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AI:10

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WHAT'S HOT

HOW FINTECH COMPANIES ARE USING AI, MACHINE LEARNING TO CREATE ALTERNATIVE LENDING SCORE

HEADLINE NEWS IN A FLASH

- The #1 way AI is transforming grocery shopping
- Google employs ML to make Chrome more secure and enjoyable
- AI-powered speech recognition is entering a new phase: Total global comprehension
- AI is primed to have an outsized impact on the field of dentistry
- New Chip Can Process Nearly Two Billion Images Per Second
- Researchers use AI to detect new family of genes in gut bacteria

INDUSTRY FOCUS

BLOCKCHAIN'S POTENTIAL: HOW AI CAN CHANGE THE DECENTRALIZED LEDGER

HOW FINTECH COMPANIES ARE USING AI, MACHINE LEARNING TO CREATE ALTERNATIVE LENDING SCORE

Fintech companies lending in markets where adequate credit history, banking records, and tax-filing records, etc., are not available, especially rely on such alternative lending scores for their underwriting

Alternative credit scoring models and the lenders embracing them are making serious inroads into the sections of the market which were considered largely impenetrable or too difficult to underwrite. Developments in AI/ML and innovations in utilizing data outside the preset list of mainstream lending practices have made this possible.

Some of the visionary players in the market segments where inadequate data is a major impediment to underwriting and hence lending, are making great use of alternative credit scoring models using AI/ML on non-conventional data to profile and evaluate customers. These models often combine elements of different computer vision algorithms (for image segmentation, object detection), geospatial analysis, and NLP methods for information extraction from textual data.

This approach has turned out to be a game changer in "new-to-credit" segments. For some of the early movers in the lending space targeting the lower section of the MSME sectors where mainstream underwriting data and credit history files are quite thin, the AI/ML driven alternative credit scoring models are becoming increasingly integral to the lending processes and will be a key differentiator in the future.

Conventional methods for credit scoring followed by lending institutions rely on sufficient credit history (credit bureau data), formal banking and accounting records, tax return filing information for several years, etc. Alternative credit scoring models, on the other hand, use data other than the kinds listed above. Fintech companies lending in markets where adequate credit history, banking records, and tax-filing records, etc., are not available, especially rely on such alternative lending scores for their underwriting.

These alternative credit scoring models use data such as geolocation-based data on several economic, demographic, and risk indicators, certain similar kinds of indicators derived from satellite image data, other location-level sectoral economic trends are being used quite extensively in alternative credit scoring AI/ML models.

Another type of data that AI/ML algorithms (for example, certain variants of deep learning models) are proving to be quite useful are business image data (for example, stock of goods, store space, store frontage and location-street, etc.). Also, modern alternative approach to AI/ML driven credit scoring make use of permitted mobile data (transactions SMS data,

As we noted, the alternative credit scoring approach not only uses non-conventional data, but the data types are also of a wide variety (images, texts, along with numeric data). This makes specific kind of computing and data extraction techniques and AI/ML algorithms necessary to ingest and utilize most of these types of alternative data (like images, SMS scrapes, etc.) which wouldn't have been amenable to traditional data analysis methods. Carefully developed and rigorously tested ML models using such comprehensive data from multiple sources, are capable of highly accurate credit risk prediction. This enables fintech firms to address the critical data gap by substituting conventional credit scoring with AI/ML based credit scoring models using alternative data.

The alternative credit scoring approach allows expanding the scope of lending manifold to include a significant portion of underserved segments, thus enhancing revenue with appropriate credit risk management and pricing for the lenders as well as catering to the social cause of financial inclusion.

AI/ML solutions enabling such alternative credit risk modeling are also going to be a critical factor in bringing (almost) fully digital lending products to hitherto unexplored segments.

Source: *Entrepreneurs*



HEADLINE NEWS IN A FLASH

THE #1 WAY AI IS TRANSFORMING GROCERY SHOPPING

With artificial intelligence, technology startups are hoping to change the grocery shopping experience. "It's pretty overwhelming to get your food right each week," says Alex Weinstein, Chief Digital Officer of Hungryroot an AI grocery company. "That logic coincides with trends in consumer behavior toward contactless shopping and fast delivery. And interestingly this could be a huge boon to a major problem: Food wastage. AI's predictive and suggestion capabilities can help solve that. Hungryroot's AI-powered grocery suggestion algorithm, for example, reduces food wastage by predicting how much of each kind of food to buy before sourcing it. Since customer preferences are known, it's easier to forecast demand and manage inventory. Substitutions can also be made throughout the process, such as at the warehouse and based on customer preferences.

