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AI:10

GET INSIGHTS ON AI UNDER 10 MINUTES

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WHAT'S HOT

POPULAR AI-POWERED ETF SUFFERS FROM HUMAN FLAW

HEADLINE NEWS IN A FLASH

- This humanoid robot is about to fly like Iron Man
- Ameca humanoid robot puts AI in a gender-neutral, 'non-threatening' body
- Nearly half of Latin companies set to adopt AI by 2023
- Medical robots: their facial expressions will help humans trust them
- Machine learning-powered radar sees even what you don't
- Researcher developing technology to predict vapour explosion-induced accidents in boilers

THE AGE OF HYPER-ACCELERATED AI ADOPTION

POPULAR AI-POWERED ETF SUFFERS FROM HUMAN FLAW

It is a brand new year and analysts are scrambling to promote their top picks. EquBot, an exchange traded fund manager, is out with its list for 2022 with a twist: the stock picker is not human. Artificial intelligence is the driving force at its AI Powered Equity ETF (AIEQ). If its algorithms are correct, 2022 will be another great year for the biggest companies with strong momentum.

AS WITH ALL TOP PICK LISTS, INVESTORS SHOULD TREAD CAREFULLY.

EquBot was born in 2017 in the halls of the Haas School of Business at the University of California at Berkeley. Chada Khatua, Art Amador and Chris Nativdad thought they could start a business that would use AI to actively manage a stock portfolio.

As part of the "Startup with IBM," program the team had access to Watson, the AI that gained fame by beating a steady stream of human contestants on the TV trivia game Jeopardy. Taking Watson to the stock market seemed like a no-brainer. So, the EquBot team got to work training an AI model to automatically parse data from social media, news items, financial statements at the Securities and Exchange Commission, and classic market information such as price momentum and volatility.

The goal was to get the AI to a point where the system could build a dynamic, yet data dependent portfolio that could be rebalanced every day in real time. Ideally, the algorithms would continually learn, getting better as the software systems analyzed more data and accessed its performance.

When the AI Powered Equity ETF debuted in October 2018 it was the first fully functioning, actively managed ETF governed by unsupervised algorithms.

Documents filed at the SEC claimed the AI would analyze more than one million data inputs daily, building dynamic models for its investments. Amador later told CNBC that the system will strive to recognize patterns across data inputs that humans might miss. And given its data dependency, there would be none of the emotional biases that make stock picking so difficult.

EARLY PERFORMANCE WAS CHOPPY, TO SAY THE LEAST.

The computer system traded as frequently as it did erratically. The turnover rate in the first year was 260% versus only 3.1% for the S&P 500. And during the 2018 market downturn AIEQ plummeted 16%, compared to a loss of 6% for the benchmark S&P. Despite the sketchy start, performance improved and the machine versus man scheme caught on with the public.

The fund logged returns in 2019 and 2020 of 31.2% and 25.4% respectively, earning a three-star rating with *Morningstar*. Assets under administration grew from only $7 million in 2017, to $169 million through December 2021.

AIEQ enters 2022 with top picks Advanced Micro Devices (AMD), Palo Alto Networks (PANW), DexCom (DXCM), Fortinet (FTNT), Moderna (MRNA), Avantor (AVTR), CBRE Group (CBRE), Enphase Energy (ENPH) and Nutanix (NTNX), according to ETF Managers Group, an ETF tracker and broker dealer.

The list is filled with big cap tech winners in the semiconductors, cybersecurity and vaccine categories. It's a great strategy if the best trends of 2021 persist. Unfortunately, the list assumes AIEQ will stick around to see how it all plays out in 2022. Given past practices that is not likely.

A year ago *U.S. News and World Report* noted that AIEQ to picks or 2021 were Tesla (TSLA), AMD, Enphase, Alphabet (GOOGL), Moderna (MRNA), Zscaler (ZS) and Etsy (ETSY). A year later only three of these companies are in the top nine. And AIEQ gained only 19.4% in 2021, well short of the benchmark S&P 500 advance of 27.6%.

