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AI:10

HEADLINE NEWS IN A FLASH

- Will artificial intelligence spell the end of the programmer?
- As artificial intelligence rises, lawmakers try to catch up
- In China, AI can now screen newborns for genetic disorders
- AI makes rooftop solar panels more efficient
- AI Reveals the Most Human Parts of Writing
- How AI Can Be Used Ethically to Monitor Worker Productivity

INDUSTRY FOCUS

IMPLEMENTING AI DURING A WORLDWIDE TALENT SHORTAGE

IMPLEMENTING AI DURING A WORLDWIDE TALENT SHORTAGE

Source: VentureBeat

C-suite demands for the proliferation of AI throughout the enterprise are often complicated by the lack of available talent and the requisite skills to endeavor on such deployments. Budget is rarely the limiting factor — especially for larger organizations. What's missing is the people with the knowledge and hands-on skills to test and institute AI throughout an organization. When the right machine learning (ML) models are combined with the right use cases, AI can augment customer service, perform administrative tasks, analyze huge data sets, and perform many more organizational functions in enormous volume and with low error rates. Business leaders know this. Yet they're being held back from acting on that knowledge.

New research by SambaNova Systems has shown that, globally, only 18% of organizations are rolling out AI as a large-scale, enterprise-scale initiative. Similarly, 59% of IT managers in the UK report that they have the budget to hire additional resources for their AI teams, but 82% said that actually hiring into these teams is a challenge. Every hour of repetitive tasks that can be cut by automating or augmenting with AI is an hour that employees can spend deriving value through higher-order, lateral thinking tasks. Firms are watching their competitors find a competitive edge when they test, iterate, and roll out wide-scale AI programs, casting about for whatever AI and ML expertise they can attract in the meanwhile.

This skills crisis is not new, nor surprising, nor easily solved. It's been an issue across the tech sector as a whole for years, if not decades. In 2011, a PwC study found that more 56% of CEOs were concerned about a lack of talent to fit digital roles.

And more than a decade later, 54% of tech leaders ranked talent acquisition and retention as the number one threat to business growth. The era of AI has made this problem more acute — the pace of change is outpacing what's come before.

The skills crisis is exacerbated by the rapid pace of change in AI models

The challenge for anyone working in AI who wants to keep their skills up to date is two-fold. Firstly, the pace of change is breathtaking, and seemingly getting faster all the time. Secondly, as models become bigger, they become less accessible for software engineers to train, as large models need big budgets to run. The hottest topic in AI is probably large language models (LLMs). The first Generative Pre-trained Transformer (GPT) model was launched by OpenAI in 2018 — which, as a general purpose learner, is not specifically trained to do the tasks it's good at. The model leverages deep learning and is able to carry out tasks such as summarizing text, answering questions, and generating text output — and doing so on a human-like level. The first model came out four years ago, but it only leveraged 150 million parameters (a dataset of less than a million web pages). The breakthrough for GPT and large language models came with GPT-3, which launched in 2020 and had 175 billion parameters, more than a thousand times the number of the first GPT model.

LEVERAGING ARTIFICIAL INTELLIGENCE AND HUMAN KNOW-HOW TO ACCELERATE DRUG DISCOVERY

Source: BioPharmInternational

Through the integration of human expertise, artificial intelligence, and automation robotics, bio/pharma companies can more efficiently target drug discovery efforts with bigger payoff.

Cell- and gene-based therapies, while still emerging, have great potential to fulfill high unmet patient needs across a broad range of disease areas. These therapies may have the potential to transform patients' lives and cure diseases in which there are no or few treatments by addressing the root cause rather than the symptoms. Using an approach that combines a deep understanding of disease biology with innovative technologies and versatile treatment modalities (e.g., Astellas' Focus Area Approach), bio/pharmaceutical companies can make a meaningful difference for patients.

