AI:10

GET INSIGHTS ON AI UNDER 10 MINUTES

HEADLINE NEWS IN A FLASH

- Early Results On Artificial Intelligence For Business: So Far, So Good
- Artificial intelligence is already upending geopolitics
- Perceptron: Robots that feel pain and AI that predicts soccer players' movements
- Artificial Intelligence: For AI to work, data use must be right
- Advances in AI and machine learning could lead to better health care: lawyers
- Engineers build LEGO-like AI chip that could reduce electronics waste

WHAT'S HOT

AI MATURITY: ONLY 12% OF COMPANIES ARE 'AI ACHIEVERS'

INDUSTRY FOCUS

ARTIFICIAL INTELLIGENCE AND SECURITY: WHAT YOU SHOULD KNOW

AI MATURITY: ONLY 12% OF COMPANIES ARE 'AI ACHIEVERS'

Accenture research suggests that only 12% of companies have advanced their AI maturity enough to achieve superior growth and business transformation. These companies are 'AI Achievers' and, on average, attribute 30% of their total revenue to AI.

According to Accenture, in 2021, among executives of the world's 2,000 largest companies (by market capitalization), those who discussed AI on their earnings calls were 40% more likely to see their firms' share prices increase -- up from 23% in 2018. Yet the most recent Accenture research suggests that only 12% of companies have advanced their AI maturity enough to achieve 'superior growth' and business transformation. On average, 12% of "AI achievers" attribute 30% of their total revenue to AI.

What is AI Maturity? AI maturity measures the degree to which organizations have mastered AI-related capabilities in the right combination to achieve high performance for customers, shareholders and employees.

"AI maturity comes down to mastering a set of key capabilities in the right combinations -- not only in data and AI but also in organizational strategy, talent and culture. This includes "foundational" AI capabilities -- like cloud platforms and tools, data platforms, architecture and governance -- that are required to keep pace with competitors. It also includes "differentiation" AI capabilities, like AI strategy and C-suite sponsorship, combined with a culture of innovation that can set companies apart," Accenture.

There are four types of companies with respect to AI maturity:

- **AI Achievers:** show advanced AI maturity enough to achieve 'superior growth' and business transformation

- **AI Builders:** show strong foundational capabilities and average differentiation capabilities

- **AI Innovators:** show strong differentiation capabilities and average foundational capabilities

- **AI Experimenters:** those with average capabilities in both categories -- make up the majority (63%) of those surveyed. (See chart below.)

Achievers, Builders and Innovators collectively represent just 37% of surveyed organizations -- Achievers accounted for 12%, Builders for 12% and Innovators for 13%.
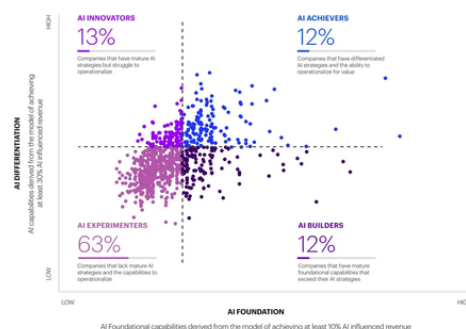

Here are the key AI takeaways from Accenture research:

1.75% of companies have already integrated AI into their business strategies and have reworked their cloud plans to achieve AI success.

2. Nearly a third (30%) of all AI pilot initiatives are subsequently scaled to deliver wide-range outcomes, with 42% of business leaders noting that AI projects exceeded their expectations.

