

Rise of the Machines: Deep Research on the Most Important Work and Breakthroughs in AI Robotics from the Past 7 Days

Introduction

The past seven days represent a watershed moment for the field of humanoid robotics, marking a transition from siloed advancements to a synchronized, full-stack technological leap. A confluence of breakthroughs—in on-device supercomputing, unified AI control models, sensory perception, and ecosystem maturation—collectively signal the dawn of commercially viable, general-purpose humanoids powered by what is increasingly termed Physical AI. This report will analyze these developments not as isolated events, but as a tightly coupled narrative. A powerful new "brain" in the form of NVIDIA's Jetson Thor compute module has been released; a revolutionary "mind" built on Large Behavior Models (LBMs) has been demonstrated running on it by Boston Dynamics and Toyota Research Institute (TRI); a robust "nervous system" of essential control components has been engineered by Infineon to support it; and a more advanced "skin" is being developed by researchers at JAIST to interface it with the world. This convergence resolves critical bottlenecks that have historically constrained the industry. This analysis will deconstruct these foundational technologies, examine their real-world demonstrations, explore the challenges of AI integration, contextualize them within the competitive ecosystem, and provide a strategic assessment of their future applications and implications.

Major Breakthroughs

The core technological announcements of the week represent fundamental shifts in the hardware, software, and sensory capabilities that underpin the next generation of humanoid

robots. Each breakthrough addresses a long-standing barrier to creating autonomous, general-purpose machines that can operate in human environments.

NVIDIA Jetson Thor: A Supercomputer for Physical AI

The general availability of the NVIDIA Jetson AGX Thor marks the arrival of a server-class computer in a mobile power envelope, purpose-built for the demands of Physical AI.¹ Its technical specifications represent a step-change in performance for edge computing. Built on the NVIDIA Blackwell GPU architecture, Thor delivers up to 2,070 FP4 teraflops of AI compute, a 7.5x increase over its predecessor, Jetson Orin. This is coupled with 128GB of high-bandwidth memory and a 3.5x increase in energy efficiency, all operating within a 130-watt power envelope—a critical consideration for battery-powered mobile robots.¹

The platform's significance is validated by its immediate and widespread adoption by a roster of industry leaders. Agility Robotics, Boston Dynamics, Figure AI, Amazon Robotics, and Meta have been announced as early adopters, with OpenAI also reportedly evaluating the technology.¹ This broad endorsement from the most advanced robotics companies underscores that Jetson Thor is not an incremental upgrade; it is a strategic platform designed to shift the computational center of gravity for robotics from the cloud to the edge.

Historically, edge computers could handle perception tasks like object recognition, but the complex reasoning and planning layers of AI often had to be offloaded to cloud servers. This approach introduces network latency, a factor that is unacceptable for robots physically interacting with dynamic, unpredictable human environments where a split-second delay can be catastrophic. Jetson Thor's massive compute capability, specifically its FP4 performance and integrated Transformer Engine, is explicitly designed to run large generative AI models—including Large Language Models (LLMs), Vision Language Models (VLMs), and Vision Language Action (VLA) models—directly on the robot.² This capability for on-device, real-time reasoning enables true autonomy, transforming robots from remotely guided platforms into intelligent agents that perceive, reason, and act in the physical world.

Boston Dynamics & TRI: The Large Behavior Model Paradigm

Concurrent with the hardware revolution, Boston Dynamics and Toyota Research Institute (TRI) unveiled a joint research demonstration showcasing a Large Behavior Model (LBM) powering the Atlas humanoid. This represents a fundamental departure from traditional

robotics control methodologies.⁹ The model is a 450-million-parameter Diffusion Transformer-based architecture, trained with a flow-matching objective, that applies the principles of generative AI to physical action.¹¹

The paradigm shift lies in its architecture: the LBM is a single neural network with direct, end-to-end control over the entire robot. It treats locomotion (controlling the feet) and manipulation (controlling the hands) as a unified problem, rather than separate domains.⁹ This contrasts sharply with legacy systems that rely on a patchwork of separate, hand-coded controllers for balancing, walking, and arm movement, which are notoriously difficult to integrate and maintain. The model is trained on embodied behavior data collected via a sophisticated teleoperation system that uses a VR interface, allowing human operators to perform complex, whole-body tasks that are then used as training examples.¹¹ This "learning from demonstration" approach drastically accelerates the process of skill acquisition.

