



SmartLivingPlat

Plataforma Tecnológica de la Domótica
y las Ciudades Inteligentes



Boletín de Vigilancia Tecnológica

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SMART BUILDINGS
SMART CITIES
INDUSTRIA 4.0

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NOTICIAS

The Upside Down of polymer additive manufacturing

Publicada en voxelmatters.com, 30/06/2026

Doing forecasts is a thankless job. In a market evolving as fast as additive manufacturing, projecting revenues a decade out has become less useful than accurately sizing what exists today. VoxelMatters' new 2026 Polymer AM Market Report, to be released on July 14th (now available for pre-order), reflects that shift: the new edition focuses more on quantifying the current opportunity and somewhat less on extrapolating distant futures.

[Ver más..](#)



What It Takes To Deploy physical AI at Scale

Publicada en informationweek.com, 26/06/2026

Physical AI adoption is accelerating, but success requires early integration, edge engineering and strategic deployment to move beyond pilots, according to a Cognizant senior vice president.

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Loop engineering

Publicada en oreilly.com, 22/06/2026

you define a purpose and the AI iterates until complete. I believe this may be the future of how we work with coding agents. However, it's still early; I'm skeptical, and you absolutely have to be careful about token costs (usage patterns can vary wildly if you are token rich or poor)

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The European Innovation Council opens to defence and dual-use technologies

Publicada en eic.ec.europa.eu, 17/06/2026

As from today, the European Innovation Council (EIC) will provide investments in defence and dual-use technologies, marking a strategic pivot in Europe's innovation policy. The change is the result of an amendment to the EIC work programme 2026, adopted today by the Commission to implement the Defence Mini-Omnibus.

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Edge AI, Acercando la Inteligencia al Origen de la Información

Publicada en datos.gob.es, 16/06/2026

Durante años la gestión del dato siguió una lógica centralizada: recoger información, transportarla, almacenarla y procesarla en el mismo lugar. La nube (cloud) concentró gran parte del procesamiento empresarial gracias a su capacidad de almacenamiento y cómputo. Sin embargo, la evolución de los sistemas conectados está modificando este modelo. Hoy, una parte creciente del valor asociado al dato se genera cerca de su punto de origen: fábricas,

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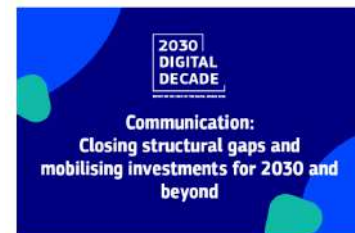


State of the Digital Decade 2026

Publicada en digital-strategy.ec.europa.eu, 16/06/2026

The State of the Digital Decade 2026 report provides an overview of Europe's progress towards the 2030 targets and objectives. The Digital Decade Policy Programme (DDPP) 2030 provides the framework for Europe's digital transformation and sets the path towards the 2030 targets and objectives.

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The manufacturing robotics market map: 115+ companies building the automated factory of the future

Publicada en cbinsights.com, 12/06/2026

Manufacturing robotics is shifting from fixed, purpose-built machines toward systems that can learn, adapt, and coordinate across diverse environments. AI is driving this shift, enabling a new generation of robots — such as industrial humanoids and quadrupeds — that operate with minimal human intervention.

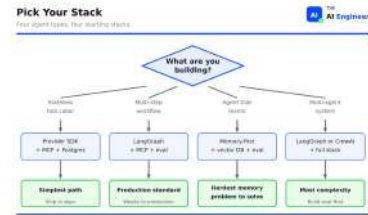
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The AI Agents Stack (2026 Edition)

Publicada en oreilly.com, 8/06/2026

Your team picks LangGraph for a customer support chatbot. Three weeks in, you've got 14 nodes in a state graph, a custom checkpointing writing to Redis, and retry logic for tool calls that fail once a week. The agent answers refund questions. It calls one API. A 50-line script on the OpenAI SDK with two MCP servers would have done the same thing. But nobody mapped which layers the problem actually needed.

[Ver más..](#)



Solar Power is Security Infrastructure. Treat Them Like It.

Publicada en ec.europa.eu, 8/06/2026

As the days grow hotter, air conditioning is playing a larger role in how people cope with the heat. In EU households, energy consumption for cooling has steadily increased, reaching 80.4 thousand terajoules (TJ) in 2024. In 2018, EU households used 40.5 thousand TJ for space cooling, meaning that by 2024, total final energy consumption doubled. Between 2018 and 2024, consumption increased every year, except for 2023 (-1.9%) and 2020 (-2.5%)

[Ver más..](#)



EU moves to ban high-risk inverters from China over cybersecurity threats

Publicada en euronews.com, 4/05/2026

An EU official stated that 'serious' economic and cybersecurity threats had been identified, adding that the Commission's evaluation was based on both classified and publicly available information submitted by several member states. The European Commission will gradually eliminate the use of Chinese-made inverters in EU-funded energy projects, a major step aimed at protecting critical energy infrastructure from possible cyber threats that could trigger power outages.

[Ver más..](#)



Your Digital Twin Has No Constitution: Why the Smartest Buildings Are the Least Governed

Publicada en cognitive-corp.com, 1/05/2026

The paradox sits right in front of you. Equinix's 272 data centers run digital twins that predict equipment failure with high accuracy. Meta's hyperscale facilities optimize power consumption down to the kilowatt. Schneider Electric's EcoStruxure platform processes millions of data points per second across customer buildings worldwide. In 2025, consider innovations like Google Cloud's Asset Twin and Autodesk's Building Twin platform

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EMPRESAS Y MERCADOS

Toshiba Launches 80V Power MOSFET for AI Data Centers

Publicada en timestech.in, 30/06/2026

Toshiba Electronic Devices & Storage Corporation (“Toshiba”) has launched “TPM1R408RH,” an 80V N-channel power MOSFET fabricated using U-MOS11-H, Toshiba’s latest-generation process[1]. The MOSFET targets applications such as switched-mode power supplies for industrial equipment used in AI data centers and communications base stations. Shipments start today.

