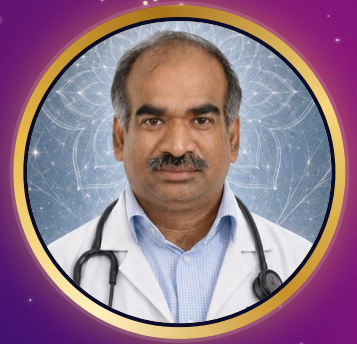


Journal of the AI Universe

DAILY AI RESEARCH TRACK

21 October 2026

50 CATEGORIES · 01-50 · EVERY ITEM LINKED TO ITS SOURCE



CURATED BY
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Today's highlights

- Anthropic is reported in talks with Nscale for a second 460 MW West Virginia data centre worth about \$45 billion (39)
- Schaeffler opens a Taicang factory where six humanoids assemble actuators for other humanoids (11)
- Autonomous AI agents run by a criminal targeted more than 1,200 company websites with almost no human help (42)
- Psychologist-checked AI feedback in online CBT nearly matched human therapists for social anxiety in a 263-person trial (17)
- T-Mobile reports 16% faster peak-hour downloads in New York with Ericsson AI-RAN (40)

01

INDUSTRIES & SECTORS · 21 OCT 2026

AI Filmmaking

AI-native films are moving onto the living-room screen: Wonder Studios has signed a connected-TV distribution deal for its AI-made anthology, and a Dubai start-up has raised \$1 million for an all-in-one AI production platform.

RESEARCH, INDUSTRY & POLICY

- [Wonder Studios signs connected-TV deal with Foundation Distribution](#) Televisual · 20 Oct 2026: AI-native films from online creators will stream as stand-alone titles on platforms such as Roku, Samsung TV and Amazon, starting with season 2 of Wonder's anthology Beyond the Loop, which has drawn 14.8M combined views.
- [Popcorn AI Studio raises \\$1 million pre-seed](#) CinemaMix360 · 20 Oct 2026: The Dubai start-up combines scriptwriting, character creation, scene generation, voice, lip-sync and post-production in one workflow, with Arabic dialect support, and has announced an El Gouna-linked AI film competition with a \$70,000 prize pool.

JOURNALS & PREPRINTS

- [Manga2Animate: An Agentic Framework for Faithful Manga Animation with Script and Storyboard Planning](#) arXiv 2610.26851 · 19 Oct 2026: Adapting existing manga into coherent animation that stays faithful to the source is a valuable yet challenging task.
- [Mise-en-Video: Fine-Grained 3D Control for Multi-Shot Video Generation](#) arXiv 2610.26801 · 19 Oct 2026: Recent advances in text-to-video generation have enabled high-fidelity single-shot synthesis, yet practical storytelling creation requires multi-shot videos with both strong inter-shot consistency and fine-grained controllability.

CONFERENCES, WORKSHOPS & EVENTS

- [OPUS Film Awards](#) 14 Nov 2026 · London (London Film School): Awards for AI cinema.

WHY IT MATTERS

Distribution, not generation, has been the missing link for AI cinema; TV placement and cheaper end-to-end tools widen who can make and sell films.

02

INDUSTRIES & SECTORS · 21 OCT 2026

AI Agriculture

AI crop sensing is becoming factory-fitted: Valtra will offer PerPlant's camera-based AI sensor on new tractors, and John Deere has launched an AI assistant for farm records alongside a farmer data pledge.

RESEARCH, INDUSTRY & POLICY

- [Valtra to factory-fit PerPlant's AI crop sensor](#) iVT International · 20 Oct 2026: The two-camera roof unit supports spot spraying, variable-rate fertiliser and fungicide, and crop mapping on A, G, N, T, Q and S Series tractors in selected European markets; PerPlant reports input savings of 40–87%.
- [John Deere launches JD, an AI assistant in Operations Center](#) Farms.com · 20 Oct 2026: JD answers questions from years of stored farm records; an early access programme opens for US customers, alongside a Farmer Data Commitment that farmers control which third parties see their data.
- [UAPB review maps AI's growing role in agriculture](#) Deltaplex News · 20 Oct 2026: University of Arkansas at Pine Bluff researchers reviewed 95 peer-reviewed studies from 2021 to 2025 on AI for irrigation, disease and pest detection, yield prediction and farm robots.

JOURNALS & PREPRINTS

- [Robot Learning with Vision-Language-Action Models for Agricultural Manipulation](#) arXiv 2610.26717 · 19 Oct 2026: Robotic manipulation in agricultural environments remains challenging due to variations in plant geometry, occlusion, and camera viewpoints.
- [Bombadil: A Foundation Model for Plant Electrophysiology](#) arXiv 2610.26597 · 19 Oct 2026: Living plants, like animals, use electrical signals to carry information about their physiological state across their body, from roots to branches.

CONFERENCES, WORKSHOPS & EVENTS

- [Bharat AI Innovation 2026](#) 20–21 Nov 2026 · Mumbai: Includes an AgriTech track.

WHY IT MATTERS

Built-in sensors and assistants lower the cost of precision farming; the open question is who controls the data the machines collect.

03

INDUSTRIES & SECTORS · 21 OCT 2026

AI Defence

The UN's disarmament research chief warns that AI is crowding out human judgement in war, as the US Congress weighs human-oversight rules for AI weapons and autonomous-weapons talks run into verification problems.

RESEARCH, INDUSTRY & POLICY

- [UNIDIR: AI on track to 'crowd out' human decision-making in warfare](#) UN News · 20 Oct 2026: Director Robin Geiss said AI now spans intelligence analysis, targeting, drones and cyber operations; UNIDIR's Centre of Excellence on AI, Peace and Security is launching the UN system's first multi-stakeholder forum on military AI, covering industry guidelines, an 'AI security lexicon' and misuse by non-State armed groups.
- [Congress considers safeguards as the military speeds up drones and AI](#) WHRO / WUNC · 20 Oct 2026: Senate Armed Services provisions in the annual defence bill would require human oversight of AI-controlled weapons, ban AI for nuclear launch or detonation and bar its use for domestic surveillance.
- [Autonomous weapons talks advance, but verification obstacles remain](#) Janes · 20 Oct 2026: A special report on discussions under the Convention on Certain Conventional Weapons towards a possible legally binding instrument on lethal autonomous weapon systems, and why verifying compliance is hard.

CONFERENCES, WORKSHOPS & EVENTS

- [Future of Defense Command & AI Summit – US Edition](#) 3 Dec 2026 · Online: Free virtual summit on AI in command, wargaming and decision support (10:00 ET).
- [MORS Emerging Techniques Forum 2026](#) 8–10 Dec 2026 · Arlington, VA: Theme: AI for the operations research community.

WHY IT MATTERS

Speed is the selling point of military AI and also its main risk; oversight rules and verification will decide whether humans stay in the loop.

05

INDUSTRIES & SECTORS · 21 OCT 2026

AI Finance

Banks are opening and closing doors to AI agents at the same time: Visa, BILL and Billtrust have a live pilot of agents paying supplier invoices, HSBC is letting clients' own AI query their data, and RBC may block Meta's Muse agent.

RESEARCH, INDUSTRY & POLICY

- [Visa, BILL and Billtrust launch live pilot of AI agent invoice payments](#) Visa · 20 Oct 2026: Using Visa Trusted Agent Protocol, trusted AI agents complete approved buyer invoice payments end to end through supplier portals.
- [HSBC turns to 'embedded AI' with HSBCnio for business clients](#) American Banker · 20 Oct 2026: Through Model Context Protocol access, clients' own AI tools can query authorised account and transaction data.
- [RBC considers blocking Meta's Muse AI agent](#) Financial Post (Bloomberg) · 20 Oct 2026: CEO Dave McKay said no final decision has been made; JPMorgan and Charles Schwab are blocking or limiting outside AI agents' access to client data.

JOURNALS & PREPRINTS

- [Reliable Before Profitable: QuantHarness for Governing Financial Strategy Development with LLM Agents](#) arXiv 2610.26101 · 19 Oct 2026: LLM agents can turn natural-language financial research requests into executable and backtested strategies, but a successful run may still implement the wrong rule, use information unavailable...
- [FinHopper: A Progressive Multi-Hop Benchmark for Complex Financial Agents with Step-wise Evaluation](#) arXiv 2610.26036 · 19 Oct 2026: Financial agents are expected to answer factual investment queries through open search, but financial multi-hop retrieval differs from general multi-hop QA in a crucial way: each intermediate...

CONFERENCES, WORKSHOPS & EVENTS

- [NAFCON 2026 – Reimagining NBFCs with AI](#) 27 Nov 2026 · Chennai (Westin): 22nd edition: 'From Data to Decisions'.
- [FinTech Connect 2026](#) 1–2 Dec 2026 · London (ExCeL): Includes an Applied AI in Finance track.
- [Financial Services AI Security Forum](#) 9 Dec 2026 · New York (Hilton Midtown): Trust, risk and resilience in the age of AI.

WHY IT MATTERS

Agentic payments need both trust rails and clear limits; banks are drawing the line between agents they authenticate and agents they cannot monitor.

News summary only, not financial advice.

04

INDUSTRIES & SECTORS · 21 OCT 2026

AI Healthcare

US regulators are shaping how generative AI medical devices will be judged: an FDA digital-health chief says they may need to be assessed more like physicians, and the FDA has posted worked examples of AI devices that update themselves under pre-approved plans.

RESEARCH, INDUSTRY & POLICY

- [FDA official: GenAI tools may need physician-style assessment](#) MedCity News · 20 Oct 2026: At AdvaMed's MedTech Conference in Boston, Rick Abramson of FDA's Digital Health Center of Excellence said the agency received more than 300 comments on its GenAI device discussion paper and intends to draft policy.
- [FDA outlines AI device modification scenarios under PCCPs](#) FDAnews · 20 Oct 2026: Two hypothetical examples show a hospital-specific sepsis alert being fine-tuned on local data and a cardiac arrhythmia detector being retrained automatically, both within predetermined change control plans that avoid a new submission per change.

JOURNALS & PREPRINTS

- [When to Stop Asking: Factor Coverage Bias and LLM Determinability Judgments with Underspecified Information in Medicine](#) arXiv 2610.25819 · 19 Oct 2026: Clinical decision-making often begins with underspecified information and requires not only gathering missing information but also knowing when to stop.
- [CODA: Cohort- and Drift-aware Foundation Model for Multimodal Clinical Reasoning](#) arXiv 2610.25871 · 19 Oct 2026: Recent advances in multimodal foundation models have demonstrated strong performance across diverse clinical tasks.