This LBM approach fundamentally redefines a "robot skill" from a block of code to a dataset. Traditionally, adding a new capability to a robot like Atlas required months of work by highly specialized engineers writing and debugging complex control algorithms.⁹ The LBM allows new skills to be added "without writing a single new line of code".⁹ Instead, developers "teach" the robot by demonstrating the new skill. This shifts the core competency from low-level control programming to high-level data collection, curation, and model training. By training a single model on a vast and diverse dataset of tasks, the model begins to generalize, learning underlying physical principles that can be applied to novel situations it was not explicitly trained for.⁹ This is the necessary path from single-task automation to general-purpose robotics.

JAIST's ProTac: A New Modality in Robotic Touch

Addressing the critical need for better sensory feedback in human-robot interaction, researchers at the Japan Advanced Institute of Science and Technology (JAIST) developed ProTac, a novel soft sensing skin.¹⁵ The sensor is built around a polymer-dispersed liquid crystal (PDLC) layer that can switch between transparent and opaque states when a voltage is applied.¹⁵ This simple but ingenious mechanism enables a single set of embedded cameras to perform two distinct sensing functions. In its transparent state, the cameras can "see through" the skin to detect and estimate the distance to nearby objects, providing proximity sensing before contact is made. In its opaque state, the cameras track the deformation of the skin's surface to sense contact, pressure, and the location of touch with high accuracy.¹⁵

This approach provides rich, multimodal perception across a large surface area without the complex wiring and integration challenges of conventional electronic skins. To accelerate

research in the field, the developers have made the design open-source.¹⁵ ProTac addresses the critical "last inch" problem in human-robot interaction, providing the sensory data needed to bridge the gap between high-level AI reasoning and safe, dexterous physical action. A robot powered by an LBM on Jetson Thor can reason about

what to do (e.g., "pick up the box"), but executing this action safely requires nuanced, real-time feedback. Proximity sensing enables preemptive actions, like slowing down as a human approaches, while tactile feedback is essential for dexterous manipulation of delicate or irregularly shaped objects.¹⁵ Technologies like ProTac are a crucial enabling layer that makes advanced AI models practical and safe for real-world deployment, especially in collaborative and domestic settings.

Demonstrations and Prototypes

The theoretical breakthroughs of the past week were grounded in real-world performance, with demonstrations that both showcased the new state-of-the-art and highlighted the challenges that remain on the frontier of robotics.

Atlas in the Workshop: A Showcase of Learned, Reactive Behavior

The demonstration from Boston Dynamics and TRI featured the Atlas robot performing a sequence of tasks involving packing, sorting, and organizing objects.⁹ The significance was not in the tasks themselves, but in the fluid, whole-body movements—walking, crouching, lifting—that were orchestrated by the single LBM.

The most critical test, however, came when researchers introduced unexpected perturbations. They closed the lid of a box Atlas was working with and slid the box across the floor.⁹ In response, Atlas was able to self-adjust and continue its task without human intervention or reprogramming. This demonstrated a level of robustness and reactive intelligence that is a direct result of the LBM's ability to generalize from its training data, rather than following a rigid, pre-programmed script.¹¹

This demonstration is the first concrete evidence of a humanoid moving beyond "choreographed parkour" to "purposeful work," showcasing the commercial viability of learned behaviors over brittle, hand-coded routines. Previous impressive videos of Atlas focused on dynamic locomotion like running and backflips, which were largely pre-scripted

demonstrations in controlled environments. The new demonstration focuses on a long-horizon, goal-oriented task representative of actual labor. The robot's ability to handle unexpected interruptions is the key differentiator. A scripted robot would fail and require a reset; the LBM-powered Atlas perceived the change, re-evaluated its plan, and generated a new sequence of actions to achieve its original goal. This resilience to real-world unpredictability is the single most important capability for commercial deployment.