Astellas' R&D is often focused on therapeutic drugs for rare diseases with small patient populations, presenting challenges to sample collection and limiting the potential for drug discovery through traditional approaches. Against this backdrop, a solution came to light with the advent of technology that utilizes induced pluripotent stem cells (iPSCs) to differentiate cells into target cells (1).

iPSC research with Mahol-A-Ba

Drug discovery through iPSCs is difficult due to the nature of the cells themselves and the availability of experienced researchers. iPSCs are extremely difficult to handle, and though their ability to change into various cell types is advantageous, they can also alter their state and differentiate into completely different cells based on minor differences in how they are handled by researchers.

Culturing and differentiating the cells requires experienced researchers with subject matter expertise to evaluate whether the cells have differentiated into the target cells and whether the compound has the desired pharmacological effects. There are very few of these researchers worldwide, and the possibility of human error remains alongside a limitation on experimentation time.

Astellas' "Mahol-A-Ba" platform is a proprietary human-in-the-loop (HITL) drug discovery approach that integrates human expertise, artificial intelligence (AI), and automation robotics (see Figure 1). Leveraging the Maholo LabDroid (Robotic Biology Institute)—a robot that had already been introduced at Astellas' Tsukuba Research Center in Japan to utilize iPSCs for drug discovery—has allowed the company to overcome challenges associated with iPSC drug discovery, including handling, culture and differentiation, experimentation time limitations, and availability of skilled researchers.

All Figures are courtesy of the author. **Figure 1.** The Maholo robot automates cell culturing and differentiation.

HEADLINE NEWS IN A FLASH

WILL ARTIFICIAL INTELLIGENCE SPELL THE END OF THE PROGRAMMER?

Social-media management, e-mail marketing tools and text-to-image generators are among the functions fuelled by AI, representing new frontiers for companies. “AI is no longer the special purview of PhDs and specialized programmers,” says Stephanie Holko, director of project development at Next Generation Manufacturing Canada (NGen), a Hamilton-based non-profit that supports technology adoption in manufacturing. “Those folks have developed interfaces and platforms to allow others without these specific skills to access the power of their work.” For now, AI is still a programming specialty, says Jean-Philippe Roberge, professor in the systems engineering department of the Control and Robotics Lab (CoRo) at the Université du Québec’s École de Technologie Supérieure (ÉTS).

Source: TheGlobalandMail

IN CHINA, AI CAN NOW SCREEN NEWBORNS FOR GENETIC DISORDERS

Researchers from the Shanghai Children’s Medical Center and the Shanghai Paediatric Center said their new assistive diagnosis tool – which they described as the first of its kind – was designed to detect more than 100 disorders with distinctive facial features, including Cornelia de Lange syndrome (CdLS) and Down syndrome, according to a report by state-owned China News Service on Friday. They said their AI-enabled tool would be used for initial screening, helping avoid missed or wrong diagnosis of newborns. Prominent facial features of children with CdLS, for example, include thin eyebrows that often meet at the midline, long eyelashes, short upturned nose, thin downturned lips, low-set ears, and high-arched palate or cleft palate, according to the CdLS Foundation. or shaped in a way that is not typical for their ethnic group.

Source: TechinAsia

AI REVEALS THE MOST HUMAN PARTS OF WRITING

With the advent of high quality computer-generated text, writers suddenly have a half-decent writing buddy who at least wants to do what they ask (even if it doesn’t always succeed) and has no desire to take any credit. Never before could writers get paragraphs of fluent text on a topic of their choice, except from another writer. (Ghostwriting may be an appropriate analogy for these writerly use cases of AI.) This is posing questions to writers everywhere: Which parts of writing are so tedious you’d be happy to see them go? Which parts bring you the inexplicable joy of creating something from nothing? And what is it about writing you hold most dear? It’s useful to think about three different parts of writing: planning, drafting, and revising. By thinking through specific parts of writing, we can understand in more detail how computers will end up affecting writing as a whole.