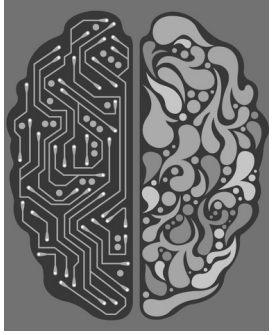
AIEQ's algorithms are great at finding winners. The system simply can't stay with them, at least the way it is currently coded.

Even with all of the data crunching and machine learning, this is a shockingly human shortcoming.

Top-ten picks lists are entertaining, yet most of the time they are not very useful. Investors should find a strategy that works for them, then stay with it.

Source: forbes





THIS HUMANOID ROBOT IS ABOUT TO FLY LIKE IRON MAN

The flying humanoid robot iRonCub gives off more than a little Iron Man vibe. iRonCub has four jet engines, and the shiny silver pants seen in the image above were used to prevent the robot from setting its legs on fire. Eventually, those shiny, flame-resistant pants were replaced with flame-resistant plates to protect all the robot's mechanical innards. iRonCub was created by researchers at the Center for Robotics and Intelligent Systems at the Italian Institute of Technology (IIT). One of the key aims for this project is making robotic aerial manipulation more robust and energy-efficient than ever before. Robots of that type cannot move around the environment utilizing contact forces, and they typically struggle to fly in windy conditions while manipulating objects. /

Source: slashgear

AMECA HUMANOID ROBOT PUTS AI IN A GENDER-NEUTRAL, 'NON-THREATENING' BODY

The Ameca humanoid robot is designed to work with humans and provide relatable natural human gestures. It's designed with upgradeable modular mechanics and can be controlled via a cloud-managed API dev kit. The company says its robot has ground-breaking advances in movement and natural gestures, intelligent interaction and provides a future-proof software system. Engineered Arts also says that its API offers customization pathways that weren't available previously. The company plans to show off its robot at CES 2022 in Las Vegas, which will kick off early next year. The robot is designed to be non-threatening and general neutral. Ameca is designed to support the testing and development of artificial intelligence and machine learning systems alongside the company's Tritium robot operating system. /

Source: slashgear

NEARLY HALF OF LATIN COMPANIES SET TO ADOPT AI BY 2023

Artificial intelligence (AI) will be in place in 40% of the largest organizations in Latin America by 2023, according to research released by IT analyst firm IDC. Companies in the region will also be seeking governance services relating to areas such as data management and security, according to the study that was carried out with 5,000 large Latin American businesses. Despite the advances in AI adoption in the region, the analyst noted that 30% of companies will not be able to make the most of the technology due to skills shortages and challenges in relation to the existing IT set up of organizations. Some 40% of companies will also be allocating hardware budgets differently to improve the experience of customers and staff working remotely until 2025. Most companies using artificial intelligence systems in Latin America have profited from the use of the technology

Source: zdnet

MEDICAL ROBOTS: THEIR FACIAL EXPRESSIONS WILL HELP HUMANS TRUST THEM

Despite the apparent technical and emotional advantages, research shows that a clear majority refuse to trust robots and machines with important and potentially life-saving roles. Participants said they wanted a robot that resembled humans with a face, a mouth and eyes but – crucially – not an identical representation of human features. In other words, they still wanted them to look like a robot, not some unsettling cyborg hybrid. These findings align with a phenomenon called the "uncanny valley" which states that we accept robots with a human likeness – but only up to a certain point. Once we cross this point, and the robot looks too human, our acceptance of it can swiftly go from positive to negative.

Source: theconversation

MACHINE LEARNING-POWERED RADAR SEES EVEN WHAT YOU DON'T

Think of a self-driving car as a human being; radars are the eyes and machine learning technology is the brain. Fitting radars to a car's body allows it to scope out the environment it operates in. It can detect that there's a car in front of it, that there's a bike coming the other way, and that there's a traffic light it needs to stop for. These are fairly straightforward tasks that most self-driving prototypes already perform. Machine learning takes this feature to the next level by allowing a car to remember the different scenarios and objects it has encountered. In turn, it can plan ahead: it knows that there is, say, a crowded bus stop around the corner that it might need to slow down for. Radar-equipped prototypes are reportedly capable of operating in low-light conditions, at night, in the rain, in a snowstorm, and in dense fog. Aptiv traveled to CES 2022 to showcase the improvements it has made to its suite of advanced driver assistance systems.