[Ver más..](#)



La mayor planta de autoconsumo del sector del aluminio entra en funcionamiento

Publicada en energias-renovables.com, 29/06/2026

Helexia, especializada en soluciones de autoconsumo y eficiencia energética, y Grupo Baux, uno de los principales fabricantes europeos de aluminio reciclado, han puesto en marcha la mayor planta de autoconsumo del sector del aluminio en España.

[Ver más..](#)



Arrive partners with BYD to power 'ParkPay in-car mobility service

Publicada en arrive.com, 25/06/2026

Arrive announces partnership with BYD to provide Parkopedia in-car connected services, EasyPark and RingGo app integrations in new BYD ParkPay mobility app on Android Automotive OS, initially available in Denza Z9 GT and BYD ATTO 3 EVO.

[Ver más..](#)



GM layoffs: Over 1,000 workers affected as automaker deploys 50 collaborative robots

Publicada en storyboard18.com, 25/06/2026

General Motors has expanded the use of collaborative robots, or cobots, at its Factory Zero assembly plant in Michigan, as the automaker continues to automate manufacturing operations. The move has also coincided with workforce reductions at the facility, with reports saying more than 1,000 workers have been affected.

[Ver más..](#)



Blending in-situ additive insight with smarter inspection

Publicada en machinery-market.co.uk, 25/06/2026

In this article, Marten Murg, co-founder and CEO of Additive Assurance, who argues that metal additive manufacturing must move beyond blanket inspection towards a risk-based approach that integrates in-situ process data with targeted verification to deliver scalable, economically viable quality.

[Ver más..](#)



AI for HVAC Companies: 9 Ways to Save Time, Win Work, and Grow

Publicada en simprogroup.com, 24/06/2026

Quick Answer: HVAC companies can use AI to save time, win more work, and grow by applying it to the highest-friction points in the job life cycle: lead capture, scheduling, route optimisation, estimating, predictive maintenance, diagnostics, customer follow-up, reporting, and marketing

[Ver más..](#)

The smarter E Award 2026: Outstanding projects

Publicada en pveurope.eu, 21/06/2026

From solar-plus-storage in California and utility-scale batteries in Ukraine to agrivoltaics in Germany and green hydrogen in Namibia, the 2026 finalists show how renewable projects are being delivered across very different markets.



[Ver más..](#)

Schneider Electric reúne a ingenierías estratégicas para abordar el futuro de la media tensión y presentar GMAirSeT

Publicada en se.com, 17/06/2026

Schneider Electric , líder global en tecnología energética, celebró el 11 de junio en MESA, la planta de la compañía ubicada en Mungia (Bizkaia), una jornada exclusiva dirigida a ingenierías y profesionales de la prescripción para analizar las principales tendencias del sector y presentar GMAirSeT , su nueva celda para distribución primaria libre de SF₆. El encuentro sirvió como espacio para intercambiar conocimiento sobre la modernización de la distribución eléctrica.

[Ver más..](#)

How Deutsche Telekom is rewiring telecommunications with AI

Publicada en openai.com, 10/06/2026

Deutsche Telekom is one of the world's largest telecommunications companies, serving more than 300 million customers across Europe and the United States and employing more than 200,000 people across the group. Operating at this scale means managing vast customer service operations, complex network infrastructure, and millions of daily interactions that keep people connected.

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NextEra Energy and Dominion Energy to Combine, Creating the World's Largest Regulated Electric Utility Business and North America's Premier Energy Infrastructure Platform Benefiting Customers

Publicada en newsroom.nexteraenergy.com, 18/05/2026

Creates the world's largest regulated electric utility business by market capitalization and one of the world's largest energy infrastructure companies with an unmatched operating platform benefiting customers. Combined company's customers will benefit over time from its enhanced scale in operations, procurement, construction and financing, enabling it to more cost-effectively meet increased electric demand for approximately 10 million customer accounts

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Hyundai Reportedly Demanding ‘Tens of Thousands of Boston Dynamics Robots ASAP

Publicada en gizmodo.com, 4/05/2026

According to a report from Semafor, it sounds like the C-suite at Boston Dynamics—the company that made the original creepy walking robot videos—has come under a bit of a strain as Hyundai, the Korean automaker that bought a majority stake in Boston Dynamics in 2021, demands a huge manufacturing surge.

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PATENTES

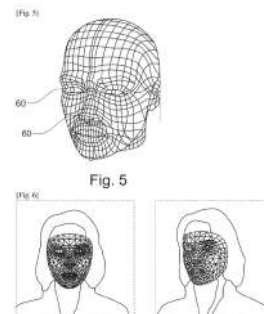
Robotic System For Applying A Product And Learning Method

Publicada en Espacenet, 26/06/2026

Solicitante: OREAL [FR]

A robotic system (1) for applying a product to a part of the human body, notably a face, comprising: - a robotic arm (10), - an applicator (11) mounted at the end of the arm, - at least one force sensor for measuring the force exerted by the applicator (11) during the application, - at least one optical sensor (13), - an arm control system

Ver más..