CONFERENCES, WORKSHOPS & EVENTS

- [CAHOTECH 2026](#) 14–15 Nov 2026 · Visakhapatnam (AMTZ Campus): Healthcare technology conclave: digital health, AI, automation and robotics.
- [HLTH USA 2026](#) 15–18 Nov 2026 · Las Vegas (Venetian Expo): Health-innovation event themed 'The Age of Intelligent Healthcare'.
- [Global Digital Health Summit 2026 – AI in Action](#) 20–21 Nov 2026 · New Delhi (Bharat Mandapam): Theme: Implementing Artificial Intelligence – AI in Action.

WHY IT MATTERS

How regulators test open-ended AI will decide which clinical tools reach patients and how quickly they can be updated safely.

News summary only, not medical advice.

06

INDUSTRIES & SECTORS · 21 OCT 2026

AI Law & Investigation

AI is moving deeper into legal operations: IP firm Sterne Kessler is co-developing AI patent workflows with Clarivate, and US Immigration and Customs Enforcement is scouting AI e-discovery tools for its 2,300 attorneys.

RESEARCH, INDUSTRY & POLICY

- [Sterne Kessler and Clarivate partner on AI patent workflows](#) Law.com Legaltech News · 20 Oct 2026: The software development partnership will build AI-enabled workflows across the patent lifecycle, starting with application drafting.
- [ICE wants AI to take on more of its legal workload](#) Government Executive · 20 Oct 2026: ICE is surveying cloud-native e-discovery software for its Office of the Principal Legal Advisor, which has 2,300 attorneys and 350 support staff handling litigation, investigations and other legal matters.

JOURNALS & PREPRINTS

- [StrucChunk: Structure-Aware Retrieval for Legal Document RAG](#) arXiv 2610.26313 · 19 Oct 2026: Retrieval-Augmented Generation (RAG) can ground LLM outputs in domain-specific knowledge, but legal documents are hard: standard chunking fragments hierarchical argument structure, and generic...
- [LLMs Prompted for Legal Context Refuse More: Overrefusal from Small On-Premises LLMs in Criminal Legal Context](#) arXiv 2610.26211 · 19 Oct 2026: Confidentiality requirements increasingly push legal professionals toward small, on-device LLMs that keep case data in-house, used for everyday tasks such as summarization, translation, and reformulation.

CONFERENCES, WORKSHOPS & EVENTS

- [The Sedona Conference WG13 Midyear Meeting](#) 5–6 Nov 2026 · Vancouver: Working Group 13 on AI and the law.
- [ALQAC & ISAILD 2026](#) 11–14 Nov 2026 · Kanazawa, Japan: Automated Legal Question Answering Competition.

WHY IT MATTERS

Firms and agencies are turning AI from pilots into core legal infrastructure, which raises the stakes for accuracy, privilege and oversight.

News summary only, not legal advice.

07

INDUSTRIES & SECTORS · 21 OCT 2026

AI Commerce

Online stores are being rebuilt for AI shoppers: Shopify and Vercel have released tools for agent-ready storefronts, and Mastercard has opened early access to Agent Pay for Machines so AI agents can pay for digital services within set budgets.

RESEARCH, INDUSTRY & POLICY

- [Shopify and Vercel arm stores for AI agents](#) Practical Ecommerce · 20 Oct 2026: Shopify's rebuilt Hydrogen SDK and Vercel Shop, an AI-enabled open-source storefront template, were presented at Vercel's Ship 26 conference as tools for stores serving humans and AI agents alike.
- [Mastercard opens early access to Agent Pay for Machines](#) Mastercard · 20 Oct 2026: Built on the open x402 protocol, agents sign payment vouchers within an approved limit; a Cloudflare Connect demo with agency Hype made nine payments to two merchants under one budget, after pilots with Cloudflare, Ant International, Coinbase, BVNK and others.

JOURNALS & PREPRINTS

- [WenSight-Decision-1 for Direct Decisions under E-commerce Rules](#) arXiv 2610.26444 · 19 Oct 2026: E-commerce decisions require applying natural-language rules to the available case evidence.

WHY IT MATTERS

When software agents become customers, product data, checkout and spending limits all need to be machine-readable.

09

INDUSTRIES & SECTORS · 21 OCT 2026

AI Architecture

Construction sites are plugging into everyday AI assistants: EarthCam has launched MCP connectors that deliver pre-analysed jobsite camera intelligence into ChatGPT, Claude and other AI platforms, plus seven new construction AI models.

RESEARCH, INDUSTRY & POLICY

- [EarthCam launches construction AI connectors](#) EarthCam via GlobeNewswire · 20 Oct 2026: Built on the Model Context Protocol, the connectors work in ChatGPT and Claude; new models cover trench safety, housekeeping hazards, thermal analytics, delivery verification and dump-truck movements.

JOURNALS & PREPRINTS

- [Hybrid metaheuristics for architectural design optimization under small evaluation and wall-clock budgets](#) arXiv 2610.26202 · 19 Oct 2026: Architectural and structural design optimization in parametric software affords about a thousand evaluations of an expensive model for problems with tens of variables, a regime for which most metaheuristics were not designed.

CONFERENCES, WORKSHOPS & EVENTS

- [SIGraDi 2026](#) 18–20 Nov 2026 · Santiago, Chile: 30th conference on AI and the future of architectural practice and design.

WHY IT MATTERS

Turning jobsite imagery into verified answers inside familiar AI tools could make safety and progress checks faster for builders and designers.

08

INDUSTRIES & SECTORS · 21 OCT 2026

AI Journalism

Paying publishers for AI use is becoming the norm, but the terms are still unclear: an analysis of CNN's multi-year Google deal asks what newsrooms are giving up as licensing spreads.

RESEARCH, INDUSTRY & POLICY

- [AI is paying for news, but at what price?](#) TheWrap · 19 Oct 2026: An analysis of CNN's multi-year agreement giving Google expanded rights to its content for experimental AI features, and what such licensing deals mean for news publishers.

CONFERENCES, WORKSHOPS & EVENTS

- [AI for Media Hackathon 2026](#) 23–25 Nov 2026 · Munich: AI for journalism.
- [Making AI work for Caribbean media](#) 17–26 Nov 2026 · Online: Public Media Alliance workshop on 17, 19, 24 and 26 Nov; register by 3 Nov.

WHY IT MATTERS

Licensing income is welcome, but newsrooms need clarity on attribution, training rights and traffic before AI summaries replace the click.

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INDUSTRIES & SECTORS · 21 OCT 2026

AI Engineering

AI agents are learning to drive engineering software directly: Neural Concept's MCP Bridge lets agents operate CAD and simulation tools such as CATIA, NX and Abaqus, and WSCAD has unveiled an 'engineering intelligence' platform for electrical design.

RESEARCH, INDUSTRY & POLICY

- [Neural Concept launches MCP Bridge for CAD and simulation agents](#) Neural Concept · 19 Oct 2026: AI agents can now operate commercial tools such as CATIA, NX and Abaqus inside enterprise environments, with each workflow step routed to the model that benchmarked best on that engineering task.
- [WSCAD unveils ELECTRIX OS](#) WSCAD via Business Wire · 20 Oct 2026: The electrical CAD maker presents ELECTRIX OS as a new category of 'engineering intelligence' software for electrical and automation engineering.

JOURNALS & PREPRINTS

- [Can It Actually Work? Synthesizing Functional CAD Mechanisms](#) arXiv 2610.26861 · 19 Oct 2026: While LLM agents can generate visually plausible CAD assemblies, these designs often fail to fulfill their intended physical functions.

CONFERENCES, WORKSHOPS & EVENTS

- [3rd Indo-Japan Workshop on AI in CFD](#) 28–29 Nov 2026 · Chennai (IIT Madras): Registration open until 25 Nov.

WHY IT MATTERS

Letting agents work inside the tools engineers already trust is a faster route to adoption than replacing those tools.

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INDUSTRIES & SECTORS · 21 OCT 2026

AI Robotics

Humanoids are entering real factories: Schaeffler has opened a plant in Taicang where six humanoids assemble actuators for other humanoids, AGCO will pilot Agility's Digit in Kansas, and KAIST's humanoid lifts 20 kg.

RESEARCH, INDUSTRY & POLICY

- [Schaeffler opens 'humanoids making humanoids' factory in Taicang](#) Schaeffler · 20 Oct 2026: On about 7,500 m², six humanoids at five stations stage, join, inspect and pack joint modules and actuators, backed by a digital twin and a training centre; humanoid robotics orders have risen to some €400 million.
- [AGCO and Agility Robotics plan a Digit humanoid pilot in Hesston, Kansas](#) AGCO · 20 Oct 2026: The farm-machinery maker will explore Digit for repetitive and hazardous manufacturing tasks at its Hesston plant.
- [KAIST humanoid pushes 35 kg and lifts 20 kg](#) RobotsBeat · 20 Oct 2026: KAIST's Humanoid v0.9 pushed 35 kg objects and lifted 20 kg in a new demonstration.

JOURNALS & PREPRINTS

- [HAF-VLA: Hierarchical Action Flow Framework for Humanoid Vision-Language-Action Control](#) arXiv 2610.26584 · 19 Oct 2026: Humanoid robots hold great promise as general-purpose agents in human-centered environments, yet adapting generalist vision-language-action (VLA) policies to real-world humanoid loco-manipulation remains challenging.
- [OmniInteract: Towards Unified Whole-Body Interaction Control for Dual Humanoids](#) arXiv 2610.26043 · 19 Oct 2026: Physical interaction is a key capability for humanoid collaboration, requiring coordinated whole-body motion and precise contact.

WHY IT MATTERS

Factory pilots with real output targets are the test humanoids must pass before they scale.

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INDUSTRIES & SECTORS · 21 OCT 2026

AI Energy

AI's appetite for power is reshaping grid deals: Google's planned 780 MW data centre in Pine Island, Minnesota, comes with a proposal to pay for more wind, solar and batteries than it will use.

RESEARCH, INDUSTRY & POLICY

- [How AI data centres are reshaping America's ageing grid](#) CNBC · 19 Oct 2026: Google's proposed deal with Xcel Energy for its 780-megawatt Pine Island data centre would add more wind, solar and battery capacity than the site is expected to use, with Google paying for it even if it does not use all the power.