Source: zdnet
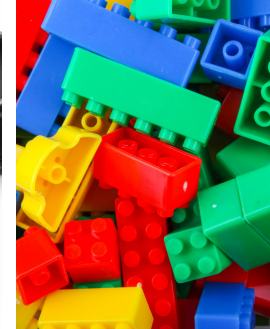
EARLY RESULTS ON ARTIFICIAL INTELLIGENCE FOR BUSINESS: SO FAR, SO GOOD

It's too early to tell if artificial intelligence (AI) will deliver on all the hype and promises around it. But in the meantime, the results we do see trickling in are encouraging. A survey just released shows that the majority of organizations that use AI are still experimenting with the technology, with about 12% have the technology truly at work in a fully "mature" fashion. The mature AI sites notably are seeing strong competitive advantage. The study from Accenture, which covered of 1,176 firms and 1,615 executives across the globe, estimates that the number of fully mature AI initiatives is projected to increase from 12% to 27% over the next two years. At this point, a majority, 63%, are still mostly testing the waters.

Source: zdnet

PERCEPTRON: ROBOTS THAT FEEL PAIN AND AI THAT PREDICTS SOCCER PLAYERS' MOVEMENTS

This week in AI, a team of engineers at the University of Glasgow developed "artificial skin" that can learn to experience and react to simulated pain. Elsewhere, researchers at DeepMind developed a machine learning system that predicts where soccer players will run on a field, while groups from The Chinese University of Hong Kong (CUHK) and Tsinghua University created algorithms that can generate realistic photos — and even videos — of human models. According to a press release, the Glasgow team's artificial skin leveraged a new type of processing system based on "synaptic transistors" designed to mimic the brain's neural pathways. The transistors, made from zinc-oxide nanowires printed onto the surface of a flexible plastic, connected to a skin sensor that registered changes in electrical resistance.

Source: TechCrunch

ADVANCES IN AI AND MACHINE LEARNING COULD LEAD TO BETTER HEALTH CARE: LAWYERS

As the commercialization of artificial intelligence and machine learning grows, the next frontier for its use will be in the world of health care. This use will potentially change health outcomes for the better – and brings questions surrounding privacy and data use to the forefront. There are many examples of Canadian hospitals and health care organizations using AI to improve efficiencies and outcomes for better patient care in a clinical setting. **HARNESSING THE POWER OF AI FOR HEALTH CARE: Clinical applications -** improving patient experience and health care outcomes, using AI in select procedures to improve patient care, **Detection and Diagnosis -** Improve speed and accuracy of disease detection and diagnostics, **Research and Development -** Drug discovery, Medical Devices, System Efficiency

Source: lexpert.ca

ARTIFICIAL INTELLIGENCE IS ALREADY UPENDING GEOPOLITICS

Geopolitical actors have always used technology to further their goals. Unlike other technologies, artificial intelligence (AI) is far more than a mere tool. We do not want to anthropomorphize AI or suggest that it has intentions of its own. It is not — yet — a moral agent. But it is fast becoming a primary determinant of our collective destiny. We believe that because of AI's unique characteristics — and its impact on other fields, from biotechnologies to nanotechnologies — it is already threatening the foundations of global peace and security. The rapid rate of AI technological development, paired with the breadth of new applications (the global AI market size is expected to grow more than ninefold from 2020 to 2028) means AI systems are being widely deployed without sufficient legal oversight or full consideration of their ethical impacts.   *Source: TechCrunch*

ARTIFICIAL INTELLIGENCE: FOR AI TO WORK, DATA USE MUST BE RIGHT

The surge in digital transformation initiatives across businesses and the heightened need for real-time insights has led to an explosion in data creation. But few organisations have a proper understanding of where all their data exists in the first place. Every company has different siloed data sets running on-premises and across multiple public and private clouds and various servers. To help organisations address challenges related to data complexity, IBM proposes an approach called a data fabric. "A data fabric is a strategy and architectural approach that allows businesses to use the disparate data sources and storage repositories (databases, data lakes, data warehouses) and simplifies data access," says Siddhesh Naik, Data, AI & Automation sales leader, IBM Technology Sales, IBM India/South Asia.