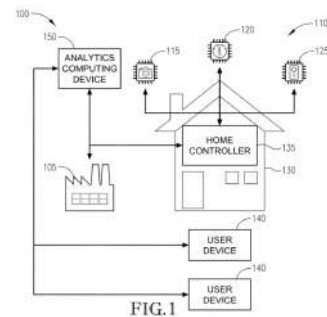
Artificial Intelligence-Based Systems And Methods For Smart Home Related Data Predictions And Recommendations

Publicada en Espacenet, 25/06/2026

Solicitante: STATE FARM MUTUAL AUTOMOBILE INSURANCE CO [US]

A computer system may be programmed to: (1) receive a first home inspection report associated with a first home; (2) extract, using an artificial intelligence model, home data from the first home inspection report, the artificial intelligence model including extraction tools and trained

[Ver más..](#)



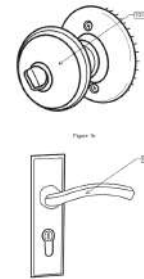
Systems And Methods For Secure Exchange Of Goods, Intelligent Monitoring, And Remote Control Of Package Receptacles And Surroundings

Publicada en Espacenet, 25/06/2026

Solicitante: DOORBOX CORP [US]

An intelligent, standalone, and modular secure parcel management platform integrates Internet of Things (IoT) architecture with artificial intelligence (AI) and machine learning (ML) to autonomously receive, authenticate, monitor, and secure delivery, return, and exchange of parcels.

[Ver más..](#)



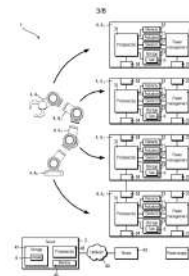
Module for a Modular Robot

Publicada en Espacenet, 24/06/2026

Solicitante: ADAPTIVE MACHINE PATTERNS LTD [GB]

A module 4 for a modular robot is configured to store a digital twin 5 of the module 4 and, in response to determining that the module 4 has been connected to another module 4, to transmit at least part of the digital twin 5 to the other module 4. the digital twin 5 may include a three-dimensional model of the module 4, a set of physical simulation parameters and an application programming interface including an interface for controlling the module 4

[Ver más..](#)



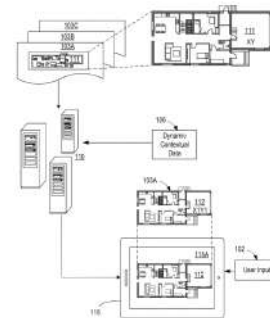
Agentic AI-based systems and methods for context-aware building construction and maintenance management

Publicada en Espacenet, 23/06/2026

Solicitante: TOGAL AI INC [US]; TOGAL AL INC [US]

Methods, systems, and apparatus for intelligent planning, monitoring, and management of building construction or maintenance projects using Agentic artificial intelligence (AI). A controller operating an AI agent receives a design plan including a spatial layout and building elements, and converts it into a dynamic interactive model comprising interactive components.

[Ver más..](#)



Omconsole: Multi-Sensory Interactive Console with Predictive Training Model for Gaming, Home Automation, and Robotics

Publicada en Espacenet, 21/06/2026

Solicitante: CHADHAINES [CA]

The Omconsole is a cutting-edge, multi-sensory control system designed to integrate electromyography (EMG), electroencephalography (EEG), retina tracking, gesture recognition, and body movement detection into a unified adaptive platform. By leveraging a predictive training model powered by machine learning

Ver más..

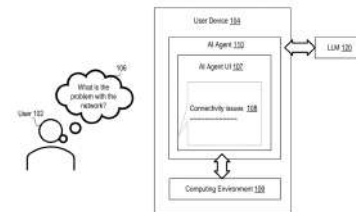
Systems And Methods For Artificial Intelligence Agents For Factual Consistent Generation

Publicada en Espacenet, 18/06/2026

Solicitante: SALESFORCE INC [US]

Embodiments described herein provide a method for enhancing factual consistency of an artificial intelligence (AI) agent. The method includes obtaining a first dataset of documents and corresponding seed summaries; generating, by a first neural network based language model, inconsistent summaries by replacing texts in one or more seed summaries

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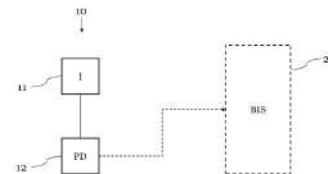
System And Method For Commissioning A Building Infrastructure System

Publicada en Espacenet, 17/06/2026

Solicitante: TRIDONIC GMBH & CO KG [AT]

A system (10) for commissioning a building infrastructure system (20) is provided. Said system (10) comprises an input interface (11) for inputting information and/or commissioning-associated data with respect to the building infrastructure system (20), and a processing device (12) configured to provide commissioning parameters for the building infrastructure system (20).

[Ver más..](#)



Artificial Intelligence (AI) for Prediction and/or Prevention of Home Loss and/or Damage

Publicada en Espacenet, 11/06/2026

Solicitante: STATE FARM MUTUAL AUTOMOBILE INSURANCE CO [US]

The following relates generally to creating customized training datasets for improved training of artificial intelligence (AI) and/or machine learning (ML) models, particularly in the insurance industry. In some embodiments, one or more processors are configured to: (1) construct a customized training dataset; (2) train the ML model

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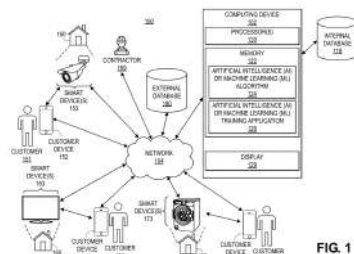


FIG. 1

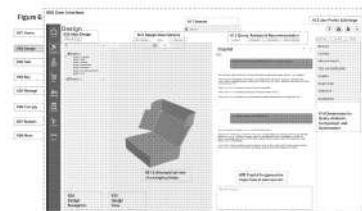
Methods And Apparatus For Artificial Intelligence Based Learning And Prediction For Packaging

Publicada en Espacenet, 11/06/2026

Solicitante: PLASTIC FREE FUTURE INC [US]

A computer-implemented system and method for analyzing, optimizing, and managing packaging designs are disclosed. The system includes databases for packaging designs, materials, regulatory requirements, testing results, suppliers, and supply chain risks. A digital twin module models lifecycle and performance characteristics of packaging. A machine learning engine evaluates designs using performance metrics

[Ver más..](#)



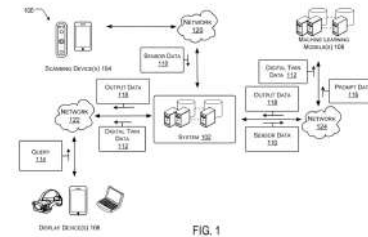
Methods And System For Facilitating User Interactions With A Digital Twin Of A Physical Environment

Publicada en Espacenet, 4/06/2026

Solicitante: OCCIPITAL INC [US]

The present disclosure provides methods and systems for facilitating user interactions with a digital twin of a physical environment. The system receives sensor data and generates a three-dimensional model of the physical environment. The system generates text-based descriptors of the physical environment and objects based on the three-dimensional model.