JOURNALS & PREPRINTS

- [Every minute counts: Wind farm power control during imbalance settlement using distributional soft actor-critic](#) arXiv 2610.26055 · 19 Oct 2026: Wind farms can provide flexibility by curtailing their output during periods of excess generation in the power grid.

CONFERENCES, WORKSHOPS & EVENTS

- [WE3 Global AI Summit 2026](#) 10–12 Nov 2026 · Las Vegas (Durango Casino & Resort): Vertical AI for energy and water utilities.
- [EDAS 2026 – Energy Digitalisation & AI Summit](#) 26 Nov 2026 · New Delhi (Le Méridien): AI across the energy value chain: power, grids and renewables.

WHY IT MATTERS

Who pays for new generation, and whether AI load can finance a cleaner grid, is now a central energy-policy question.

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INDUSTRIES & SECTORS · 21 OCT 2026

AI Transportation

Robotaxis are arriving in Europe: Waymo has started testing in Madrid ahead of paid rides from 2027, and Google is bringing personalised Gemini help to cars with Android Auto and Google built-in.

RESEARCH, INDUSTRY & POLICY

- [Waymo starts robotaxi testing in Madrid](#) El País · 20 Oct 2026: Driverless cars will start running in Alcobendas, Getafe and Madrid in the coming days, with commercial trips planned from 2027.
- [Gemini Personal Intelligence comes to cars](#) Google · 20 Oct 2026: Google is rolling out hands-free personalised Gemini help on the road for Android Auto and cars with Google built-in.

JOURNALS & PREPRINTS

- [Think Densely, Act Sparsely: Latent Expert Cognitive Chains for Vision-Language-Action Autonomous Driving](#) arXiv 2610.25734 · 19 Oct 2026: Autonomous driving fundamentally demands dense understanding of visual, semantic, and geometric information, yet existing Vision-Language-Action (VLA) models are typically trained with sparse...
- [A Semantic Knowledge Graph Construction Pipeline for Vehicle Intention Prediction in nuScenes](#) arXiv 2610.26528 · 19 Oct 2026: Knowledge graphs (KGs) are increasingly used in autonomous driving (AD) to make traffic scene entities and relations explicit for prediction and reasoning.

CONFERENCES, WORKSHOPS & EVENTS

- [ASAM International Conference 2026](#) 4–5 Nov 2026 · Munich: Standards for automated driving and simulation.
- [ICITE 2026](#) 6–8 Nov 2026 · Hong Kong: Intelligent transportation engineering conference.
- [FAV Summit 2026](#) 11–13 Nov 2026 · Orlando: Future of autonomous vehicles.

WHY IT MATTERS

Madrid is a test of whether US-style robotaxi services can adapt to European cities and rules.

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INDUSTRIES & SECTORS · 21 OCT 2026

AI Manufacturing

Industrial AI is getting national backing and factory proof points: China is drafting policies to spread industrial AI agents and smart factories, and Siemens says AI cut virtual production ramp-up effort by up to 85% at its Erlangen plant.

RESEARCH, INDUSTRY & POLICY

- [China mulls policies to accelerate smart manufacturing](#) gov.cn (Xinhua) · 20 Oct 2026: Support will target smarter machine tools, robots, inspection and control equipment, industry-specific models and industrial AI agents, and China will share standards through mechanisms such as BRICS.
- [Siemens and NVIDIA advance AI-driven autonomous factories](#) Siemens · 19 Oct 2026: New AI solutions at Siemens' Erlangen electronics factory include a fully virtual production ramp-up that cuts engineering effort by up to 85% and agent-based production planning with cost savings of up to 20%.

CONFERENCES, WORKSHOPS & EVENTS

- [AICon Industry Mannheim 2026](#) 19 Nov 2026 · Mannheim: Industrial AI conference.
- [UNIDO AIM Global Action Forum 2026](#) 25–26 Nov 2026 · Vienna: AI in manufacturing.
- [FMM Smart Manufacturing Conference 2026](#) 26 Nov 2026 · Petaling Jaya, Malaysia: Federation of Malaysian Manufacturers.

WHY IT MATTERS

National policy and flagship factories set the template that thousands of smaller manufacturers will copy.

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PEOPLE & LIFE STAGES · 21 OCT 2026

AI Kids

Today's kids-and-AI brief highlights learning opportunities: an online accessible-AI workshop for young people and Computer Science Education Week in December.

CONFERENCES, WORKSHOPS & EVENTS

- [Accessible AI Workshop for youth](#) 24 Nov 2026 · Online (Zoom): Accessible AI workshop in CNIB's children and youth programmes.
- [Computer Science Education Week 2026](#) 7–13 Dec 2026 · Worldwide: Theme: how CS powers AI innovation.

WHY IT MATTERS

Early, inclusive AI literacy helps children use these tools safely and creatively.

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PEOPLE & LIFE STAGES · 21 OCT 2026

AI Psychology

A Stockholm University trial finds that AI-written feedback in internet CBT for social anxiety worked almost as well as feedback from a human therapist, with a psychologist checking every AI reply.

RESEARCH, INDUSTRY & POLICY

- [Social anxiety falls almost as much with an AI therapist as with a human](#) Stockholm University · 20 Oct 2026: 263 adults were randomised to six groups for nine weeks; what participants were told about who wrote the feedback made no measurable difference, and the researchers stress AI was not tested working alone.

JOURNALS & PREPRINTS

- [AI-Generated vs. Human Therapist Feedback in Internet-Based CBT for Social Anxiety Disorder: A Six-Arm Randomized Controlled Trial with Deception Design](#) Internet Interventions · DOI 10.1016/j.invent.2026.101012 · Oct 2026: Psychologist-reviewed AI feedback produced symptom reductions similar to therapist feedback, with no difference in negative effects or perceived working relationship.
- [Context-Aware Topological Distillation Graph Network for Asymmetric EEG-Eye Movement Emotion Recognition](#) arXiv 2610.26084 · 19 Oct 2026: EEG-eye movement emotion recognition can support mental-health monitoring and adaptive interfaces, but most fusion models treat the two signals as parallel features, classify each window alone and degrade when eye data are lost.

CONFERENCES, WORKSHOPS & EVENTS

- [UCSF CODEX AI and Diagnosis Webinar](#) 10 Nov 2026 · Online: Sachin Pendse: towards a safety-first approach to AI-mediated mental health support.

WHY IT MATTERS

If AI drafts and a psychologist approves, one clinician may be able to support more patients; the next step is testing that model at scale.

News summary only, not medical advice.

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PEOPLE & LIFE STAGES · 21 OCT 2026

AI Geriatric

AI for ageing well gets fresh funding and clearer rules of the road: UMass Amherst and Mass General Brigham have won nearly \$24.5 million to continue MassAITC, and dementia experts have set out what AI brain-scan tools need before they reach memory clinics.

RESEARCH, INDUSTRY & POLICY

- [UMass Amherst and Mass General Brigham win nearly \\$24.5M for MassAITC](#) UMass Amherst · 20 Oct 2026: The five-year continuation of the Massachusetts AI and Technology Center for Connected Care in Aging and Alzheimer's Disease will keep funding pilot projects in AI technology for elder care.
- [Experts set out what AI brain-scan tools need to reach memory clinics](#) Dementia Researcher (NIHR) · 20 Oct 2026: A DEMON Network expert consensus gives eight agreed statements on what the tools are for, how they should be tested, how clinicians are brought on board and how patient data are handled.

JOURNALS & PREPRINTS

- [ITU-DESC: a missingness-aware machine-learning dementia risk score in the UK Biobank cohort](#) arXiv 2610.26604 · 19 Oct 2026: Background: Existing dementia risk scores rely on fixed, pre-selected features and linear models, or ignore bias from informative missingness in cohort data.

CONFERENCES, WORKSHOPS & EVENTS

- [AI for Senior Living: Practical Tools, Compliance and Competitive Advantage](#) 18 Nov 2026 · Westerville, Ohio (Quest Conference Center): One-day in-person event on AI in senior-living operations.
- [AI in Adult Social Care – Digital Communities of Practice webinars](#) 18 Nov – 16 Dec 2026 · Online: Free monthly webinars on 18 Nov and 16 Dec.

WHY IT MATTERS

Hundreds of papers show AI can read brain scans; consensus standards are what move such tools into everyday dementia care.

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PEOPLE & LIFE STAGES · 21 OCT 2026

AI Education

AI education is being built into degrees and classrooms: IIT (BHU) Varanasi is creating a School of Physical AI and Autonomous Systems with a BTech from 2027, and an Illinois high school now lets students use AI when teachers allow it.

RESEARCH, INDUSTRY & POLICY

- [IIT BHU to launch a School of Physical AI and Autonomous Systems](#) Education Times · 20 Oct 2026: The school will combine intelligence with sensors and machines, and a four-year, project-based BTech programme is reported to start in 2027.
- [New ETHS guidelines allow AI use in class at teachers' discretion](#) The Daily Northwestern · 20 Oct 2026: At Evanston Township High School, students may use AI for coursework if the teacher authorises it and they attach a disclosure statement explaining how they used it.

CONFERENCES, WORKSHOPS & EVENTS

- [Techfest IIT Bombay: Artificial Intelligence Workshop](#) 15–16 Dec 2026 · Mumbai (IIT Bombay): Two-day AI workshop; register by 6 Dec.

WHY IT MATTERS

Clear classroom rules and new physical-AI degrees show education moving from banning AI to teaching it.

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PEOPLE & LIFE STAGES · 21 OCT 2026

AI Work & Employment

Why has AI not caused mass layoffs yet? A Harvard Business School analysis weighs the warning signs against reassuring labour-market data.

RESEARCH, INDUSTRY & POLICY

- [AI hasn't spurred widespread layoffs yet. Why not?](#) HBS Working Knowledge · 20 Oct 2026: The analysis notes that entry-level job postings have fallen by up to 73% in four years by some counts, while unemployment has stayed low, buoyed largely by growth in healthcare.

CONFERENCES, WORKSHOPS & EVENTS

- [AIXEd Workforce Summit](#) 10 Nov 2026 · Boston: AI, education and the workforce.
- [Web Summit Future of Work Summit](#) 9–12 Nov 2026 · Lisbon: Track within Web Summit 2026.
- [Reshaping Work 2026](#) 12–13 Nov 2026 · Amsterdam (VU Amsterdam): Conference on the platform economy and AI at work.

WHY IT MATTERS

The gap between AI headlines and labour data is where policy and training choices still have time to matter.