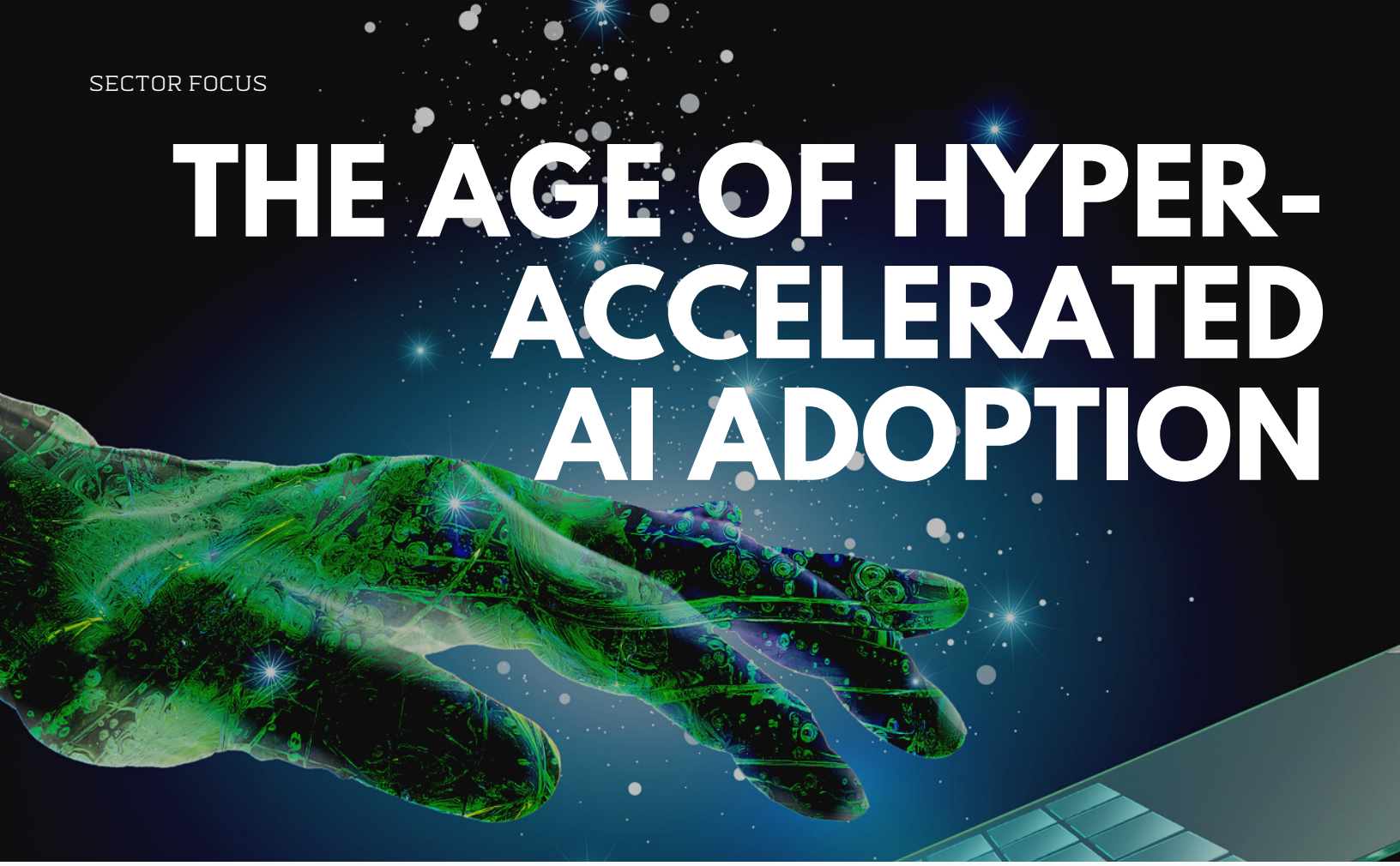
Source: digitaltrends

RESEARCHER DEVELOPING TECHNOLOGY TO PREDICT VAPOUR EXPLOSION-INDUCED ACCIDENTS IN BOILERS

An Associate Professor in the Department of Mechanical Engineering, IIT-Patna, Rishi Raj, and a recipient of this year's Swarnajayanti fellowship instituted by the Department of Science and Technology (DST), Government of India, is working on a "novel" technology utilising Artificial Intelligence/Machine Learning to develop prognostic tools for advance prediction and control of vapor explosion-induced accidents in boilers. The development assumes importance in view of the fact that a staggering 23,000 boiler accidents have been recorded worldwide over the past 10 years, wherein India alone accounts for the 34 per cent of the global deaths.

Source: glamsham

THE AGE OF HYPER-ACCELERATED AI ADOPTION



“2021 has brought significant advances in AI and in the next year this momentum will drive humanity even further,” writes Michael Kagan, Chief Technology Officer of NVIDIA