[Ver más..](#)

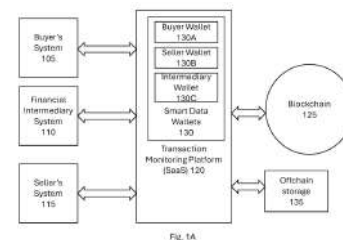


System Of Long-Term Blockchain-Based Financialtransactions Management Using Machine-Learning

Publicada en Espacenet, 1/06/2026

Solicitante: HOMEPAY LTD

A system of blockchain-based tracking of a financial transaction, comprising a processing circuitry (PC) configured to: receive text of a financial transaction agreement (FTA); utilize a large language model (LLM) in conjunction with the received text to generate data indicative of a transaction map (TM), where the TM comprises: two or more blockchain addresses associated with respective parties of the financial transaction



[Ver más..](#)

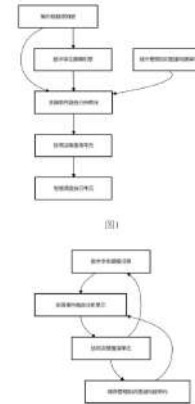
Intelligent city management AI collaborative decision-making system based on digital twinborn and knowledge graph

Publicada en Espacenet, 29/05/2026

Solicitante: ZHEJIANG COLLEGE OF CONSTRUCTION

The invention relates to the technical field of smart cities and artificial intelligence, in particular to a smart city management AI collaborative decision-making system based on digital twinning and a knowledge graph, and aims to solve the problem that a traditional city management system lacks dynamic perception

[Ver más..](#)



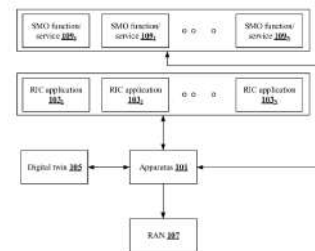
Conflict Mitigation Using Digital Twin

Publicada en Espacenet, 28/05/2026

Solicitante: RAKUTEN SYMPHONY INC [JP]; RAKUTEN SYMPHONY USA LLC [US]

Embodiments of present disclosure disclose conflict mitigation using digital twin. The method comprises receiving network management configurations to be implemented in Radio Access Network (RAN), from at least one of, RAN Intelligent Controller (RIC) applications and Service Management and Orchestration (SMO) functions; transmitting network management configurations

[Ver más..](#)



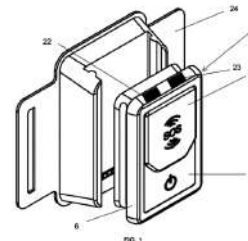
Scalable Realtime Mesh Network With Universal Artificial Intelligence Safety Devices

Publicada en Espacenet, 28/05/2026

Solicitante: HALOTECH DIGITAL SERVICES S L [ES]

A safety monitoring AI system comprising interconnected safety AI wearable devices and a remote monitoring AI server to handle real-time data prioritizing urgent safety signals to optimize response time, wherein the safety wearable devices comprise multiple sensors (GPS, temperature, heart rate, humidity, VOC etc), advanced communication capabilities (LTE 4G, NB-IoT, LTE-M, NTN)

[Ver más..](#)



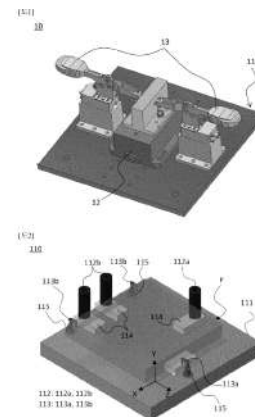
Smart Jig For Implementing Super Connection Manufacturing Platform And Component Processing Monitoring System Using Same

Publicada en Espacenet, 28/05/2026

Solicitante: KOREA INST OF INDUSTRIAL TECHNOLOGY [KR]

According to the present invention, disclosed are a smart jig for a smart factory, a processing system having same, and a method therefor. The smart jig according to the present invention comprises: a jig plate supporting a workpiece; at least one fixing part located on the jig plate and fixing the workpiece

[Ver más..](#)

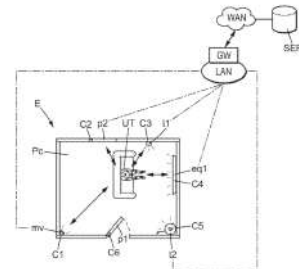


Method for non-intrusively analyzing human activity in a connected environment

Publicada en Espacenet, 28/05/2026

Solicitante: ORANGE [FR]

A method for determining a human activity in a real environment including at least one usage sensor for at least one device of the environment. The method includes learning by an artificial intelligence and an inference by the artificial intelligence to determine the human activity in the environment. For the learning by the artificial intelligence



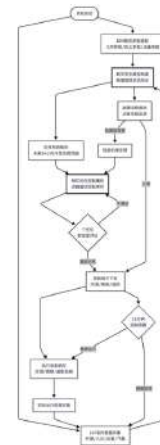
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Intelligent building energy consumption optimization and comfort level control system based on BIM-IoT fusion

Publicada en Espacenet, 26/05/2026

Solicitante: JIANGSU HOPERUN SOFTWARE CO LTD

The invention discloses an intelligent building energy consumption optimization and comfort control system based on BIM-IoT fusion. The intelligent building energy consumption optimization and comfort control system comprises a BIM-IoT fusion digital twin module; a load prediction module based on a thermodynamic model