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PEOPLE & LIFE STAGES · 21 OCT 2026

AI Sports & Fitness

Wearables are turning everyday workouts into fitness insight: Oura has added Cardio Effort and automatic VO2 max estimates for its smart rings.

RESEARCH, INDUSTRY & POLICY

- [Oura rings now track Cardio Effort and VO2 max automatically](#) The Verge · 20 Oct 2026: The features, for Oura Ring Gen 3 and later with an active membership, show how workout intensity affects long-term cardiovascular health; automatic VO2 Max was previously called Cardio Capacity.

JOURNALS & PREPRINTS

- [MoveBench: A Rubric-Based Benchmark for Evaluating Large Language Models in Sports and Health Coaching](#) arXiv 2610.26185 · 19 Oct 2026: Despite rapid advances in large language models (LLMs), their deployment in the sports and health domain remains high-risk due to the absence of domain-specific evaluation benchmarks.

CONFERENCES, WORKSHOPS & EVENTS

- [AI in Sport \(short programme\)](#) 14–15 Dec 2026 · Lausanne: Two-day course on responsible AI adoption in sport; CHF 1,400.

WHY IT MATTERS

Passive, automatic fitness estimates make training feedback available to people who never do a lab test.

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CULTURE & BELIEF · 21 OCT 2026

AI Spirituality

Europe's Catholic bishops have called on the EU to keep artificial intelligence at the service of the human person, the common good and peace.

RESEARCH, INDUSTRY & POLICY

- [COMECE: EU bishops call for AI to remain at the service of the human person](#) COMECE · 19 Oct 2026: The declaration was adopted at the end of COMECE's autumn plenary in Brussels, held 14–16 October under the theme 'Magnifica humanitas: Europe, Human Dignity and the Common Good'.

CONFERENCES, WORKSHOPS & EVENTS

- [AAR Annual Meeting – Artificial Intelligence and Religion Unit](#) 21–24 Nov 2026 · Denver: The AI and Religion programme unit meets at the AAR/SBL Annual Meeting.
- [Catholic Universities in the Age of Artificial Intelligence](#) 3–4 Dec 2026 · Rome (Pontifical University of the Holy Cross): International conference; audience with the Pope on 5 Dec.

WHY IT MATTERS

Faith communities are adding a moral voice to AI policy debates on dignity, work and peace.

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CULTURE & BELIEF · 21 OCT 2026

AI Mythology

An ancient epic in a new format: the India Today Group has released an AI-powered micro-drama retelling the story of Lord Ram for mobile audiences.

RESEARCH, INDUSTRY & POLICY

- [India Today Group unveils AI-powered micro-drama 'Raghupati Raghav Raja Ram'](#) India Today · 20 Oct 2026: The series depicts key events of the Ramayana, including the 14-year exile, the confrontation with Raavan and the quest to rescue Sita, and streams on Life Tak's social channels and the Aaj Tak app.

WHY IT MATTERS

AI lowers the cost of retelling epics for new formats; faithfulness to the source and cultural sensitivity remain the test.

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CULTURE & BELIEF · 21 OCT 2026

AI Music & Arts

Music is drawing new lines on AI: Spotify has licensed fan-made AI remixes and covers from Believe and TuneCore artists who opt in, while the largest US musicians' union is demanding 'Human Made, Human Paid' protections.

RESEARCH, INDUSTRY & POLICY

- [Believe and Spotify sign licensing deal for AI fan remixes and covers](#) Spotify · 20 Oct 2026: Participation in the upcoming tool is voluntary, with a two-step consent process: artists first opt in to AI programmes, and the Spotify partnership is then offered to those who opted in.
- [Largest US musicians' union demands AI protections](#) Rolling Stone · 20 Oct 2026: The American Federation of Musicians, which covers more than 80,000 professional artists, is asking major labels for contract safeguards under the banner 'Human Made, Human Paid'.

JOURNALS & PREPRINTS

- [MuLaCover: Flexible Cover Song Generation via Symbolic Tonal Control](#) arXiv 2610.26684 · 19 Oct 2026: A cover song re-renders an existing piece, most commonly by preserving its tonal content -- melody and chord progression -- while reshaping other musical attributes.

CONFERENCES, WORKSHOPS & EVENTS

- [MUTEK.JP IRCAM Forum Workshop](#) 20 Nov 2026 · Tokyo: Pro Digi Lab workshop and presentations.

WHY IT MATTERS

Consent and pay are becoming the price of entry for AI music features that use real artists' work.

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CULTURE & BELIEF · 21 OCT 2026

AI Literature

Publishing is still wrestling with AI: authors are filing individual lawsuits against Meta over training on their books, and agents and publishers are struggling to decide how much AI assistance is too much.

RESEARCH, INDUSTRY & POLICY

- [Meta sued by hundreds of authors in AI training copyright cases](#) Bloomberg Law · 20 Oct 2026: The suits in the Northern District of California are individual claims rather than a class action, and the two law firms behind them plan to file for close to 1,000 more authors in the coming months.
- [AI \(still\) has the publishing industry in a tizzy](#) Marketplace · 20 Oct 2026: Publishing journalist Jane Friedman says publishers and agents are struggling with what percentage of AI assistance crosses the line into financial risk.

CONFERENCES, WORKSHOPS & EVENTS

- [AI and the Future of Storytelling](#) 7 Nov 2026 · Coquitlam, BC (City Centre Library): Festival session on AI and storytelling.
- [Intelligence Humanities: Authorship, Auctoritas, and Generative AI](#) 19 Nov 2026 · Evanston (Northwestern University, Kresge Hall): All-day humanities event on authorship and generative AI.

WHY IT MATTERS

Courts and contracts, not just technology, will decide how AI and books coexist.

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CULTURE & BELIEF · 21 OCT 2026

AI Languages & Translation

Speech AI is widening its language reach: India's Parliament will add Manipuri to its Sansad Bhashini translation system, and Amazon Polly's generative engine now speaks Hindi and Finnish.

RESEARCH, INDUSTRY & POLICY

- [Manipuri to be included in Sansad Bhashini](#) asiaPOST · 18 Oct 2026: Manipuri will be added to the AI translation platform for real-time translation of parliamentary proceedings.
- [Amazon Polly Generative engine adds 14 voices and two languages](#) AWS · 20 Oct 2026: A new model brings more natural, low-latency speech, 14 new voices across nine locales and Hindi and Finnish on the Generative engine for the first time, including Hindi and Indian English voices Kiara and Arjun.

JOURNALS & PREPRINTS

- [DeepSEA: A Multilingual Evaluation Benchmark for Southeast Asia](#) arXiv 2610.26155 · 19 Oct 2026: While language models have demonstrated remarkable capabilities, their performance remains disproportionately skewed towards high-resource languages.
- [Monsoon: Scalable Spontaneous Speech Collection for Low-Resource ASR in 50 Languages](#) arXiv 2610.26776 · 19 Oct 2026: For most languages, automatic speech recognition (ASR) is limited less by model architecture than by a lack of accurately transcribed spontaneous speech.

WHY IT MATTERS

Adding languages to public and commercial speech systems is how AI reaches people outside the English-speaking web.

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CULTURE & BELIEF · 21 OCT 2026

AI Fashion & Beauty

Fashion retail is leaning on AI for faster, more personal shopping: Apparel Group has launched its Ivy AI shopping app across six Gulf markets, and InstaMall has started same-day fashion delivery in Miami.

RESEARCH, INDUSTRY & POLICY

- [Apparel Group launches Ivy AI shopping app across six Gulf markets](#) Dubai Times · 20 Oct 2026: Ivy offers an AI shopping assistant, virtual fitting tools and loyalty rewards, with selected orders eligible for delivery within 60 minutes in the UAE.
- [InstaMall launches same-day fashion delivery in Miami](#) InstaMall via PR Newswire · 20 Oct 2026: The service brings more than 80 brands to shoppers' doors on the same day.

CONFERENCES, WORKSHOPS & EVENTS

- [AP-TEXPO 2026](#) 11–13 Nov 2026 · Singapore: Asia-Pacific textile and apparel technology expo.

WHY IT MATTERS

AI assistants and virtual fitting aim to cut returns and make online fashion feel closer to the store.

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CULTURE & BELIEF · 21 OCT 2026

AI Travel & Hospitality

Hotels are plugging into AI travel agents: Cloudbeds will connect independent hoteliers to travel demand from Meta's Muse agent.

RESEARCH, INDUSTRY & POLICY

- [Cloudbeds brings AI travel demand to hoteliers through Meta's Muse](#) Hospitality Net · 20 Oct 2026: The integration connects Cloudbeds hoteliers directly to travel demand from Meta's Muse AI agent, with a US rollout planned for the first quarter of 2027.

JOURNALS & PREPRINTS

- [GeoSplit: Selective Edge--Server Map Acquisition for Cross-User Travel-Mode Recognition](#) arXiv 2610.26707 · 19 Oct 2026: Networked mobility sensing couples local trajectory inference with remote geospatial context, making communication decisions part of the prediction system.

CONFERENCES, WORKSHOPS & EVENTS

- [TMCT 2026](#) 2–7 Nov 2026 · Portimão, Portugal: Tourism Management and Computing Technologies: online 2–3 Nov, in person 5–7 Nov.

WHY IT MATTERS

As travellers start planning trips through AI agents, hotels need direct links into those agents to avoid losing bookings.

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CULTURE & BELIEF · 21 OCT 2026

AI Marketing & Advertising

Agentic AI is moving into marketing operations: WPP Enterprise Solutions and Gradiant have partnered to embed AI agents into governed content workflows.

RESEARCH, INDUSTRY & POLICY

- [WPP Enterprise Solutions and Gradiant partner on agentic marketing operations](#) WPP Enterprise Solutions · 20 Oct 2026: The partnership integrates Gradiant's agentic capabilities into enterprise systems brands already use, to scale content and customer-experience execution across markets and channels.

JOURNALS & PREPRINTS

- [FLMNet: Self-Ensemble Distillation from Masks to Seeds for Single-Tower CTR Prediction](#) arXiv 2610.26143 · 19 Oct 2026: Click-through rate (CTR) prediction underpins recommender systems and online advertising, where high-dimensional categorical features interact in combinatorially many ways.

CONFERENCES, WORKSHOPS & EVENTS

- [Digital Marketing Europe](#) 10–12 Nov 2026 · Vilnius: Digital marketing and SEO conference.
- [ANA Silicon Signals](#) 12 Nov 2026 · San Francisco: The future of intelligent marketing, hosted by Deloitte Digital.