The World Humanoid Robot Games: Benchmarking Real-World Dynamics

In contrast to polished corporate demos, China's inaugural World Humanoid Robot Games provided a valuable, unfiltered benchmark of the industry's current capabilities.²⁰ The event, which featured robots from 16 countries, was explicitly designed to trial and refine robotics for real-life settings like factories and homes.²¹

The successes were notable. The victories of Unitree's H1 robot in track and field events, where it won four gold medals including the 400m and 1500m races, highlighted significant progress in stable, dynamic, bipedal locomotion over distance.²⁰ However, the "fails" were equally illuminating. Brutal knockouts in kickboxing and chaotic pile-ups in soccer starkly illustrated the immense difficulty of real-time, dynamic interaction with other moving agents and unpredictable contact forces.²⁰

The Humanoid Games reveal a critical performance gap between autonomous navigation—a largely solved problem—and autonomous physical interaction, a frontier challenge. The track events primarily test a robot's internal model for balance and locomotion in a stable environment. Unitree's success shows this is becoming a mature capability. The kickboxing and soccer events, however, require the robot to perceive, predict, and react to the actions of other dynamic agents in real-time. The widespread failures in these events show that current control systems are not yet robust enough to handle this level of chaotic interaction. This underscores why the Atlas LBM's ability to handle perturbations is such a monumental breakthrough and clarifies where the industry must focus its next wave of innovation.

AI Integration and the Path to Generalization

The deep synergy between new hardware and advanced AI models is accelerating the industry's ultimate goal: creating general-purpose robots that can learn, adapt, and perform a

wide variety of tasks.

Running Foundation Models at the Edge

The architecture of Jetson Thor is purpose-built to run the transformer-based models that are revolutionizing AI. The Blackwell GPU's native support for FP4 quantization and its next-generation Transformer Engine are designed to accelerate the specific mathematical operations central to models like the Diffusion Transformer used in the Atlas LBM, allowing for faster inference while maintaining accuracy.⁸ Furthermore, Thor's Multi-Instance GPU (MIG) capability allows the GPU to be partitioned into isolated instances. This is critical for robotics, where a high-priority, low-latency control loop must run without being interrupted by less time-sensitive tasks like high-level planning or natural language interaction.⁸ The platform is designed to handle multiple generative AI models and a large number of sensor inputs simultaneously, which is essential for a robot that needs to see, hear, and feel its environment to make intelligent decisions.⁵

These architectural features indicate a strategic bet by NVIDIA that the future of robotics is not just AI-powered, but specifically *transformer-powered*, aligning the hardware roadmap directly with the dominant AI paradigm. Rather than focusing only on raw compute power, NVIDIA has invested in features that provide outsized performance gains for transformer models. The success of the Atlas LBM, a Diffusion *Transformer*, validates these architectural choices. This creates a powerful feedback loop: as more developers build transformer-based robot brains to leverage Thor's capabilities, the platform becomes the de facto industry standard, solidifying NVIDIA's market position.

From Brittle Scripts to Robust Skills: The New Development Workflow

The LBM approach fundamentally changes how robots are "programmed." New skills are taught through demonstration, and robustness is improved by adding data of the robot recovering from failures, a process that is radically faster and more scalable than manual coding.¹¹ Foundational research from TRI shows that LBMs, when pre-trained on large, diverse datasets, can learn new tasks with three to five times less task-specific data.²⁴ This is a crucial finding, as high-quality robot data is scarce and expensive to collect. The ability to pool data from different platforms—such as the full Atlas and the upper-body-only Atlas MTS—to train a single policy further demonstrates that learned skills can be transferred, increasing data

efficiency.¹¹

This shift to a data-driven development model creates a "data flywheel" effect. In the old paradigm, the best robotics company was the one with the best control engineers. In the new LBM paradigm, the best company will be the one with the best data. As companies like Boston Dynamics, Agility, and Figure deploy their robots, these machines will constantly collect data on physical interactions. This data will be used to continuously retrain and improve their central LBMs, making the robots more capable and able to handle more complex tasks. This increased capability allows them to be deployed in more varied environments, which in turn generates even more diverse data. This virtuous cycle means the current race to deploy humanoids is not just about near-term revenue; it is a strategic race to build the foundational datasets that will power the next generation of Physical AI, creating a formidable competitive moat that will be difficult for latecomers to overcome.