[Ver más..](#)

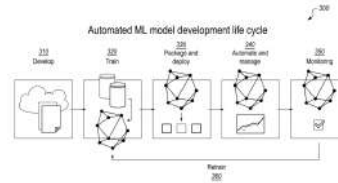
Unified Iot Edge Framework For Lifecycle Management Of Artificial Intelligence Solutions Across Multiple Iot Edge Devices

Publicada en Espacenet, 21/05/2026

Solicitante: ZEDEDA INC [US]

A computer-implemented method may be used to implement artificial intelligence (AI) over an Internet of Things (IoT) Edge Network. The method may include, at one or more storage devices, storing an AI model. The method may further include, at one or more hardware processing devices, using the AI model to develop an AI Edge Solution

[Ver más..](#)



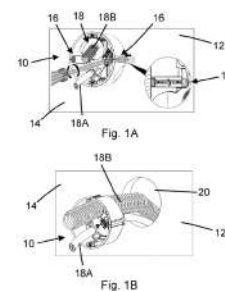
Electrical Socket, Fixing Element, Device, Tool, Handling Robot, Method For Assembling A Device, And Table

Publicada en Espacenet, 21/05/2026

Solicitante: GROPYUS AG [AT]

The invention relates to an electrical socket (30), which is designed to be fastened to a panel (31). The panel (31) is designed to be mounted as part of a wall (32) and/or a ceiling (32) of a room (37) of a building. The panel (31) has, based on a mounted state of the panel (31), an inner side (33), which faces the room (37), and an outer side (34), which faces away from the room (37).

[Ver más..](#)



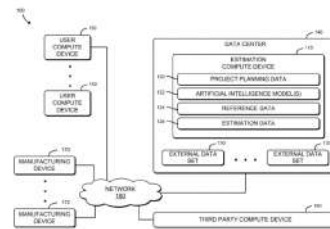
Artificial Intelligence Technologies For Estimating Costs In Building Construction

Publicada en Espacenet, 21/05/2026

Solicitante: MITEK HOLDINGS INC [US]

Technologies for estimating costs in building construction with artificial intelligence include a system configured to obtain project planning data indicative of a planned construction of a building, perform one or more preprocessing operations on the obtained project planning data to prepare a feature vector usable by a set of artificial intelligence models to produce a prediction

[Ver más..](#)



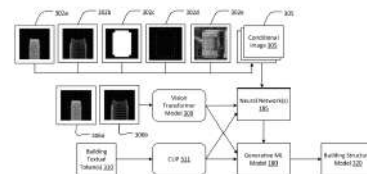
Techniques For Automating Building Material Audits Based On Imagery And Building Metadata

Publicada en Espacenet, 21/05/2026

Solicitante: AUTODESK INC [US]

In various embodiments, a computer-implemented method for determining compositions of buildings includes receiving a plurality of building images associated with a building, generating a conditional image based on the plurality of building images, generating a plurality of tokens characterizing the building

[Ver más..](#)

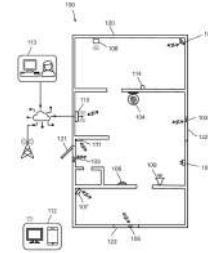


Improved Security Monitoring and Smart-Home System

Publicada en Espacenet, 20/05/2026

Solicitante: VERISURE SARL [CH]

There is provided a smart-home system for installation in a premises, the smart home system comprising: one or more smart devices, and an electrical discharge detector configured to detect electrical discharges in electrical wiring of the premises.



[Ver más..](#)

Adaptive process for multi-industry document analysis, data extraction, and blockchain tokenized asset tracking

Publicada en Espacenet, 19/05/2026

Solicitante: DATASTRAX INC [US]

Embodiments of systems and methods of this disclosure provide a multi-tenant user interface for uploading a variety of different documents over a network to a content server; analyze the uploaded documents on the content server using an AI-powered document analysis engine to identify, for each document, a document type and industry

[illegible]

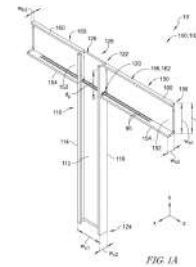
Prefabrication Smart Self-Storage Facility

Publicada en Espacenet, 14/05/2026

Solicitante: JANUS INT GROUP LLC [US]

The invention relates to the technical field of artificial intelligence, and discloses a flowmeter predictive maintenance method and system based on artificial intelligence, and the method comprises the steps: firstly carrying out the learning of multi-dimensional operation parameters through an artificial intelligence model

[Ver más..](#)



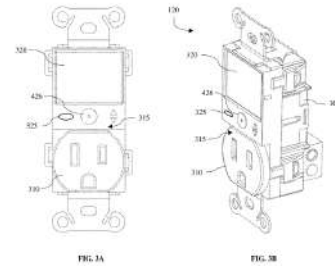
Smart Fixture System With Integrated Sensors For Contextual Monitoring, Interactive Response, And Environmental Control, And Methods For Operation

Publicada en Espacenet, 7/05/2026

Solicitante: ARQAIOS INC [US]

A method for operating a plurality of smart fixtures is disclosed. The smart fixtures are integrated into elements of a building infrastructure such as power receptacles, light switches, and vents, and are configured to monitor environmental conditions using embedded sensors. The method includes capturing environmental and identification data

[Ver más..](#)



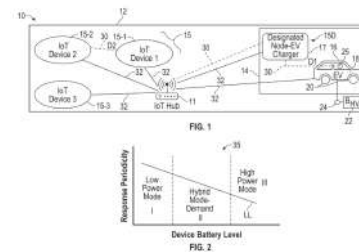
Method For Managing Smart Internet Of Things Hub And Node Interactions

Publicada en Espacenet, 7/05/2026

Solicitante: GM GLOBAL TECH OPERATIONS LLC [US]

A method for managing communication between Internet-of-Things (IoT) nodes in an IoT environment having an IoT hub includes using a service-requesting, high power initiator node to identify a candidate smart device among the nodes.