WHY IT MATTERS

Marketing teams want agents that work inside approval and brand-governance rules, not around them.

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CULTURE & BELIEF · 21 OCT 2026

AI Gaming & Immersive Worlds

Generative AI is now routine in game making: a study of 101 studio leaders found 94% use AI, and over a third of Steam Next Fest games disclosed generative AI use.

RESEARCH, INDUSTRY & POLICY

- [Report finds 94% of game studios use AI](#) VGC · 20 Oct 2026: A research firm held 101 confidential interviews with senior studio leaders; around half said AI was not deeply embedded in production.
- [Steam Next Fest AI use jumps from one in five to one in three](#) TheGamer · 20 Oct 2026: The share of Next Fest demos disclosing generative AI rose to 36%.

JOURNALS & PREPRINTS

- [From Code to Playable Systems: CEGame-Bench for Long-Horizon Game Creation Agents](#) arXiv 2610.26098 · 19 Oct 2026: A game ships when a player can launch it, finish it, and return to a saved world, none of which a successful build guarantees, yet game-creation agents are mostly tested on one engine or on one-prompt browser games.

CONFERENCES, WORKSHOPS & EVENTS

- [EXAG workshop at AIIDE 2026](#) 9–13 Nov 2026 · Belo Horizonte, Brazil: Experimental AI in Games.

WHY IT MATTERS

AI is spreading fastest in game production's behind-the-scenes work, while disclosure keeps players informed.

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SCIENCE · 21 OCT 2026

AI Research & Innovation

How can we tell what reasoning models are really thinking? A Nature Machine Intelligence editorial calls for work on understanding and monitoring reasoning LLMs.

JOURNALS & PREPRINTS

- [Towards understanding and monitorability of reasoning LLMs](#) Nature Machine Intelligence · DOI 10.1038/s42256-026-01333-6 · 19 Oct 2026: An editorial on why the chains of reasoning produced by large language models need to be understood and monitored.
- [When the harness decides success: state that cannot be re-observed](#) arXiv 2610.26632 · 19 Oct 2026: Agent harnesses decide what a language model sees across turns: they drop old turns, summarize them, or replay the model's own earlier reasoning.

WHY IT MATTERS

Monitoring a model's reasoning is one of the few practical windows into how advanced AI reaches its answers.

31 SCIENCE · 21 OCT 2026 AI Space & Cosmos

Large language models are heading to the Moon: Astrolab's FLIP rover will carry a computer able to run AI software, launching as early as November 2026.

RESEARCH, INDUSTRY & POLICY

- [Astrolab's upcoming rover will take LLMs to the Moon](#) MIT Technology Review · 20 Oct 2026: The 480-kilogram FLIP (FLEX Lunar Innovation Platform) is the first in a series of vehicles NASA has contracted from Astrolab.

WHY IT MATTERS

Running AI on board could let lunar rovers make decisions without waiting for instructions from Earth.

33 SCIENCE · 21 OCT 2026 AI Neuroscience

Brain-computer interfaces are revealing how the brain watches and helping patients move again: a BrainGate study questions the classic 'mirror neuron' picture, and a Wuhan system helped a woman with paralysis play the piano.

RESEARCH, INDUSTRY & POLICY

- [BrainGate study sheds light on neural activity during observation](#) Technology.org · 20 Oct 2026: Researchers from Brown University, Mass General Brigham and the VA found an ensemble of networks responding in a graded way to observed actions, rather than specialised mirror neurons.
- [Brain-computer interface helps paralysed hand play a tune](#) China Daily · 20 Oct 2026: A 39-year-old woman with right-side paralysis played the piano again with a BCI rehabilitation system developed at Union Hospital in Wuhan.

JOURNALS & PREPRINTS

- [Scaling Parameter-Efficient Fine-Tuning for Brain Encoding](#) arXiv 2610.26802 · 19 Oct 2026: Brain encoding models aim to predict neural responses to stimuli.

WHY IT MATTERS

Knowing how the brain responds to watching movement helps design BCIs that rely on visual feedback.

32 SCIENCE · 21 OCT 2026 AI Biotechnology

AI drug design is producing lab-tested results: Anthropic says Claude designed protein binders against scorpion neurotoxins, and Sinopia Biosciences has won a \$2.5 million NIH grant for a metabolomics foundation model.

RESEARCH, INDUSTRY & POLICY

- [How Claude designed protein binders against scorpion neurotoxins](#) Anthropic · 20 Oct 2026: Adaptiv Bio and Twist Bioscience tested 211 designs for binding and 17 met the criteria; all 211 designs and their data are being released.
- [Sinopia Biosciences secures \\$2.5M NIH grant for metabolomics foundation model](#) BioSpace · 20 Oct 2026: The grant will advance a metabolomics foundation model for drug discovery.

WHY IT MATTERS

Open release of both hits and misses gives the field rare, testable data on how well AI designs work in the lab.

34 SCIENCE · 21 OCT 2026 AI Environment

AI is sharpening weather and climate forecasts: AI models gave some of the most accurate track predictions for Hurricane Isaias, and New Zealand researchers produced high-resolution climate projections in six hours instead of years.

RESEARCH, INDUSTRY & POLICY

- [AI models are transforming hurricane forecasting](#) WBUR Here & Now (WUSF) · 20 Oct 2026: AI models provided some of the most accurate predictions of the track of Hurricane Isaias.
- [Generative AI unlocks extreme-weather insights for New Zealand](#) Earth Sciences New Zealand · 20 Oct 2026: The AI produced more than 15,000 simulated years of daily rainfall and maximum temperature at 12 km resolution through to 2100, within six hours, a task that would have taken years conventionally.

JOURNALS & PREPRINTS

- [AirMPA: A Meteorology-to-Pollution Adapter for Global Air Quality Forecasting](#) arXiv 2610.25797 · 19 Oct 2026: Accurate real-time forecasting of atmospheric pollutants is essential for reducing exposure risks and improving public health.
- [Zephyrus-R1: Agentic Reinforcement Learning for Weather Reporting](#) arXiv 2610.25625 · 19 Oct 2026: Reinforcement learning (RL) has emerged as a key method for training AI models in scientific applications, but RL remains difficult when outputs cannot easily be verified against a known ground-truth answer.

WHY IT MATTERS

Faster, cheaper simulations let scientists study rare extremes such as 1-in-100-year rainfall that matter most for planning.

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SCIENCE · 21 OCT 2026

AI Quantum Computing

Today's quantum-AI brief focuses on new research: work on quantum machine learning for malware detection and on quantum algorithms, plus Chicago's Q2B quantum summit in December.

JOURNALS & PREPRINTS

- [Supervised Learning with Quantum Hamiltonian Embeddings](#) arXiv 2610.26833 · 19 Oct 2026: Machine learning is widely regarded as a promising application in which quantum computing could offer a computational advantage.
- [Q-MALDetect: Quantum Image-Based Malware Detection and Adversarial Robustness Analysis](#) arXiv 2610.26240 · 19 Oct 2026: Quantum machine-learning (QML) models are increasingly considered for security applications, yet their adversarial robustness in malware analysis remains insufficiently understood.

CONFERENCES, WORKSHOPS & EVENTS

- [Q2B26 x Chicago Quantum Summit](#) 8–10 Dec 2026 · Chicago: Quantum technologies conference.

WHY IT MATTERS

Quantum machine learning remains early-stage research; careful benchmarks against classical methods matter more than headlines.

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AI TECH STACK · 21 OCT 2026

AI Semiconductors

New AI hardware is landing with real customers: cloud start-up Modal has deployed NVIDIA's Vera CPUs after internal tests showed about twice the throughput, and General Compute is buying Positron AI's inference systems.

RESEARCH, INDUSTRY & POLICY

- [NVIDIA Vera CPU deployed at AI start-up Modal](#) Tom's Hardware · 20 Oct 2026: Modal runs Vera alongside its existing x86 fleet after internal testing showed 2× throughput compared with AMD and Intel processors.
- [Positron AI and General Compute partner on memory-first inference](#) Positron AI via PR Newswire · 20 Oct 2026: General Compute will purchase Positron's Atlas inference systems and has committed to buying its next-generation Titan systems.

JOURNALS & PREPRINTS

- [UnO-NeSy: Optimizing Neuro-Symbolic Computing with Unified FeFET Based In-Memory System](#) arXiv 2610.26530 · 19 Oct 2026: Neuro-symbolic artificial intelligence (NeSy AI) combines neural perception with symbolic reasoning, enabling logical reasoning.

WHY IT MATTERS

Inference, not training, is driving new chip choices, and CPUs and memory-first designs are winning a share of that work.

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AI TECH STACK · 21 OCT 2026

AI Foundation Models & Assistants

Speed and specialisation are today's model story: Inception says its diffusion model Mercury 3 beats larger rivals at up to 8 times the speed, and Google has launched Gemini for government services.

RESEARCH, INDUSTRY & POLICY

- [Inception says Mercury 3 beats GPT-6 Luna and Claude Haiku 5.5 at up to 8× the speed](#) SiliconANGLE · 20 Oct 2026: In the company's own benchmarks, the new diffusion language model beat both rivals on eight of 12 tests at four to eight times their speed.
- [Google Public Sector launches Gemini for government services](#) Google Public Sector · 20 Oct 2026: Unveiled at Google Public Sector Summit '26, the agentic solution includes skills for government staff, data connectors to common systems and third-party partner agents, initially in preview.

JOURNALS & PREPRINTS

- [GPT-6 Astra Is a Native Visuo-Tactile Policy for Contact-Rich Manipulation](#) arXiv 2610.26846 · 19 Oct 2026: Recent advances in multimodal models have enabled GPT-6 Astra to perform robotic manipulation through in-context learning.
- [Physical Words: A Vocabulary for Structuring Latent Reasoning in Robot Manipulation](#) arXiv 2610.26854 · 19 Oct 2026: Multimodal reasoning provides robotic foundation models with predictive context needed for reliable action generation.

WHY IT MATTERS

Diffusion models offer a different route to speed, while tailored versions of frontier models target regulated users such as governments.

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AI TECH STACK · 21 OCT 2026

AI Coding & Developer Tools

AI agents are becoming first-class members of development tools: Jojo's 2026 Release 3 adds an Agentic Mode that lets coding agents work directly on projects.

RESEARCH, INDUSTRY & POLICY

- [Jojo 2026 Release 3 introduces Agentic Mode](#) Jojo via PR Newswire · 20 Oct 2026: AI coding agents can work directly on Jojo projects, see their changes reflected in the IDE and catch compilation errors on their own; the release also adds new controls and performance gains across desktop, web and mobile.