Source: zdnet

AI-POWERED SPEECH RECOGNITION IS ENTERING A NEW PHASE: TOTAL GLOBAL COMPREHENSION

A speech recognition startup just landed \$62 million in Series B funding. How will the money be used? In a quest to enable a computer to understand every voice in the world. Speech recognition has been a huge challenge for developers, and it's a puzzle that's being closely watched in a variety of industries. The technology has implications for human-machine interfaces in fields like robotics, autonomous vehicles, and personal computing, all of which will benefit from computers that can accurately interpret natural speech. Speech recognition, then, is a kind of technological entry point, a market need that can help spur the development of technologies that will have broad resonance and incalculable implications for how we interact with machines. It's also an equity issue. Not surprisingly, speech recognition currently works well for a small part of the global population.

Source: zdnet

NEW CHIP CAN PROCESS NEARLY TWO BILLION IMAGES PER SECOND

Engineers at Penn State University have created a chip that can process and classify nearly two billion images per second. Penn Engineering Today reports that a team of researchers – including Farshid Ashtiani, Alexander J. Geers, and Firooz Aflatouni – developed the chip which is smaller than a square centimeter. The chip can perform an entire image classification in roughly half a nanosecond and all without the need for a separate processor or memory unit. Penn State engineers have created the first scalable chip that classifies and recognizes images almost instantaneously – by designing a workaround that removes the most time-consuming aspects of traditional chip-based AI image processing. Their 9.3-square-millimeter custom processor directly processes light received from an "object of interest" using what they call an "optical deep neural network."

Source: petapixel.com

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GOOGLE EMPLOYS ML TO MAKE CHROME MORE SECURE AND ENJOYABLE

Google has explained how machine learning is helping to make Chrome more secure and enjoyable. Starting with security, Google says that its latest machine learning (ML) model has enabled Chrome to detect over twice as many phishing attacks and malicious sites. The new on-device machine learning model was rolled out in March. Since its rollout, Google claims that Chrome has detected 2.5x more threats. Beyond security, Google is also preparing to use machine learning to improve the experience of Chrome users. Chrome enables users to reject notifications from pages they don't care about. In the next release of Chrome, Google says it intends to implement an AI model that learns when users are unlikely to grant prompts based on previous interactions and will silence them to minimise interruptions.

Source: AINews

AI IS PRIMED TO HAVE AN OUTSIZE IMPACT ON THE FIELD OF DENTISTRY

There are a number of reasons, however, that AI will have an outsize impact on the field of dentistry. Unlike other healthcare fields, where X-rays are captured only to diagnose the cause of a specific ailment, most dental patients receive X-rays annually to track their oral health and inform care. As a result, there are more X-rays of healthy and unhealthy teeth than there are any other kind of X-ray. This massive volume of available imagery enables training of highly accurate machine learning (ML) algorithms. Just as ML algorithms are trained to recognize humans through exposure to numerous images of faces, ML algorithms exposed to millions of dental X-rays can detect oral ailments more accurately than the human eye. For the first time, this ability of AI/ML software to distinguish healthy from unhealthy teeth allows for diagnostic consistency to be established across dental providers.

Source: FastCompany.com

RESEARCHERS USE AI TO DETECT NEW FAMILY OF GENES IN GUT BACTERIA

Using artificial intelligence, UT Southwestern researchers have discovered a new family of sensing genes in enteric bacteria that are linked by structure and probably function, but not genetic sequence. The findings, published in PNAS, offer a new way of identifying the role of genes in unrelated species and could lead to new ways to fight intestinal bacterial infections. "We identified similarities in these proteins in reverse of how it's usually done. Instead of using sequence, Lisa looked for matches in their structure," said Kim Orth, Ph.D., Professor of Molecular Biology and Biochemistry, who co-led the study with Lisa Kinch, Ph.D., a bioinformatics specialist in the Department of Molecular Biology. Dr. Orth's lab has long focused on studying how marine and estuary bacteria cause infections.

Source: The Jerusalem Post

BLOCKCHAIN'S POTENTIAL: HOW AI CAN CHANGE THE DECENTRALIZED LEDGER

Artificial intelligence's transformative power in relation to blockchain technology is being severely overlooked, say experts.

One reason is that blockchain's use of a decentralized ledger offers insight into the workings of AI systems and the provenance of the data these platforms may be using. As a result, transactions can be facilitated with a high level of trust while maintaining solid data integrity. Not only that, but the use of blockchain systems to store and distribute AI-centric operational models can help in the creation of an audit trail, which in turn allows for enhanced data security.

Furthermore, the combination of AI and blockchain, at least on paper, seems to be extremely potent, one that is capable of improving virtually every industry within which it is implemented. For example, the combination has the potential to enhance today's existing food supply chain logistics, healthcare record-sharing ecosystems, media royalty distribution platforms and financial security systems.