[Ver más..](#)



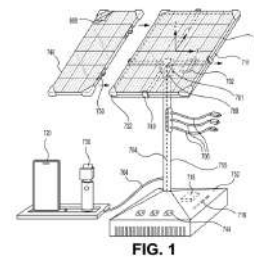
Solar-Powered Portable Electronic Systems With Integrated, Articulated, And Dock-Based Energy Management Architectures

Publicada en Espacenet, 7/05/2026

Solicitante: BRENNER PATRICK [US]

A modular solar-powered energy system for various electronic devices is disclosed. The system includes detachable solar panels, compact energy storage modules, articulated deployment mechanisms, and intelligent charge management circuitry. It enables complete or partial device operation from ambient light, reducing dependence on wired power.

[Ver más..](#)



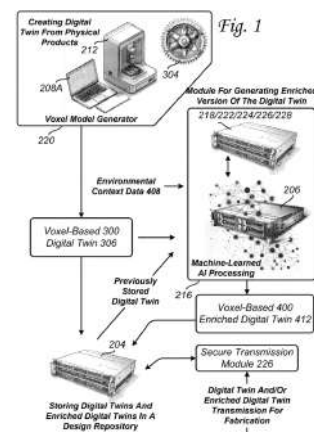
Adaptive object fabrication using enriched voxel-based digital twins and AI-guided material substitution

Publicada en Espacenet, 5/05/2026

Solicitante: SGM INFOTECH LLC [US]

The present invention relates to adaptive object fabrication using enriched digital twins that incorporate voxel-based metadata tailored to environmental conditions and material performance. A machine-learned artificial intelligence (AI) engine selects substitute materials and predicts failure modes based on environmental context data, such as temperature, vibration, and chemical exposure.

[Ver más..](#)



WIP: Software Engineering Competencies in the Age of AI

A university education is meant to fully prepare graduates to enter and succeed in the workforce in their field. Accreditation bodies and professional organizations help to achieve this by publishing curriculum content, skills and competency models to outline the basics that universities must teach within a degree program.

Company	Yes (%)	No (%)	Not disclosed (%)
Japan Logistics Fund, Inc.	100	0	0
OSE Logistics REIT, Inc.	100	0	0
Mitsui Estate Logistics REIT Investment Corporation	100	0	0
Mitsui Park Real Estate Logistics Park Inc.	100	0	0
Lufthansa LOGOPORT REIT	100	0	0
Nippon Property REIT, Inc.	100	0	0
QIP J-REIT	100	0	0
Industrial & Infrastructure Fund Investment Corporation	100	0	0
BOSU Logistics REIT, Inc.	100	0	0

Legend: ■ Yes ■ No ■ Not disclosed

X-axis: 0% 10% 20% 30% 40% 50% 60% 70% 80% 90% 100%

Legend: ■ DELIST ■ C-ESG ■ ESG

Quality control in industrial assembly is essential, and real-time monitoring of the assembly process is crucial for preventing costly defects and ensuring production reliability. Vision-based automated inspection offers a powerful solution for such real-time monitoring.

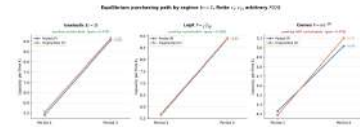
Figure 1 illustrates the proposed framework. It begins with an **Assembly Description**, which informs both a **Physics Simulation** and the selection of **CAD Models with Materials**. The **Physics Simulation** generates **Motion Sequences**, which are then rendered into **Photo-realism**. Simultaneously, the **CAD Models with Materials** are processed for **3D Reconstruction**. The combination of **Photo-realism** and **3D Reconstruction** results in **Reconstructed Images**. These images are used to create a **Real-time Assembly Video**. This video is then analyzed for **Object Detection**, which produces **Detected Object Bounding Boxes**. These boxes are mapped to **Production Lines**, which then generate **Object Bounding Box Labels**. These labels are fed back into the **Photo-realism** stage to refine the simulation. A legend indicates that solid lines represent the **Training** phase and dashed lines represent the **Testing** phase.

Data Sharing and Competition in Learning-by-Deploying Industries: Insights from Robotics and Beyond

Publicada en arxiv.org, 30/06/2026

Many modern technologies improve through use. Each unit deployed generates data that trains the next generation, so deployment is both production and an investment in a shared learning stock. We study how the architecture of this learning, whether pooled across firms or fragmented within them, interacts with firms' deployment decisions and with product-market competition.

[Ver más..](#)



Configured Grant Scheduling for the Support of TSN Traffic in 5G and Beyond Industrial Networks

Publicada en arxiv.org, 30/06/2026

5G and beyond networks can facilitate the digital transformation of manufacturing and support more flexible and reconfigurable factories with ubiquitous mobile connectivity. This requires integrating 5G networks with industrial networks that increasingly rely on TSN (Time Sensitive Networking) to support deterministic communications with bounded latencies. Deterministic communications are critical for many industrial applications

[Ver más..](#)



Fig. 1. Scheduling conflict between two TSN flows with different periodicities.

Embodied CAD: Solver-Grounded LLM Agents for Parametric B-Rep Assembly Modeling

Publicada en arxiv.org, 30/06/2026

Large language models can write plausible CAD scripts, but reliable industrial CAD modeling requires more than syntactically valid code: every feature, placement, and assembly relation must be accepted by an exact geometric kernel while remaining editable as parametric boundary representation geometry. We present Embodied CAD, solver-grounded LLM agents for parametric B-Rep assembly modeling.