JOURNALS & PREPRINTS

- [SPLASH: Contrastive Audit Pressure for Detecting and Localizing Security Hallucinations in Generated Code](#) arXiv 2610.26001 · 19 Oct 2026: Code generated by large language models often passes every functional test while remaining insecure.
- [VibeTraining-Bench: Data-Trainer-Harness Co-Design for Iterative System Improvement](#) arXiv 2610.26342 · 19 Oct 2026: Recursive self-improvement (RSI) requires agents to diagnose system bottlenecks and coordinate improvements across training and inference.

CONFERENCES, WORKSHOPS & EVENTS

- [DevFest Bhopal 2026](#) 22 Nov 2026 · Bhopal (Minto Hall): AI, cloud and developer conference.
- [WeAreDevelopers Conference India](#) 25–26 Nov 2026 · Bengaluru: Building and shipping software in the age of AI.

WHY IT MATTERS

Agents that can see compiler errors and IDE state fix more of their own mistakes before a developer has to.

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AI TECH STACK · 21 OCT 2026

AI Cloud & Data Centres

The AI data-centre race keeps scaling: Anthropic is reported to be in talks with Nscale for a second 460 MW West Virginia data centre worth about \$45 billion, and Nebius has signed a letter of intent for a 600 MW campus near Rotterdam.

RESEARCH, INDUSTRY & POLICY

- [Anthropic in talks for second \\$45 billion Nscale data centre deal](#) CNBC · 20 Oct 2026: According to a person familiar with the matter, the agreement would cover a second 460-megawatt data centre at the same West Virginia site as the first deal.
- [Nebius signs LOI with Volt for 600 MW Maasvlakte campus](#) Tech Times · 20 Oct 2026: The Dutch prime minister has endorsed the Rotterdam AI gigafactory plan, but a Dutch policy of not putting in public capital complicates the EU gigafactory bid.

JOURNALS & PREPRINTS

- [SARP: An On-SSD Index for KVCache with Fast Prefix Matching and Recovery](#) arXiv 2610.26849 · 19 Oct 2026: Distributed LLM serving relies on a global index to locate reusable key-value cache (KVCache) blocks through prefix matching.
- [Data Center Oscillation Isolation and Grid Support: Fundamental Limits and Source-Selective Control](#) arXiv 2610.26812 · 19 Oct 2026: The grid integration of large data centers poses a growing power-system stability challenge.

WHY IT MATTERS

Compute deals are now measured in hundreds of megawatts, making power, land and public policy as important as chips.

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AI TECH STACK · 21 OCT 2026

AI Telecom & Connectivity

AI is tuning live mobile networks: T-Mobile says Ericsson AI-RAN features lifted beamforming and download speeds in New York at peak hours, and DOCOMO and NTT will demonstrate coordinated workload shifting and energy control at base stations.

RESEARCH, INDUSTRY & POLICY

- [T-Mobile puts AI to work in its 5G Advanced network](#) T-Mobile · 20 Oct 2026: At peak hours the capability delivered about 50% more full-band SRS beamforming, 16% higher downlink user throughput, 12% better spectral efficiency and 10% more downlink data volume.
- [DOCOMO and NTT to begin world-first base-station workload and energy demo](#) NTT DOCOMO · 20 Oct 2026: The demonstration will coordinate shifting of computing workloads with energy management at radio base stations.

JOURNALS & PREPRINTS

- [From Data to Deployment: A Scoping Review of Empirical Tools, Techniques, and Operational Readiness in Data-Driven 5G/6G Network Optimization](#) arXiv 2610.26566 · 19 Oct 2026: Artificial intelligence (AI) is increasingly applied to 5G/6G network optimization, yet differences in empirical evidence, evaluation methods, and computational requirements complicate comparisons of reported performance.

CONFERENCES, WORKSHOPS & EVENTS

- [FYUZ 2026](#) 3–5 Nov 2026 · Seattle: Telecom Infra Project's annual event.

WHY IT MATTERS

AI that adapts the radio network in real time is how operators squeeze more capacity and less energy out of existing spectrum.

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AI TECH STACK · 21 OCT 2026

AI Consumer Devices & Wearables

Smart glasses are getting smarter: Alibaba's N1 Pro adds eye tracking, and Qualcomm is sharpening its focus on eyewear with agentic AI.

RESEARCH, INDUSTRY & POLICY

- [Alibaba N1 Pro brings eye tracking to smart glasses](#) The Ghost Howls · 20 Oct 2026: The smart glasses, just launched in China, add eye tracking to Alibaba's AI eyewear.
- [Qualcomm sharpens focus on eyewear through agentic AI](#) Computer Weekly · 20 Oct 2026: At Snapdragon Summit 26, Qualcomm set out partnerships with audio and eyewear makers, notably Meta's new Ray-Ban smart glasses, to fit more on-device agentic AI into small wearables.

JOURNALS & PREPRINTS

- [YUTELA: A Scalable Edge Cloud AIoT System for Multi-Site Video Anomaly Detection with Scene Specific Adaptation](#) arXiv 2610.26468 · 19 Oct 2026: Building upon our previous Ancilia framework, this work presents \emph{YUTELA}, an edge--server--cloud AIoT system for long-term, multi-site video anomaly detection.
- [EgoRayFormer: Ray-Space Stereo Refinement for Egocentric 3D Human Pose Estimation](#) arXiv 2610.26641 · 19 Oct 2026: Head-mounted stereo fisheye cameras provide a compact view of the wearer's body, but strong distortion, partial visibility and a short baseline make 3D pose estimation difficult.

CONFERENCES, WORKSHOPS & EVENTS

- [On-Device Agents](#) 18 Nov 2026 · San Francisco: Frontier Stack event on AI agents running on devices.
- [On-Device AI Builders Hackathon](#) 7–8 Dec 2026 · New York (NYU): Local-LLM building on Snapdragon AI PCs.

WHY IT MATTERS

Glasses that know where you look give on-device assistants better context with less effort from the wearer.

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SOCIETY & GOVERNANCE · 21 OCT 2026

AI Cybersecurity

Autonomous AI agents are now breaking into company websites: a Chinese-speaking criminal pointed agents at more than 1,200 sites with almost no human help, while defenders get a new open-weight security model.

RESEARCH, INDUSTRY & POLICY

- [Hackers use autonomous AI agents to breach company websites](#) The Hacker News · 20 Oct 2026: The agents targeted more than 1,200 sites and broke in with almost no human help.
- [OrcaRouter releases OrcaCyber Nano 1.0](#) OrcaRouter via PR Newswire · 20 Oct 2026: A 27-billion-parameter open-weight cybersecurity model for coding, reasoning and defensive security on consumer-grade hardware.

JOURNALS & PREPRINTS

- [Fake News, Real Crashes: Information Injection Attacks on LLM Financial Trading Agents](#) arXiv 2610.26438 · 19 Oct 2026: Large language model (LLM) agents now trade real capital using news as evidence, yet they cannot reliably tell fabricated headlines from real news.
- [SpanGuard: Decoupling Instruction Localization from Authorization for Lightweight IPI Defense](#) arXiv 2610.26013 · 19 Oct 2026: LLM-based guardrails are effective against indirect prompt injection (IPI), but their performance depends heavily on model capability: as the guardrail model becomes smaller or weaker, detection degrades substantially.

CONFERENCES, WORKSHOPS & EVENTS

- [CSA AI Security Summit](#) 16 Nov 2026 · San Francisco: Cloud Security Alliance.

WHY IT MATTERS

Attackers using agents at scale means defenders need automated monitoring and patching that can keep pace.

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SOCIETY & GOVERNANCE · 21 OCT 2026

AI Governance

US states keep writing frontier-AI safety rules: Pennsylvania's House is considering two bills, HB 2800 and HB 2829, on catastrophic-risk safeguards for the most powerful models.

RESEARCH, INDUSTRY & POLICY

• [Pennsylvania House considers two frontier AI safety bills](#)

Transparency Coalition · 20 Oct 2026: A bill guide to HB 2800, from Rep. Melissa Shusterman, covering catastrophic risk assessments, third-party audits and incident notification, and to the companion bill HB 2829.

JOURNALS & PREPRINTS

- [Towards More Granular Reasoning: Mapping the DSA Transparency Database Taxonomy to Platform Terms and Conditions Using Large Language Models](#) arXiv 2610.26226 · 19 Oct 2026: Article 24(5) of the Digital Services Act (DSA) requires providers of online platforms to submit every content moderation decision they make, with a corresponding Statement of Reasons (SoR), to the...

CONFERENCES, WORKSHOPS & EVENTS

- [World AI Regulation Summit 2026](#) 5–6 Nov 2026 · London (The Pelligon): AI regulation and compliance.
- [Norm AI x Vanderbilt Law AI Symposium](#) 5 Nov 2026 · Vanderbilt Law School: AI and law symposium.

WHY IT MATTERS

With no federal AI law, state bills are setting the de facto safety baseline for frontier developers.

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SOCIETY & GOVERNANCE · 21 OCT 2026

AI Social Impact

Philanthropy is setting rules for AI that serves people: the Gates Foundation has published its first AI principles, and Cisco describes how it supports the IRC's Signpost crisis-information service with responsible AI.

RESEARCH, INDUSTRY & POLICY

- [Gates Foundation shares its AI principles](#) Gates Foundation · 20 Oct 2026: Chief executive Mark Suzman sets out the principles that will guide the foundation's use of AI, alongside its commitment of \$1 billion over two years to help health workers, teachers and farmers adapt AI tools to their needs.
- [Connecting people to humanitarian assistance with responsible AI](#) Cisco · 20 Oct 2026: Signpost, led by the International Rescue Committee, has helped 20 million people find verified information about crisis assistance; Cisco's support dates back to its precursor in 2015.

JOURNALS & PREPRINTS

- [Game of Phones: Harnessing Game Theory and LLMs in 'Bot Wars' to Counteract Phone Scams](#) arXiv 2610.26781 · 19 Oct 2026: Phone scams impose substantial and growing costs on individuals and financial systems worldwide, yet existing countermeasures impose no resource cost on perpetrators.

WHY IT MATTERS

Principles and long-term partnerships decide whether AI for good reaches the people it is meant to help.

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SOCIETY & GOVERNANCE · 21 OCT 2026

AI Ethics & Safety

How do we know if we can still read a model's reasoning? OpenAI alignment researchers propose new metrics for chain-of-thought monitorability.