That said, while there are a lot of projects out there touting the use of these technologies, what ...

benefits do they realistically offer, especially since many AI experts believe that the technology is still in its relative infancy? There are many firms that are marketing the use of AI as part of their current offerings, giving rise to the blatant question: What exactly is going on here?

With the cryptocurrency market continuing to grow from strength to strength over the last couple of years, the idea of artificial intelligence (AI) making its way into the realm of crypto/blockchain technology has continued to garner an increasing amount of mainstream interest across the globe.

Are AI and blockchain a good match?

To gain a broader and deeper understanding of the subject, Cointelegraph spoke with Arunkumar Krishnakumar, chief growth officer at Bullieverse – an open-world 3D metaverse gaming platform that utilizes aspects of AI tech. In his opinion, both blockchain and AI address different aspects of a dataset's overall lifecycle.

While blockchain primarily deals with things like data integrity and immutability – making sure that information data that sits on a blockchain is of high quality – AI uses data that is stored efficiently to provide meaningful and timely insights that researchers, analysts and developers can act on. Krishnakumar added:



"AI can help us to not just make the right decisions through a specific situation, but it can also provide predictive heads-up as it gets more trained and intelligent. However, blockchain as a framework is quite capable of being an information highway, provided scalability and throughput aspects are addressed as this technology matures."

When asked whether AI is too nascent a technology to have any sort of impact on the real world, he stated that like most tech paradigms including AI, quantum computing and even blockchain, these ideas are still in their early stages of adoption. He likened the situation to the Web2 boom of the 90s, where people are only now beginning to realize the need for high-quality data to train an engine.

Furthermore, he highlighted that there are already several everyday use cases for AI that most people take for granted in their everyday lives. "We have AI algorithms that talk to us on our phones and home automation systems that track social sentiment, predict cyberattacks, etc.," Krishnakumar stated.

Source: Cointelegraph

Ahmed Ismail, CEO and president of Fluid – an AI quant-based financial platform – pointed out that there are many instances of AI benefitting blockchain. A perfect example of this combination, per Ismail, are crypto liquidity aggregators that use a subset of AI and machine learning to conduct deep data analysis, provide price predictions and offer optimized trading strategies to identify current/future market phenomena, adding:



“The combination can help users capitalize on the best opportunities. What this really translates into is an ultra-low latency and ultra-low-cost solution to fragmented liquidity – a multitrillion-dollar problem that plagues the virtual assets market today.”

On a more holistic note, Ismail pointed out that every technology has to go through a cycle of evolution and maturity. To this point, he highlighted that even when the banking and finance sectors began adopting digital assets, there were major concerns across the board about whether these assets had progressed enough to be successfully implemented. “AI and its subsets bring tremendous advantages to the crypto industry but should be ethically promoted with a long-term vision at its core,” he closed out by saying.

More work may be needed

According to Humayun Sheikh, CEO of Fetch.ai – a blockchain project aimed at introducing AI to the cryptocurrency economy – as Web3 and blockchain technologies move forward, AI will be a crucial element required to bring new value to businesses, adding:



“Decentralized AI can remove intermediaries in today’s digital economy and connect businesses to consumers directly. It can also provide access to large volumes of data from within and outside of the organization, which when analyzed using AI scale can provide more actionable insights, manage data usage and model sharing, and create a trustworthy and transparent data economy.”

In terms of the gap that exists between AI and its apparent lack of use cases, Sheikh believes that the dichotomy does not hold true since there are already many use cases for everyone to see.

Does blockchain need AI to succeed?

Chung Dao, CEO and co-founder of Oraichain – a smart contract and decentralized app platform – believes that blockchain technology is more than what most people like to believe it is, which is a closed world of financial transactions without any connection to real-world assets and events. He told Cointelegraph:



“AI must come to help blockchain recognize real world utility, expand its applicability and enable intelligent decision-making. Both technologies are in their early stages, but not ‘very early.’ There are many successful AI solutions that recognize patterns better than humans, and there are no doubt many advantages of automation in a wide range of businesses.”

Dao noted that there’s already a robust infrastructure for AI ready to be implemented atop existing blockchain technologies, one that can enhance “trust, identification and decentralization” across the space. In this regard, Oraichain has a whole ecosystem dedicated to this: The project utilizes an oracle mechanism that integrates AI into smart contracts as well as harnessing the power of an AI-centric data management system and marketplace.

Therefore, as we move into a future driven by the principles of decentralization, it stands to reason that futuristic technologies such as artificial intelligence will continue to gain more ground within the global crypto landscape over the coming months and years.

Source: CoinTelegraph



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