AI is one of the most powerful technological leaps humankind has ever made, driving a wide range of new technologies, services, and products we’ve never thought of. We live in the midst of an AI revolution that will keep transforming the world.

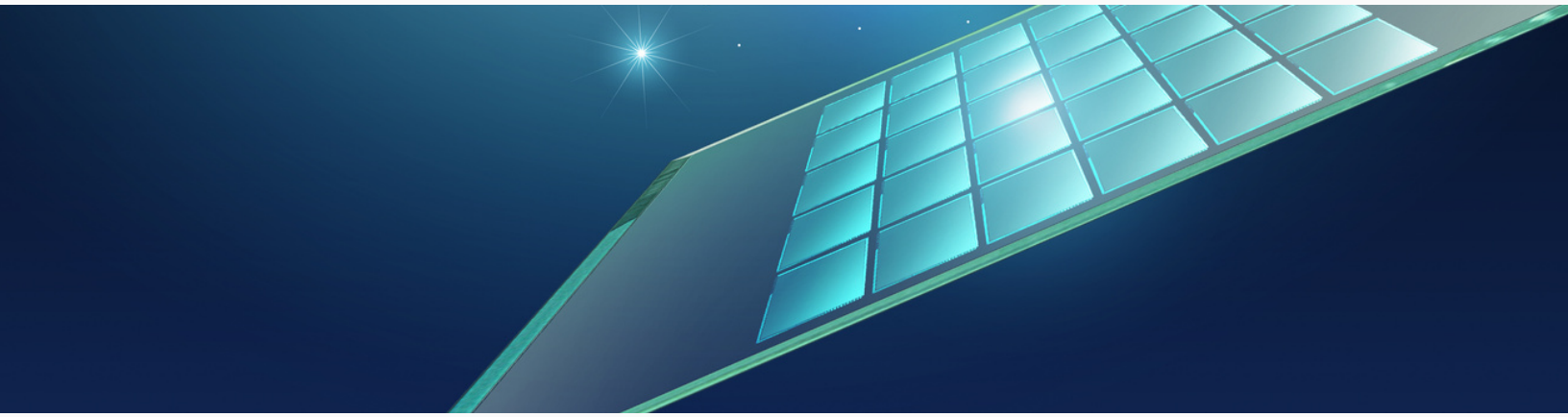
Artificial intelligence impacts every industry, business, and life of every human being on the planet. AI computers harness massive amounts of data and use their consistent evolving intelligence to make optimal decisions and discoveries in fractions of the time that it would take humans.

There’s no major industry modern AI hasn’t already affected or will affect soon. That’s especially true in the past few years, as thanks to the ever-increasing computing and processing power, startups and enterprises were able to ramp up their big-data analytics activities, create Machine Learning and AI based services and products, and more.