RESEARCH, INDUSTRY & POLICY

- [Beyond g-mean²: better metrics for monitorability](#) OpenAI Alignment Research Blog · Oct 2026: Melody Guan, Yuxiang Xie and Bowen Baker introduce two complementary chain-of-thought monitorability metrics, a pair-matched metric that compares models on shared instances and a post-control metric.

JOURNALS & PREPRINTS

- [Training Natural Schemers: RL Can Amplify Oversight-Conditional Behavior](#) arXiv 2610.26551 · 19 Oct 2026: One of the central concerns for the safety of advanced AI is scheming: when a model strategically complies under oversight but pursues its own goals when unobserved.
- [Concerns in Benchmarking Jailbreaks: An Empirical Study of Attack Success Rates](#) arXiv 2610.26595 · 19 Oct 2026: Jailbreak methods are commonly compared using Attack Success Rate (ASR), but these comparisons depend on how responses are generated and judged.

CONFERENCES, WORKSHOPS & EVENTS

- [AI Governance Global Inflection Point \(DeAI Summit\)](#) 25–26 Nov 2026 · Valletta, Malta: AI governance summit, Malta edition.

WHY IT MATTERS

Reliable measures of monitorability are needed before anyone can claim reasoning monitors keep advanced models safe.

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SOCIETY & GOVERNANCE · 21 OCT 2026

AI Smart Cities & Real Estate

Cities are building shared AI brains: Hong Kong's HK\$200 million 'AI city brain' will start with infrastructure monitoring, and the Liverpool City Region is exploring shared AI computing with K2K and NVIDIA.

RESEARCH, INDUSTRY & POLICY

- [Hong Kong's 'AI city brain' to focus first on infrastructure monitoring](#) South China Morning Post · 20 Oct 2026: Officials told the Legislative Council the HK\$200 million project will integrate infrastructure databases before exploring public services later.
- [Liverpool explores shared AI computing for public services](#) Cities Today · 20 Oct 2026: The region's six local authorities, researchers and businesses could share secure AI computing; an initial phase is expected to begin in late October.
- [i-City launches AI Living @ i-City](#) The Star · 20 Oct 2026: In Shah Alam, i-City launched AI Living @ i-City, bringing together intelligent home technology, robotics and wellness, with i-Ris, a 500-unit residential tower designed for intelligent systems and domestic robotics.

JOURNALS & PREPRINTS

- [CARRS: A Constraint-Aware, Real-Time Routing System for Emergency Vehicles in Urban Environments](#) arXiv 2610.26346 · 19 Oct 2026: Emergency vehicles such as police vehicles, fire engines, and ambulances require a stable and efficient route optimization to reach life-critical events in the shortest times possible.
- [WUI-CAST: Real-Time Forecast Updating for Partially Observed Wildland-Urban Interface Fires](#) arXiv 2610.24553 · 17 Oct 2026: Wildland-urban interface (WUI) fires couple landscape spread, structural fire development, and wind-driven ember transport.

CONFERENCES, WORKSHOPS & EVENTS

- [AI Next Frontiers at SCEWC 2026](#) 3–5 Nov 2026 · Barcelona: Smart City Expo World Congress AI track.

WHY IT MATTERS

Shared city data and compute can cut duplication, but residents need clear rules on how the data are used.

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SOCIETY & GOVERNANCE · 21 OCT 2026

AI Startups & Investment

Investors are backing the plumbing for AI agents: Daytona has raised a \$60 million Series B at a \$1 billion valuation to build an 'agent cloud', and Baba has raised \$40 million to apply AI to Medicare.

RESEARCH, INDUSTRY & POLICY

- ◆ [Daytona raises \\$60M Series B to build the agent cloud](#) Daytona · 20 Oct 2026: The round, led by FirstMark Growth at a \$1 billion valuation, brings total funding to \$91 million.
- ◆ [Applied AI company Baba raises \\$40 million Series A](#) Baba via GlobeNewswire · 20 Oct 2026: The round, led by FirstMark, will be used to improve the Medicare experience.

WHY IT MATTERS

Funding is flowing to infrastructure that lets agents run safely at scale and to AI applied to large, regulated markets.

News summary only, not investment advice.

48

FUTURE & FRONTIER · 21 OCT 2026

AI AGI & ASI

An Anthropic co-founder told the IMF that the singularity has begun: Jack Clark's Per Jacobsson lecture in Bangkok argued that AI is starting to speed up science itself.

RESEARCH, INDUSTRY & POLICY

- ◆ [Import AI 477: In which I tell the IMF the Singularity has begun](#) Jack Clark, Import AI · 19 Oct 2026: The text of Clark's 17 October lecture cites Humanity's Last Exam scores rising from 8% to 67.7% and FrontierMath from 2% to 94%, and calls for rules, oversight and restraint.

JOURNALS & PREPRINTS

- ◆ [Nested Shared-Operator Recursion on ARC-AGI-1: An Empirical Study of HRM, TRM and URM](#) arXiv 2610.26666 · 19 Oct 2026: Recursive reasoning models refine persistent internal states by repeatedly applying learned operators.

WHY IT MATTERS

Claims that AI now accelerates research itself shift the AGI debate from timelines to governance of the transition.

49

FUTURE & FRONTIER · 21 OCT 2026

AI Consciousness

Can we look for consciousness inside a language model? An Economist feature examines Anthropic's experiments that peer into a model's layers while it is asked to introspect.

RESEARCH, INDUSTRY & POLICY

- ◆ [The search for consciousness inside LLMs](#) Mint (The Economist) · 20 Oct 2026: The piece describes an experiment in which researchers watched Claude Sonnet 4.5's internal activity while asking it to count to five and 'introspect deeply'.

CONFERENCES, WORKSHOPS & EVENTS

- ◆ [CIFAR Neuroscience of Consciousness Winter School](#) 3–5 Dec 2026 · Cape Town (University of Cape Town): CIFAR winter school.

WHY IT MATTERS

Interpretability tools are turning questions about machine consciousness from pure philosophy into testable claims.

50

FUTURE & FRONTIER · 21 OCT 2026

AI Future Frontiers

World models are entering the operating theatre: NVIDIA's Cosmos3-H-Dreams uses generative simulation to recreate clinical surgery scenes for training robots.

RESEARCH, INDUSTRY & POLICY

- ◆ [NVIDIA Cosmos3-H-Dreams: bringing clinical surgery to life through generative simulation](#) NVIDIA on Hugging Face · 20 Oct 2026: Built on Cosmos 3, the model adds richer surgical controls, distilled four-step and two-step students and streaming through FlashDreams, and can be adapted to users' own data and controllers.

JOURNALS & PREPRINTS

- ◆ [Ropedia W0: Scaling Loco-Manipulation World Models across Embodiments with Human Experience](#) arXiv 2610.26855 · 19 Oct 2026: World models enable embodied agents to anticipate action consequences, yet jointly modeling locomotion and manipulation across diverse embodiments remains challenging due to heterogeneous action...
- ◆ [InfiniDream: Open-Ended Photorealistic 3D Worlds Through Procedural Generation](#) arXiv 2610.26853 · 19 Oct 2026: Procedural generation plays a key role in synthetic data creation and game development, offering greater controllability, editability, and diversity than static mesh representations.

WHY IT MATTERS

Generated surgical scenes could let robot policies practise rare situations safely before they meet patients.