Source: Wired

AS ARTIFICIAL INTELLIGENCE RISES, LAWMAKERS TRY TO CATCH UP

From “intelligent” vacuum cleaners and driverless cars to advanced techniques for diagnosing diseases, artificial intelligence has burrowed its way into every arena of modern life. Its promoters reckon it is revolutionising human experience, but critics stress that the technology risks putting machines in charge of life-changing decisions. Regulators in Europe and North America are worried. The European Union is likely to pass legislation IN 2023 – the AI Act – aimed at reining in the age of the algorithm. The United States recently published a blueprint for an AI Bill of Rights, and Canada is also mulling legislation. Looming large in the debates has been China’s use of biometric data, facial recognition and other technology to build a powerful system of control.

Source: The Straits Times

AI MAKES ROOFTOP SOLAR PANELS MORE EFFICIENT

Rooftop solar panels become more energy effective if placed accurately. Mohammad Aslani, researcher in geographical information science at University of Gävle, has developed AI methods that in several steps improve the placement of rooftop solar panels. Determining how much electricity rooftop solar panels can produce is difficult. For individual house owners, solar panels can be a good investment for their house. The challenge is to decide on the number of panels and how to position them to optimize the amount of electricity that can be produced on the roof. "Too many solar panels on the roof generates a surplus of electricity, but it does not give the owner a lot of money when it is sold on the marked. Too few solar panels, however, does not generate enough electricity in relation to the total cost of investment.

Source: techxplore

HOW AI CAN BE USED ETHICALLY TO MONITOR WORKER PRODUCTIVITY

JPMorgan Chase researchers have successfully demonstrated using quantum algorithms to summarize documents using natural language processing (NLP).
Banks often need to provide summaries of documents for their customers that might otherwise be too long to read. They automate this using a process called extractive summarization, which uses NLP to extract sentences that represent the most relevant information from the original text. NLP enables computers to understand text and spoken words like humans using artificial intelligence. It is a potential use case for quantum computing as it is a complex optimization process, an application particularly suited to quantum algorithms.

Source: VentureBeat

CATALYST

CE.A.I. Centre for AI Innovation

Y:WAIT

Young Women in AI and Technology

Who are we?

Y:WAIT is a student-led organisation built to support young women in STEM involved in the application of AI, Sciences and Technology in the work we do.

What can you expect?

- Global mentorship and advisory network
- Company visits catered to young students interested in pursuing careers in the technology industry
- Seminars and webinars with esteemed speakers from all over the globe
- Nationwide & Gglobal competitions/hackathons designed to encourage innovation in AI, especially for female youths

What is our purpose?

Raise awareness and promote interest about young women in STEM, create new and innovative ideas, build connections and partnerships within the industry and form new ventures that create impact; a movement that encourages the question: why wait?

https://ceaiglobal.com/ywait/

YWAIT.CO@GMAIL.COM
KIERA@CEAIGLOBAL.COM

COMING SOON!