Source: Financial Express

ENGINEERS BUILD LEGO-LIKE AI CHIP THAT COULD REDUCE ELECTRONICS WASTE

Engineers at Massachusetts Institute of Technology (MIT) have built a LEGO-like artificial intelligence (AI) chip, with their sight on sustainable, modular electronics. The team's results were published Monday in peer-reviewed Nature Electronics. The researchers dubbed the LEGO-like chip a "reconfigurable" AI chip because it has vast expandability. They say it can keep devices up to date while reducing the population's electronic waste. The design uses light, instead of physical wires, to transmit information through the chip and layers can be swapped out or stacked on, such as to add new sensors or updated processors. This chip is stacked with three image recognition blocks, each composed of an image sensor, optical communication layer, and artificial synapse array for classifying one of three letters, M, I, or T.

Source: The Jerusalem Post

ARTIFICIAL INTELLIGENCE AND SECURITY: WHAT YOU SHOULD KNOW

Next-generation AI products learn proactively and identify changes in the networks, users, and databases using "data drift" to adapt to specific threats as they evolve.

In March 2019, Norsk Hydro, a Norwegian renewable energy and aluminum manufacturing company, faced a ransomware attack. Rather than paying the ransom, a cybersecurity team used artificial intelligence to identify the corruption in the computer system and rebuild the operations in an uncorrupted parallel system. LockerGoga ransomware was eventually identified as the culprit, which spread via Windows-based systems. While Norsk avoided paying the ransom, the attack still forced it to operate without computer systems for an extended period of time (weeks to months), while the security team isolated and scanned thousands of employee accounts for malicious activity.

Signature-based detection is an approach in which a unique identifier is established about a known threat so that it can be identified in the future. However, signature-based approaches require continuous updates that take time and effort to maintain. Next-generation artificial intelligence (AI) products learn proactively and identify...

changes in the networks, users, and databases through what is called data drift to adapt to specific threats as they evolve. AI products are the linchpin of a multifaceted defense system that can be utilized in the background prophylactically, especially against unknown threats. Cyberattacks that make the evening news are usually the ones that end in disaster; it is hardly ever reported how AI could have prevented those attacks in the first place. In addition, cyberattacks that are contained or thwarted on a daily basis, while AI is ubiquitously at work, are almost never reported in the news because they happen so frequently. Unfortunately, as a result of the lack of coverage on these "non-events" in public forums, most people don't understand how AI makes an effective cyber defense achievable and not just theoretical. Here is what you should know.

Deep-Learning Next-Generation AI Tools

Data drift is a term used to measure changes in underlying data patterns. A typical example would be if an e-commerce business launched a new payment gateway to sell furniture. In this instance, BECS direct deposit might be a new financial term introduced in the business workflow. BECS, or Bulk Electronic Clearing System, governs how direct debits,...

automatic payments, bill payments, and direct credits work and how a range of bulk electronic transaction types are made between its participants. Deep-learning AI models can detect the term and, with minimal human assistance, classify it as a financial transaction. Next-generation AI then can monitor financial transaction data flows and correlate the data accordingly, associating it with financial context and sensitivity. The financial data monitoring can involve, for example, an application programming interface while the user checks out via online shopping cart or even general business flow. The advantage of the auto-detection approach is that a security team doesn't need to be on the lookout for new vulnerability patches for these terms. Instead, the security team can rely on AI to recommend new data patterns and self-patch accordingly.

Data Transformers

Data transformers are one of the AI tools used to auto-discover and classify data patterns. A transformer model memorizes and tracks relationships between changes in data attributes to create contextual insights. It is similar in many ways to how a human brain works when reading a book. Although you often do not understand a character's role in the story or their relationships with the other characters when they first appear, you gain that knowledge as the story develops.

Data transformers use attention-based mechanisms constantly learning in the same way to gain a greater understanding of networks, files, emails, etc., and how the content of data relate to and interact with each other to identify and classify malicious changes. The text is represented by mathematical datasets, which derive data representations that can be later used to quantify the changes in data as it is being processed by a transformer.