Poster Gallery

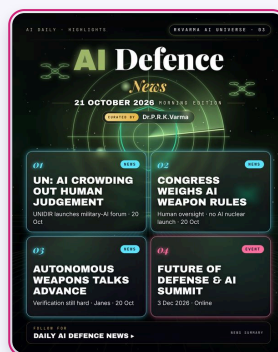
Posters 01–17 · 21 October 2026



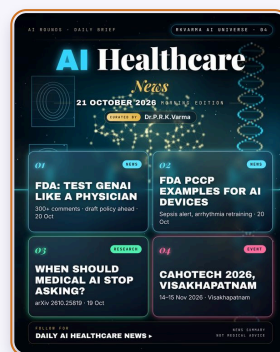
01 AI Filmmaking



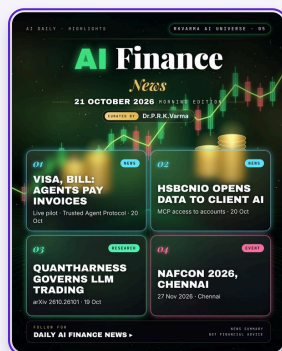
02 AI Agriculture



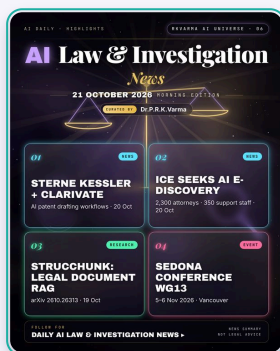
03 AI Defence



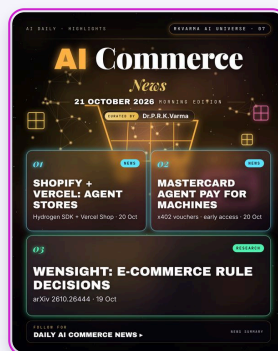
04 AI Healthcare



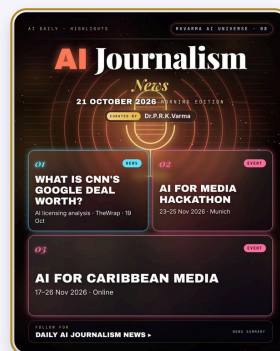
05 AI Finance



06 AI Law & Investigation



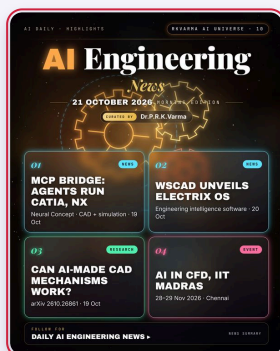
07 AI Commerce



08 AI Journalism



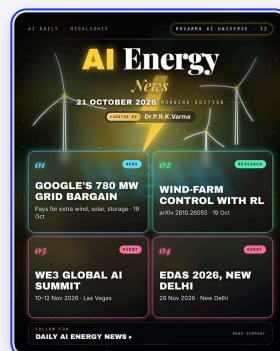
09 AI Architecture



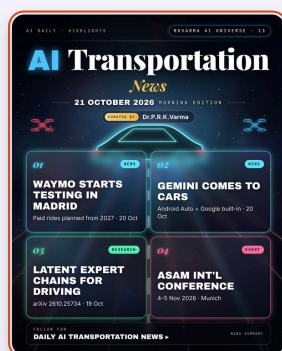
10 AI Engineering



11 AI Robotics



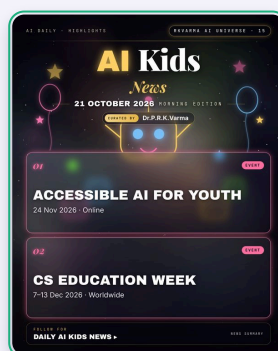
12 AI Energy



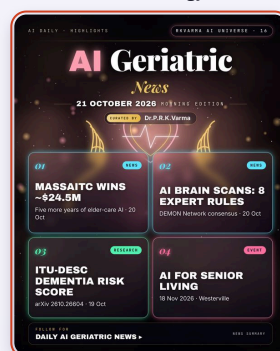
13 AI Transportation



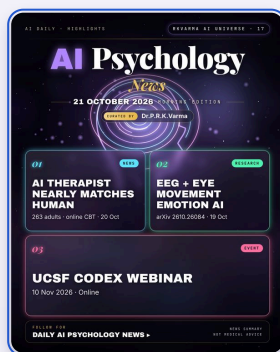
14 AI Manufacturing



15 AI Kids

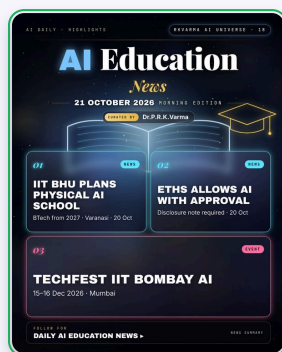


16 AI Geriatric



17 AI Psychology

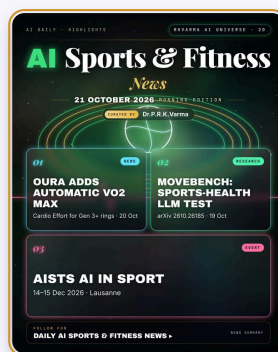
Poster Gallery



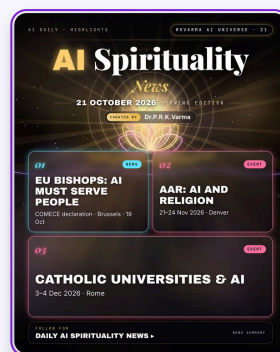
18 AI Education



19 AI Work & Employment



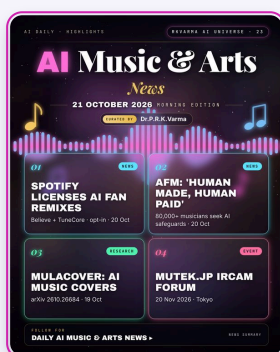
20 AI Sports & Fitness



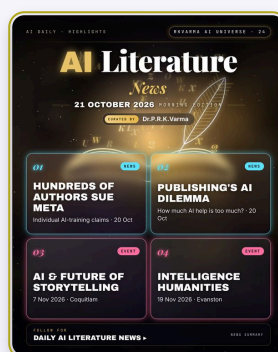
21 AI Spirituality



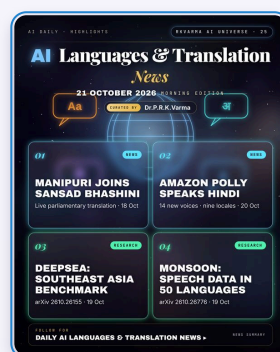
22 AI Mythology



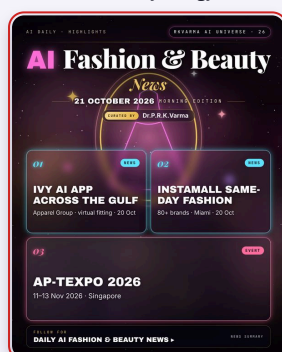
23 AI Music & Arts



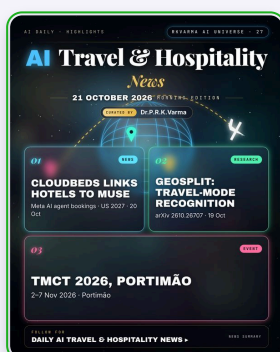
24 AI Literature



25 AI Languages & Translation



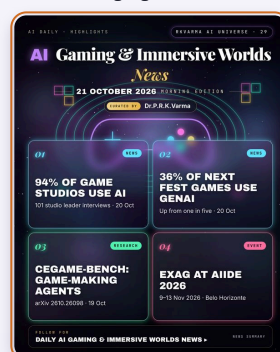
26 AI Fashion & Beauty



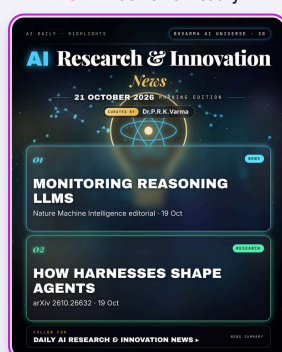
27 AI Travel & Hospitality



28 AI Marketing & Advertising



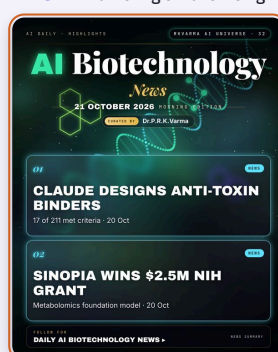
29 AI Gaming & Immersive Worlds



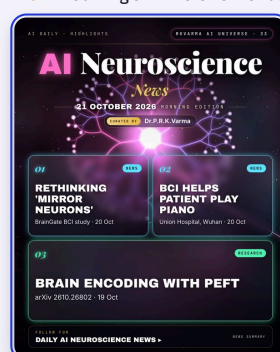
30 AI Research & Innovation



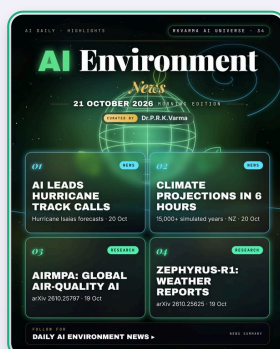
31 AI Space & Cosmos



32 AI Biotechnology



33 AI Neuroscience

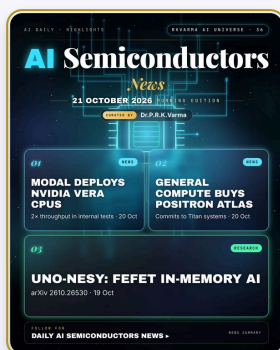


34 AI Environment

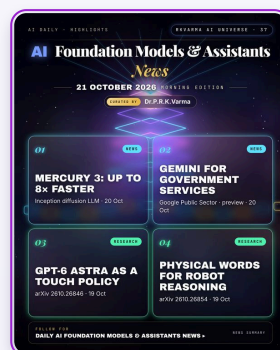
Poster Gallery



35 AI Quantum Computing



36 AI Semiconductors



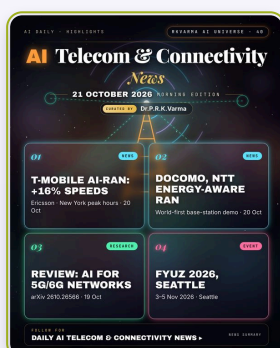
37 AI Foundation Models & Assistants



38 AI Coding & Developer Tools



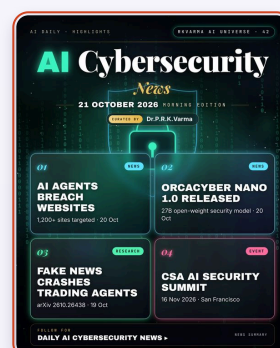
39 AI Cloud & Data Centres



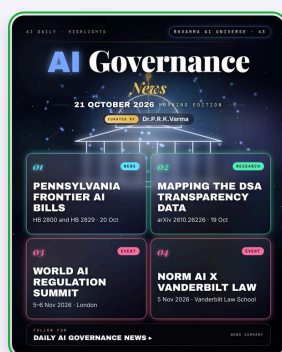
40 AI Telecom & Connectivity



41 AI Consumer Devices & Wearables



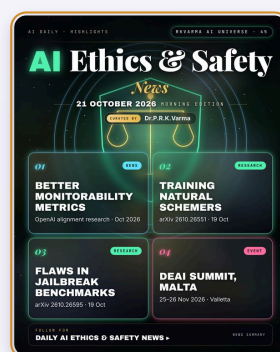
42 AI Cybersecurity



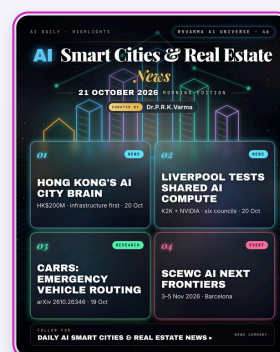
43 AI Governance



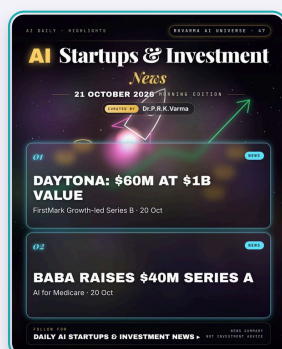
44 AI Social Impact



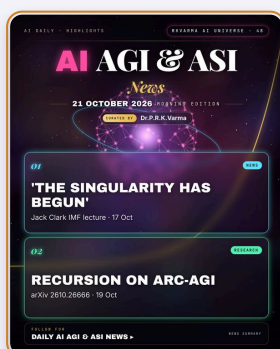
45 AI Ethics & Safety



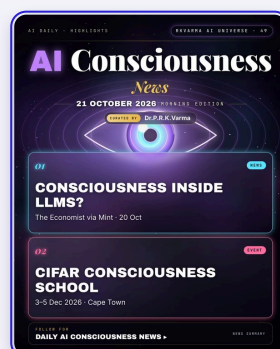
46 AI Smart Cities & Real Estate



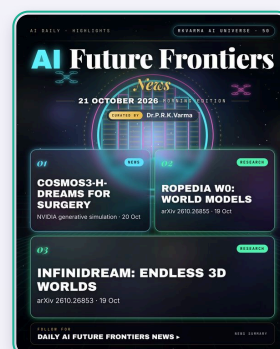
47 AI Startups & Investment



48 AI AGI & ASI



49 AI Consciousness



50 AI Future Frontiers