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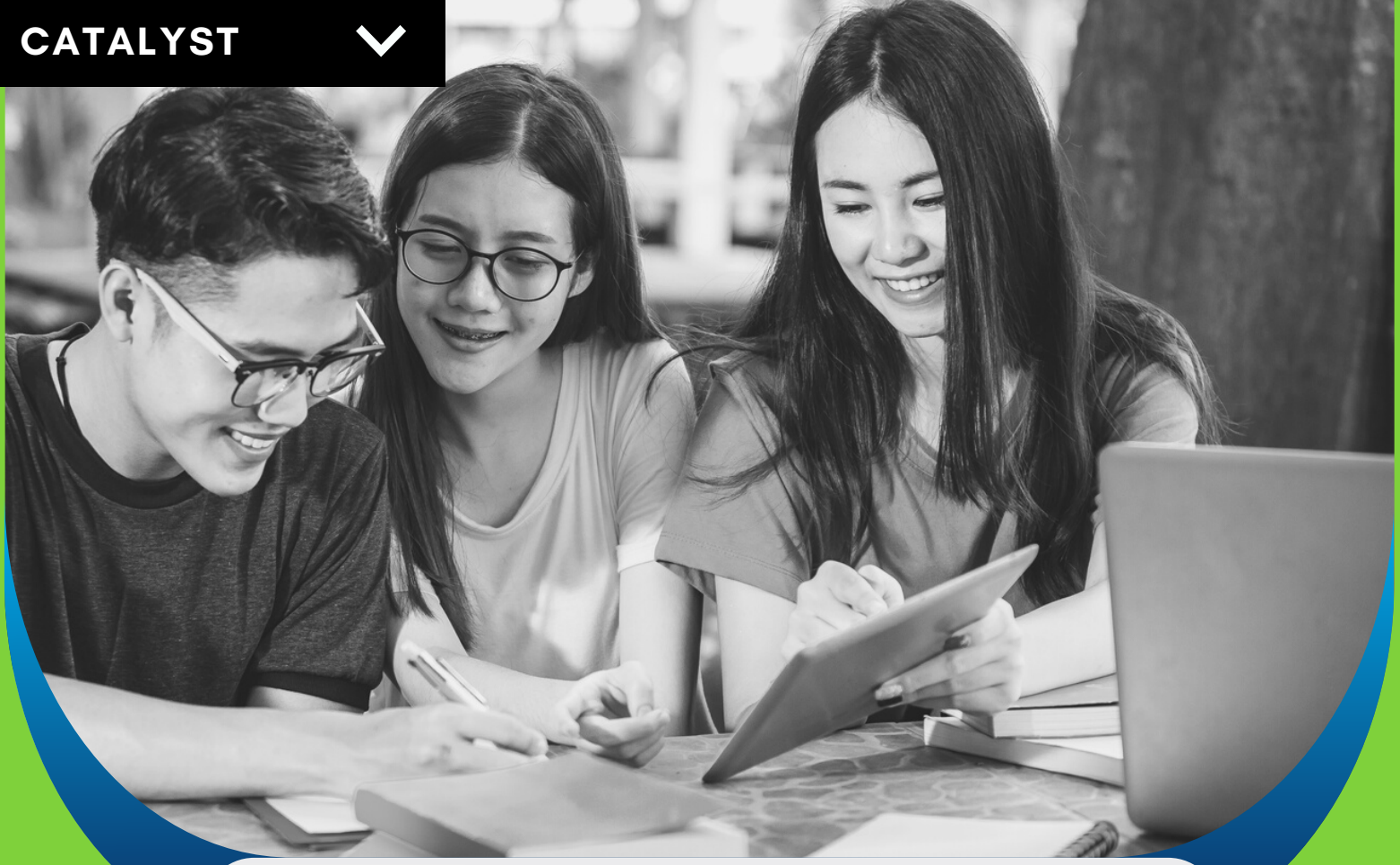

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MyFinB is an award-winning tech company that specializes in artificial intelligence. The company developed its own natural language platform with predictive and prescriptive narrative capabilities - a niche area that differentiates itself from any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

Website: www.myfinb.com Email: enquiry@myfinb.com

AIV50

AIV50 is a tech venture company with a portfolio of 50 AI assets in 10 key verticals. The special purpose company forms part of a joint incubation and venture building project by MyFinB Group (MFB) and VSC Portfolio Investments (VSCPI).

Website: www.aiv50.com Email: ventures@aiv50.com

THE ACCOUNTING AND FINANCE GROUP IN AI (TAFGAI)

TAFGAI is set up to help accounting firms and infuse their operations with our proprietary AI expert systems. The immediate goal is to transform their businesses, making them leaner, more tech-proficient and value adding to their clients using AI in 10 key areas. This will have the effect of positive revaluation of the firms, with healthy topline and bottomline along with a decent multiplier.

Website: www.tafgai.com

SOCIAL FINANCE USING APPLIED ANALYTICS (SOFINAA)

Sofinaa addresses the primary issue faced by social welfare agencies, public agencies and organisations that channel funds to help those facing socieconomic challenges. Sofinaa provides analytical insights using AI to evaluate cases and measure how the funds have been effectively utilised - including the impact these have contributed to the beneficiaries' well-being. Sofinaa enhances transparency, accountability and generate insights relating to social return on investments.

