined, the researchers suggest it could be a rapid development in science and technology or tensions that came about from changes in economic polices in the early 1980s.

Source: dailymail

SAMSUNG DEVELOPS IN-MEMORY COMPUTING FOR AI CHIPS

Samsung Electronics announced it has developed an in-memory computing technology that merges memory and system semiconductors. The world's largest memory chipmaker said the new technology is enabled by non-volatile memories, dubbed "magnetoresistive random access memory," for the first time globally. In the traditional computer architecture, data is stored in memory chips while separate processor chips compute data. In comparison, in-memory computing is able to perform both data storage and computing in a memory network at the same time. As a result, Samsung said that in-memory computing substantially reduces power consumption as the data do not need to move, a feature that may be suitable for next-generation artificial intelligence chips.

Source: upi

TEENAGE WUNDERKINDS BUILD SCHOOL PROJECT TO PREDICT CRYPTO GAINS WITH AI

Crypto fever is starting to percolate into the classroom. Two fifteen-year-old scientists from County Dublin, Republic of Ireland, have developed a computer algorithm for predicting cryptocurrency market movements. Taha Fareed and Jevin Joy from Coláiste Phádraig school in the city of Lucan are launching a website where members of the public will be able to view their model’s predictions of future crypto prices. Fareed and Joy taught themselves the basics of machine learning by watching video tutorials. Their chosen model uses Bayesian inference – a complicated theorem that infers future probabilities from a host of prior conditions. Speaking proudly of their model, Fareed told Irish Times their model is “better [than] the best model we have come across in our research. We’re very happy with what we have achieved, but we know there are a lot of further improvements we can make.”

Source: decrypt

SEOUL TO INVEST OVER 300 BILLION WON ON METAVERSE AND OTHER DIGITIZATION PROJECTS

The government of South Korea’s capital city, Seoul, announced on Thursday that it had earmarked a total of 345.9 billion (equivalent to $291.4 million) towards the development of digital technologies such as big data, artificial intelligence, and the metaverse. According to a local news outlet The Korea Herald, up to 1,067 projects will benefit from the city’s plan to invest in these fast-rising technologies. About one-third of the total investment will be allocated to smart city projects that seek to explore the use of big data, AI, and metaverse technologies in building the digital infrastructure for improved civic services.

Source: investing

These Are the 5 Covid-Driven AI Trends That Are Changing Health Care

CLOSING THE GAP BETWEEN IN-PERSON AND VIRTUAL VISITS IS JUST THE TIP OF THE ICEBERG.

For all of its ills, Covid-19 has supercharged consumerism in global health care system, offering tantalizing opportunities for companies interested in lowering health care costs and increasing access to quality medical care.

Speaking at CB Insights' recent Future of Health Conference, Deepa Varadharajan, a senior managing analyst at the New York City-based research and analytics firm, explained that consumers can look forward to improved access and quality of health care, in addition to lowered costs--courtesy of artificial intelligence spurred by the coronavirus.

More than 170 startups are driving "anytime, anywhere care," said Varadharajan, noting that she expects the trend to continue. In addition to providing a growth industry for those working to further A.I., improving accessibility and lowering the cost of care could make the lives of time-crunched workers far more convenient--especially if the technology cuts down the time it takes to see a doctor or get a test done.

Here are the five trends shared by CB Insights that are affecting health care:

BRIDGING THE GAP BETWEEN VIRTUAL AND IN-PERSON CARE

Telehealth visits are lauded for their convenience, but a major limitation with virtual visits surfaces when it comes to manual exams. For obvious reasons, a doctor cannot perform a physical exam virtually, which limits a patient's full assessment--for now, at least.

Enter report monitoring devices. Digital health company Eko offers A.I.-powered stethoscopes along with a hand-held electrocardiogram, a test that evaluates a person's heart health. A patient can, for instance, live stream their heart and lung sounds for their doctor during a virtual visit.

Together, the tools, which are proliferating after the pandemic proved a heightened need for virtual care, bring the medical field closer to completely remote checkups that supplement in-person visits.

EXPANDING LAB TEST ACCESSIBILITY FOR PATIENTS

The pandemic is normalizing at-home Covid-19 rapid testing, and that could further other at-home diagnostics testing. Remote clinical testing company Healthy.io uses computer vision, artificial intelligence, and colorimetric analysis so that patients can conduct at-home urinary tract infection tests or an annual urine test. Varadharajan expects that artificial intelligence will gradually edge out third-party laboratories, at least for certain types of tests.

DRIVING DOWN RADIOLOGY COSTS

Artificial intelligence isn't making just radiology faster; it's also driving down the costs associated with pricey scans and other imaging. That's thanks in part to the use of A.I.-assisted computerized tomography scans, which have grown in popularity for diagnosing Covid-induced pneumonia.

But looking to the next wave of artificial intelligence suggests that A.I. will go beyond diagnostics to improve patient experience, Varadharajan says. This could translate to quicker magnetic reasoning imaging. In collaboration with the New York School of Medicine, Facebook is working to improve MRIs and aims to create new methods to expedite the scanning process. Varadharajan explains that hour-long visits could drop to just 15 minutes. And shaving off a patient's time spent in an imaging device that emits radiation, such as with x-rays, can dramatically reduce exposure.

PICTURING COMPUTER VISION

Another unintended benefit of the pandemic: Computer vision is making inroads in specialty care. With computer vision, which is a form of A.I. that allows computers to learn to recognize and interpret visuals, fields including physical therapy, where patients almost exclusively rely on the direction of a physical therapist, now see the promise of making virtual connections.

But as long as a patient is armed with a smartphone camera, they can now access care almost anywhere. Kaia Health, a digital therapeutics company in the musculoskeletal space based in both New York City and Munich, is using computer vision for motion and posture tracking, which provides patients with real-time feedback on their exercises. And the Austin-based DentalMonitoring is providing A.I.-powered technology to dentists and orthodontists, which the company claims can reduce the need or frequency for in-person follow-ups.

DEPLOYING PASSIVE MONITORING TECHNOLOGY

Apple Watches and Fitbits are some of the more classic examples of wearables, but the evolving wearables space is crowded. Too many options can become overwhelming for consumers required to keep track of different devices, charge them, and monitor separate applications that their devices use.

But A.I. passive monitoring technology may disrupt the wearables space by bringing technology that doesn't require patients to wear a device around the clock. When Google entered the sleep and wellness tracking with its smartphone device, its mantra was "Nothing to wear or remember to charge."

One newer approach to monitoring patients is using contactless in-home monitoring systems, which can keep track of a patent's sleep activities and respiration with the help of a sensor.

"Big techs and startups are breaking ground here in passive monitoring and as this technology takes off, we'll head toward more proactive intervention--especially in senior and acute care setting," Varadharajan says.

Source: Inc / CB Insights

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