[Ver más...](#)

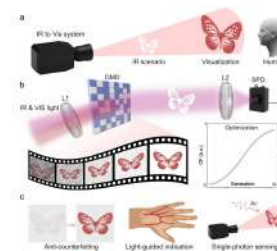


Ultrasensitive infrared-to-visible artificial vision via self-evolving projection guided by single-pixel detection

Publicada en arxiv.org, 29/06/2026

Infrared detection and visualization are essential for augmenting human perception across diverse fields, ranging from night vision to industrial inspection and bio-imaging. Conventional infrared cameras are often hindered by high cost, bulky architecture, and complex fabrication requirements. Upconversion sensing systems offer a pixel-free and cost-effective alternative solution by upconverting infrared photons into visible-light signals.

[Ver más..](#)

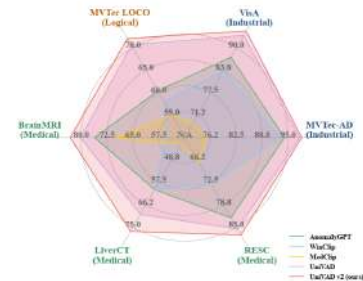


UniVAD v2: Unified Visual Anomaly Detection via Support-Conditioned Boundary Construction

Publicada en arxiv.org, 29/06/2026

Unified visual anomaly detection seeks to train a single detector that can be deployed across categories, domains, and application scenarios. In the few-shot transfer regime, the key challenge is to estimate an episode-specific boundary for an unseen target category from a small support set. Existing approaches mainly infer this boundary from normal-side evidence and provide limited abnormal-side evidence for deployment-specific tolerance.

[Ver más..](#)

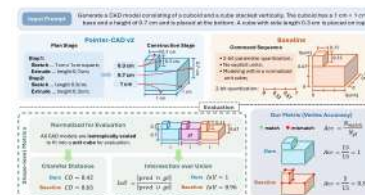


Pointer-CAD v2: Plan-Then-Construct CAD Generation with Dimension-Aware Parametric Precision

Publicada en arxiv.org, 28/06/2026

Computer-aided design (CAD) plays a fundamental role in modern manufacturing by providing the high precision required for industrial production. Recent large language model based approaches formulate CAD generation as a sequence prediction problem and have achieved promising results.

[Ver más..](#)



DBpedia-Enriched Company Representation for B2B Lead Recommendation

Publicada en arxiv.org, 8/06/2026

Selecting which companies to approach is a central challenge in business-to-business (B2B) sales, where decisions are often based on manual research and fragmented information sources. Modern B2B sales platforms centralize company records and use learned company embeddings to support tasks such as recommending and prioritizing potential clients.

[Ver más..](#)

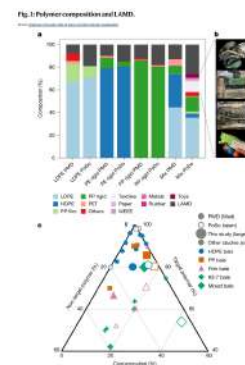


Analysis of trade-offs of post-sorting plastic packaging

Publicada en nature.com, 3/06/2026

Increasing recycling rates requires not only better technologies but also smarter collection of plastic packaging waste¹. Source separation—sorting materials such as plastics and metals at the household level—captures substantial waste volumes

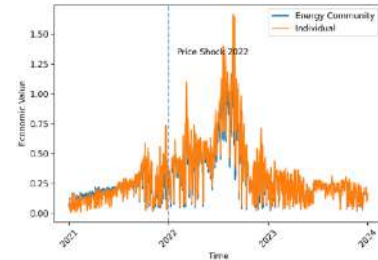
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From Price Shocks to Stability: The Role of Energy Communities in Electricity Market Volatility and Uncertainty

Publicada en mdpi.co, 3/06/2026

Renewable energy communities (RECs) are increasingly recognized as a strategic instrument for enhancing the sustainability and resilience of energy systems, promoting local renewable integration, and reducing consumer exposure to electricity market volatility. This study analyzes the Italian electricity market and assesses the economic performance of RECs relative to individual consumers using high-frequency hourly data from 2021 to 2023



[Ver más..](#)

Dynamic Coordination Strategy Selection for Enterprise Multi-Agent Systems

Publicada en arxiv.org, 30/05/2026

Enterprise multi-agent systems increasingly expose multiple coordination patterns, but deployments often lack evidence for when to use consensus, debate, synthesis, or a simpler single-agent workflow. This paper evaluates whether coordination strategy should be selected dynamically by problem class rather than fixed globally. We run a frozen matrix of 30 enterprise tasks spanning six industries

[Ver más..](#)

Ladder Logic Translation using Large Language Models in Industrial Automations

Publicada en arxiv.org, 29/05/2026

Ladder logic translation is an important problem in industrial automation because without it, it is difficult to switch Programmable Logic Controller (PLC) vendors. The prevailing translation problem highlights mismatched programming environments, incompatible ladder logic constructs

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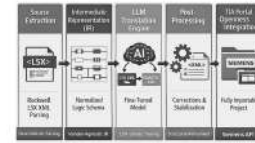


Fig. 1: L5X-to-SimaticXML translation pipeline

Current Practices in Electricity Demand and Charging Scheduling for On-Road Electric Fleet Operations: An Industry-Wide Review

Publicada en arxiv.org, 29/05/2026

The electrification of on-road fleet logistics promises improved air quality, lower noise emissions, major climate benefits, increased energy flexibility through the use of locally generated electricity and reduced dependence on imported fuels. However, battery electric vehicles can introduce operational planning challenges not present with internal combustion engine vehicles

[Ver más..](#)

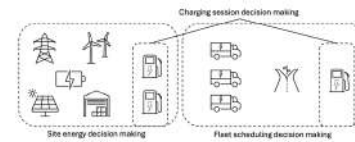


Figure 1: Operational decision levels in electric fleet management

The Challenges of Using Reinforcement Learning for Controlling Industrial Energy Systems

Publicada en arxiv.org, 29/05/2026

Reinforcement learning has shown promising results for optimizing the control of industrial energy systems, yet most existing studies remain limited to the application in simulation environments. We investigate the challenges of deploying reinforcement learning in a real-world industrial energy system, considering a thermal heating network as a use case.