Comparative Advances and Ecosystem Maturation

The week's breakthroughs must be contextualized within the broader competitive landscape and the maturation of the industrial ecosystem required to support the humanoid market at scale.

Comparative Analysis of Leading Humanoid Platforms

The following table provides a strategic snapshot of key players and their technological alignment, highlighting a clear trend of major Western companies coalescing around the NVIDIA Jetson Thor platform. This signals the formation of a powerful technology ecosystem, contrasting with more vertically integrated competitors.

Platform	Key Developer(s)	Onboard Compute (Announced/Used)	AI/Control Model	Noteworthy Recent Development (Last 7 Days)	Strategic Implication
Atlas	Boston	NVIDIA	Large	Demonstrat	Technology

	Dynamics / TRI	Jetson Thor ¹	Behavior Model (LBM) ⁹	ed whole-body manipulation & reactive behavior via single LBM.	leader; validating the LBM-on-Thor paradigm.
Digit	Agility Robotics	NVIDIA Jetson Thor (Planned for Gen 6) ¹	Policy/Reasoning Models	Announced as early adopter of Jetson Thor for advanced perception.	Commercially-focused leader betting on the NVIDIA ecosystem for next-gen capabilities.
Figure 02	Figure AI	NVIDIA Jetson Thor ⁴	Generative AI Models	Announced as early adopter of Jetson Thor.	Well-funded contender aligning with the dominant hardware platform to accelerate development.
Unitree H1	Unitree Robotics	N/A in sources	Proprietary	Won multiple gold medals at World Humanoid Robot Games. ²⁰	Vertically integrated competitor from China demonstrating strong performance in dynamic locomotion.

The NVIDIA-Infineon Alliance: De-Risking the Hardware Stack for Mass Production

A crucial development for the industrialization of humanoids is the strategic collaboration between Infineon Technologies and NVIDIA.²⁸ This partnership combines NVIDIA's strength in high-level compute (the "brain") with Infineon's deep expertise in the critical components that translate computation into physical motion—the "nervous system" and "muscles." Infineon's portfolio includes PSoC™ and AURIX™ microcontrollers for secure, real-time motor control; Gallium Nitride (GaN) transistors for high-density, energy-efficient motor drivers; and a suite of sensors and gate drivers that provide the feedback and control necessary for precise movement.²⁹

This alliance is a significant step toward mass production. Building a humanoid requires dozens of highly reliable motors, controllers, and power systems that must be perfectly integrated. For any single company, sourcing and integrating these disparate components is a massive engineering challenge and a significant barrier to entry. The partnership effectively creates a "reference platform" or a turnkey solution for the robotics industry.²⁸ Robot manufacturers can now source a pre-validated, optimized package of compute and control hardware, abstracting away low-level integration challenges. This is a classic pattern in maturing technology industries that commoditizes the underlying hardware layer, reduces R&D costs for OEMs, and accelerates time-to-market. The alliance signals the maturation of the supply chain, an essential precondition for the humanoid market to grow from dozens of prototypes to thousands of commercial units.

Applications and Implications

The synthesis of these advancements provides a clearer, more credible roadmap for the commercial deployment of humanoid robots and foreshadows a new era of human-robot interaction.

Accelerating the Commercial Roadmap

The breakthroughs of the past week collectively address key blockers that have hindered the commercialization of humanoid robots.³³ The intelligence barrier is being overcome by LBMs, which provide a scalable path to teaching robots complex tasks relevant to logistics (picking, packing) and manufacturing (assembly).³⁵ The hardware barrier is being lowered by Jetson Thor, which provides the necessary on-device compute, and the Infineon partnership, which simplifies the supply chain and reduces the cost of building production-grade robots.³³ Finally, the safety and interaction barrier is being addressed by advanced sensory technologies like ProTac, which provide the awareness needed for robots to operate effectively alongside humans.¹⁵ This confluence of solutions lends significant credibility to aggressive market growth forecasts, which project the humanoid market to reach tens of billions of dollars by 2035 and potentially trillions by 2050.³⁹ The past week's events provide a tangible technological basis for how these projections could be realized.