Deep-learning models can also be used for behavioral purpose classification, which assist security teams with efficiently identifying sensitive or harmful content. An AI transformer model uses its understanding of natural language to analyze email data it has never been exposed to, such as credit offers, lottery ticket promotions, employment offers, or COVID test results, in order to classify and identify malicious content. Similar mechanisms can be used to identify malicious content in documents containing employee health information even though the AI model had never analyzed any kind of healthcare data before. The transfer model proactively alerted security teams regarding the sharing of sensitive data before a breach occurred.

What This Means for Your Business

Not only is it important to ensure that cybersecurity systems are in place to defend against and prevent threats, but it's also important to have the right one that synthesizes with your business's needs. Manual document classification for documents, emails, and text messages is complex and requires technical expertise. Deep-learning transformers simplify those tasks, and if done right, can be leveraged efficiently to save costs and effort.

However, an AI model with incorrect settings can result in false positives, and in turn, generate too many alerts, creating headaches for security teams. As a result, one should always seek expert advice when selecting products with AI components. The next-gen AI tools will be able to automate your business processes with minimal setup, human intervention, rules, and policies.

Source: Darkreading.com
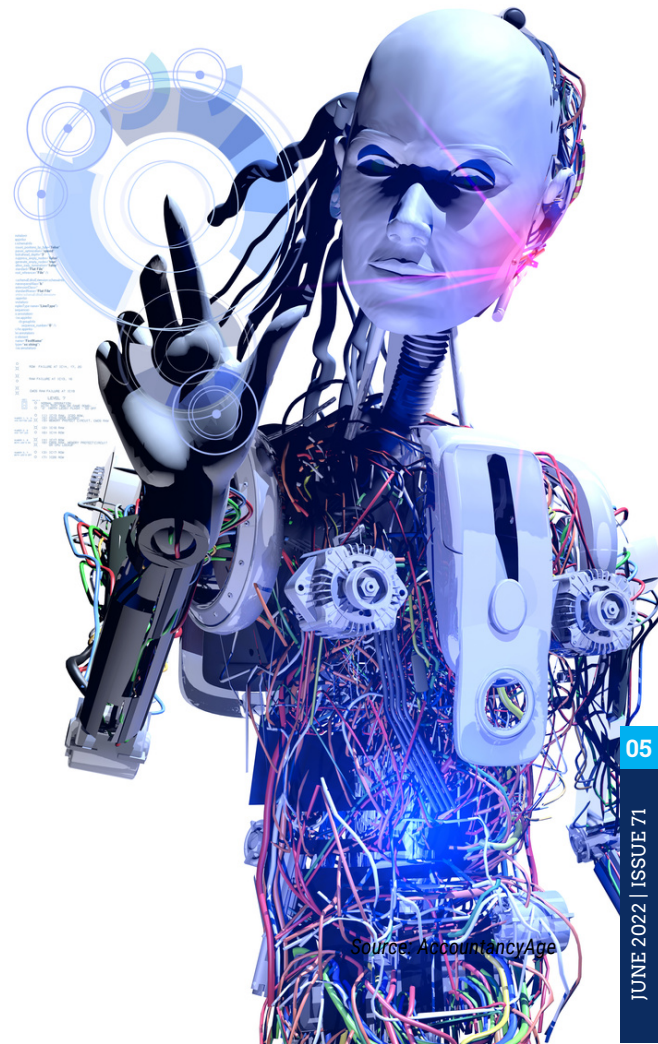
Source: AccountancyAge

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MyFinB is an award-winning tech company that specializes in artificial intelligence. The company developed its own natural language platform with predictive and prescriptive narrative capabilities - a niche area that differentiates itself from any others.

MyFinB helps people understand and communicate what is most important in their data. By transforming data into insightful, human-like language, the company's natural language technology enables people to be data-driven and make better decisions, focus talent on higher-value opportunities, and create differentiated products.

The Centre for AI Innovation (CEAI) forms part of MyFinB Venture's portfolio of innovative, disruptive projects to guide and support the digital transformation initiatives by organisations and business innovators.

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