[Ver más..](#)

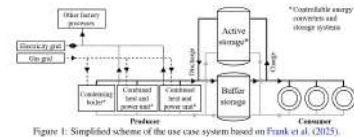


Figure 1: Simplified scheme of the use case system based on Frank et al. (2025).

Scheduling Mechanisms in Wireless Sensor-Actuator Networks for Multi-rate Periodic Control in Industry 4.0

Publicada en arxiv.org, 28/05/2026

This paper investigates scheduling strategies for wireless sensor-actuator networks (WSANs) in Industry 4.0 scenarios. In particular, we address the problem of real-time scheduling for multi-rate control systems by proposing a novel framework.

[Ver más..](#)



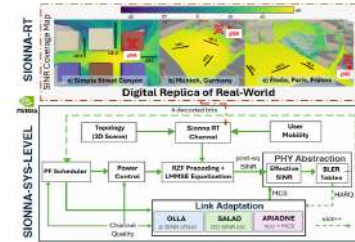
Fig. 1: WSAN consisting of one controller and multiple sensors, actuators, and relays.

ARIADNE: AI-RAN Informed Link Adaptation in Digital Twin Network Environments

Publicada en arxiv.org, 29/05/2026

Artificial Intelligence (AI)-powered Radio Access Network (RAN) networks have attracted significant attention from both industry and academia. Meanwhile, Digital Twins offer a safe playground for experimenting with AI/Machine Learning (ML)-based solutions for advanced AI-RAN research.

[Ver más..](#)



What China's rise in chemistry means for the rest of the world

Publicada en nature.com, 20/05/2026

China's performance as the leading country for chemistry research in the Nature Index is remarkable. Since 2015, it has increased its output in the subject by almost 350%, reaching a Share of more than 19,500 in the latest data, a contribution that is higher than all other top 50 countries combined.

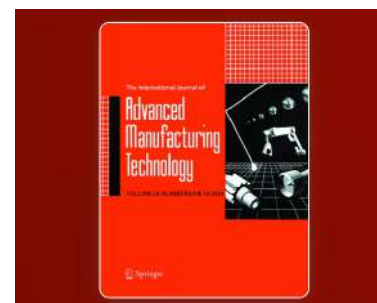
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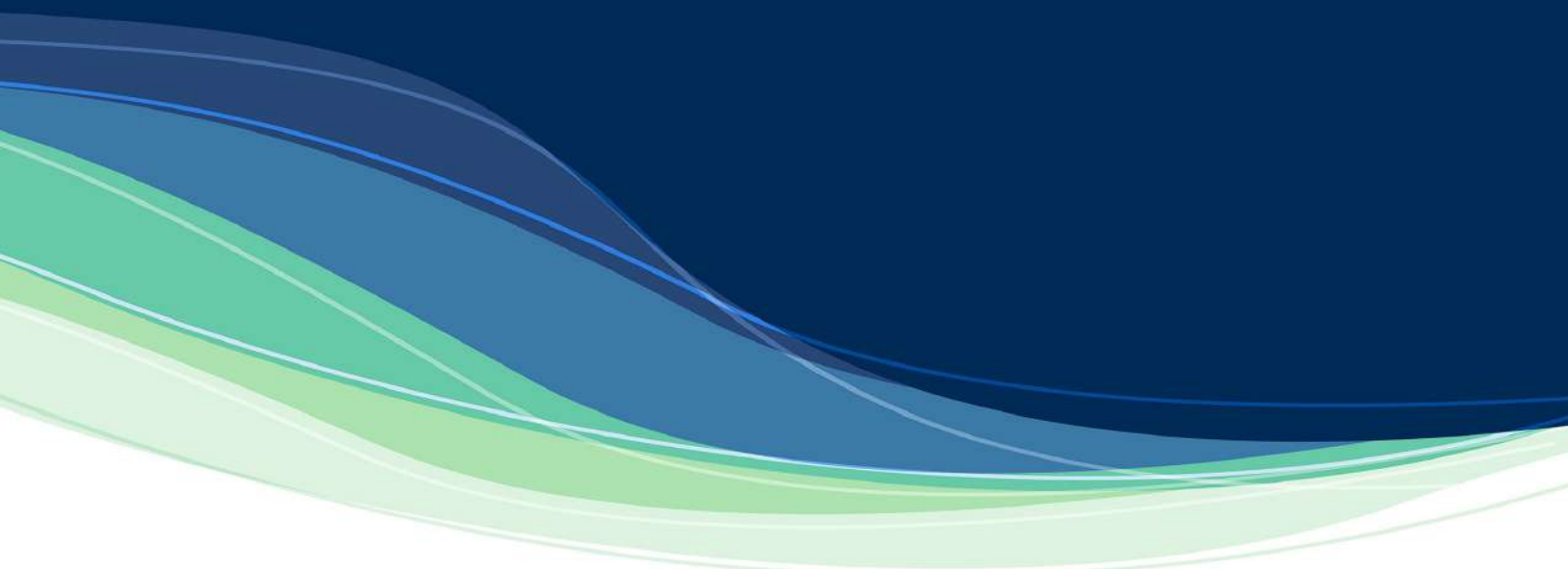
Artificial intelligence in additive Manufacturing: advances in smart materials, lattice optimization, and process intelligence

Publicada en link.springer.com, 18/04/2026

Artificial intelligence (AI) and additive manufacturing (AM) have propelled the next wave of technological innovation by integrating data-driven intelligence with design freedom, thereby enabling adaptive, efficient, and multifunctional systems. This review highlights the transformative role of AI and machine learning (ML) in addressing the key challenges associated with process complexity, parameter tuning, and multifunctional design in AM.

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