As individuals, we already see artificial intelligence in our smart devices, cars, healthcare system and apps, and we’ll continue to see its influence permeate deeper into many other industries for the foreseeable future.

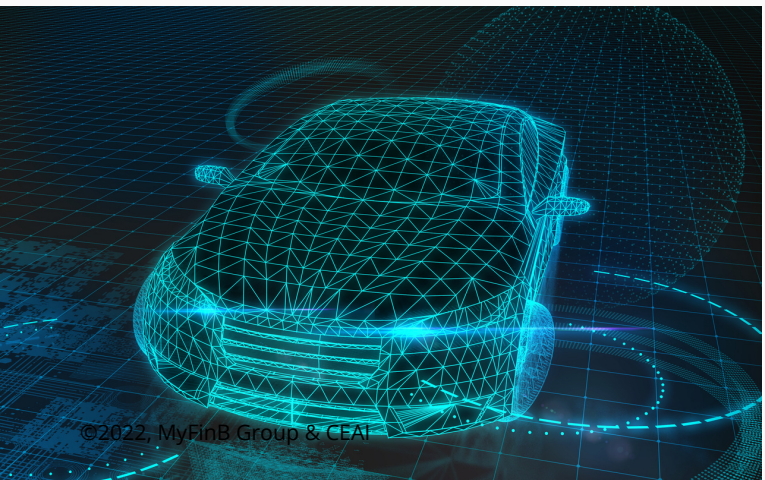
The AI revolution is leading to the creation of a “human-machine team” working together. The machine processes amounts of data no human can process – delivering insights to humans to make decisions no machine can make.

2021 has brought significant advances in AI and in the next year this momentum will drive humanity even further. Here is where I believe AI efforts in 2022 will be focused as they parse big data and look for new revenue opportunities:



ERA OF SIMULATION AND VIRTUAL WORLDS

AI-based computing platforms of today enable us to accurately simulate the real world and enable collaboration in this simulated virtual world (the much discussed Metaverse). These physically accurate models generate a high amount of synthetical data to train advanced AI models to much higher precision than possible today. We'll also see advancing 3D standards for describing virtual worlds. Building accurate and rich Digital Twins – counterparts to everything in the real world - airplanes, cars, factories, bridges, cities and even Earth itself - is one of the grand challenges in computer science. Many industries are starting to examine and adopt digital twins and virtual worlds, exploring the potential for operational efficiencies and cost savings. Everything we build in the real world will have a counterpart in the virtual world, enabling us to experience, test and optimize complex designs well before we commit to building them in the real world, and to tackle humanity's greatest challenges. That will result not just in faster product delivery, and billions of dollars saved, but will also allow us to deal with climate change and keep our planet safe.



AI WILL TALK AND UNDERSTAND US MORE THAN EVER

The synergy of hardware and AI models made big leaps forward with NLP - Natural Language Processing. Speech synthesis for example, is poised to become just as emotive and persuasive as the human voice in 2022. This will help industries like retail, banking and healthcare to improve services for their customers. We already see today conversational bots being first line help agents answering calls and chats. New developments in the area of NLP will take it to the next level. Companies will race to deploy new conversational AI tools that allow us to work more efficiently and effectively using natural language processing. Companies using both speech and text for interaction with other businesses and customers will employ AI as they move to understand the context or sentiment of what a person might be saying. Is the customer frustrated? Is your boss being sarcastic? More and more computers will be able to identify these nuances, just as if they were humans.

PROGRAMMABLE CARS

AI transforms the driving experience. In the next year we'll see more automakers creating software-defined architectures with headroom to support new applications and services via automatic over-the-air updates, just like our smartphones, meaning that vehicles will get better and safer over time. Automakers will also begin to use simulation to train and validate deep neural network models, like testing self-driving cars for a broad range of driving conditions which are too dangerous for a driver. Soon, we will also see cars that will start collaborating on the road to avoid traffic jams and prevent accidents.

Source: calcalistech

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