Website: www.myfinb.com/sofinaa

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Global Chamber's vision is a world where doing cross metro and cross border business is as easy as selling across the street. It also provides members with virtual connections, training, and information just right to grow... helping members connect with customers, partners and experts to grow across metros and borders. When members engage with Global Chamber, risk is reduced, and growth accelerates.

Website: www.globalchamber.org

KNOWLEDGE CHAMBER OF COMMERCE AND INDUSTRY

KCCI is a non-government, not-for-profit organization registered under the Central Government's Ministry of Corporate Affairs playing a proactive role in India's development process and become aKnowledge voice of India's business and industry.

Website: www.knowledgechamber.org
Email: info@knowledgechamber.org

SURYADATTA EDUCATION FOUNDATION

The Suryadatta Education Foundation, SEF, is a charitable trust registered with the Registrar of Societies, Government of Maharashtra. The Suryadatta Group of Institutes was established in the year 1999, with the blessing of Late Smt Ratanbai & Shri Bansilalji Chordiya in Pune - The Oxford of East.

Website: www.suryadatta.org Email: info@suryadatta.edu.in

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Website: www.yudiz.com

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Established in 1927, FICCI is the largest and oldest apex business organisation in India. Its history is closely interwoven with India's struggle for independence, its industrialization, and its emergence as one of the most rapidly growing global economies. A non-government, not-for-profit organisation, FICCI is the voice of India's business and industry.

Website: www.ficci.in

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- A National Resource Institute in Entrepreneurship Education, Research, Training & Institution Building. Promoted by IDBI Bank Ltd; IFCI Ltd, ICICI Ltd, SBI and Govt. of Gujarat.
- Pioneered the Entrepreneurship Development Programme (EDP) Model.
- Ranked as Number 1 by Atal Ranking of Institutions on Innovation Achievements (ARIIA) – 2021 in General (Non-Technical) Category. The only institute from Gujarat to be ranked as Number 1 across all seven categories.

Website: www.ediindia.org

WOMEN ENTREPRENEURSHIP CELL

Women Entrepreneurship Cell under Kadi Sarva Vishwavidyalaya (KSV), managed by Sarva Vidyalaya Kelavani Mandal, Kadi and Gandhinagar, Gujarat, India, established in 2016, to ignite the spirit of Entrepreneurship amongst our students. In the current era, countries should create more support systems for encouraging entrepreneurship among students. At the same time, it is to foster gender equality to break away from stereotyped mindsets.

Website: www.wecksv.org

KADI SARVA VISHWAVIDYALAYA

Kadi Sarva Vishwavidyalaya is a University established vide Gujarat State Government Act 21 of 2007 in May 2007 and approved by UGC (ref F. 9-18/2008(cpp-1) March 19,2009). The University has been established by Sarva Vidyalaya Kelavani Mandal to achieve the following objectives: To provide need-based education and develop courses of contemporary relevance. To be a University of excellence by providing research-based activities which would foster higher economic growth. To provide education to all irrespective of caste, creed, religion etc. The University has at present 19 Constituent Colleges/Departments at Gandhinagar and Kadi.

Website: www.ksv.ac.in

BE PHENOMENAL

Dr. Rachana specialized in Cosmetic Dentistry from State University of New York. After rendering her services to the medical field and its beneficiaries for a decade, she decided to contribute to her family business when she did her MBA from Nirma University with Gold Medal. Furthering the growth of human centric business approach, she successfully completed her course in Executive Education in Design Thinking from Stanford University.

Website: bephenomenal.co.in

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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.

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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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WHERE INNOVATORS & DISRUPTORS MEET TO CHALLENGE LIMITS
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'The AI World Summit: Where Innovators & Disruptors Meet to Challenge Limits' brings together the global AI community from a range of businesses, science and tech to go beyond the buzz and hype, discuss the most burning AI issues, share their developments, successes, challenges, and the resultant impact on their businesses.

MALAYSIA

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