The Future of Human-Robot Interaction (HRI)

The future of HRI is not just about robots and humans working in proximity; it is about fluid, intuitive, and adaptive collaboration. This future is enabled by the convergence of cognitive and physical intelligence. LBMs running on powerful edge computers like Thor will create robots that can understand natural language commands, infer human intent, and adapt their plans based on human actions. Simultaneously, advanced sensory skins like ProTac will provide robots with the physical intelligence to sense proximity and touch, allowing for safe physical assistance and the dexterous handling of objects. This will unlock applications previously considered science fiction, such as dynamic support in hospitals, true co-working on complex assembly lines, and in-home assistance for aging populations.³⁵

Concluding Analysis: A Foundational Week for General-Purpose Robotics

The events of the past seven days were not about a single "killer app" or a single revolutionary robot. They were about the arrival of the foundational *platform* upon which a thousand different applications will be built. The combination of a standardized supercomputing brain (Thor), a scalable AI mind (LBMs), and a maturing hardware ecosystem (Infineon) represents the "Intel Inside" or "ARM architecture" moment for the humanoid industry. The "Rise of the Machines" is not a story of a single invention, but of the systematic alignment of the entire technology stack. The breakthroughs of the past week have laid the technical and industrial groundwork for the transition of humanoid robots from laboratory curiosities to a

transformative economic force, heralding the true beginning of the age of general-purpose robotics.

Works cited

1. NVIDIA Jetson Thor bring 2K teraflops of AI compute to robots, accessed August 26, 2025, <https://www.therobotreport.com/nvidia-jetson-thor-brings-2k-teraflops-of-ai-compute-to-robots/>
2. NVIDIA's Jetson Thor Robotics Computer is Now Available, accessed August 26, 2025, <https://www.automate.org/industry-insights/nvidias-jetson-thor-robotics-computer-is-now-available>
3. AI Stock Frenzy: Nvidia's 'Robot Brain', Cloud Mega-Deals & Tesla's Autopilot Shock (Aug 25–26, 2025 Roundup) - TS2 Space, accessed August 26, 2025, <https://ts2.tech/en/ai-stock-frenzy-nvidias-robot-brain-cloud-mega-deals-teslas-autopilot-shock-aug-25-26-2025-roundup/>
4. NVIDIA Brings Blackwell Performance to the Edge with Jetson Thor for Robotics - HPCwire, accessed August 26, 2025, <https://www.hpcwire.com/off-the-wire/nvidia-brings-blackwell-performance-to-the-edge-with-jetson-thor-for-robotics/>
5. NVIDIA Blackwell-Powered Jetson Thor Now Available, Accelerating the Age of General Robotics, accessed August 26, 2025, <https://nvidianews.nvidia.com/news/nvidia-blackwell-powered-jetson-thor-now-available-accelerating-the-age-of-general-robotics>
6. NVIDIA Blackwell-Powered Jetson Thor Now Available, Accelerating the Age of General Robotics - Stock Titan, accessed August 26, 2025, <https://www.stocktitan.net/news/NVDA/nvidia-blackwell-powered-jetson-thor-now-available-accelerating-the-ok54opeyh94f.html>
7. 'Enjoy your new ...', says message card on Nvidia CEO Jensen Huang's gift to humanoid robot, accessed August 26, 2025, <https://timesofindia.indiatimes.com/technology/tech-news/enjoy-your-new-says-message-card-on-nvidia-ceo-jensen-huang-s-gift-to-humanoid-robot/articleshow/123521619.cms>
8. Introducing NVIDIA Jetson Thor, the Ultimate Platform for Physical AI, accessed August 26, 2025, <https://developer.nvidia.com/blog/introducing-nvidia-jetson-thor-the-ultimate-platform-for-physical-ai/>
9. AI-Powered Robot by Boston Dynamics and Toyota Research Institute Takes a Key Step Towards General-Purpose Humanoids, accessed August 26, 2025, <https://pressroom.toyota.com/ai-powered-robot-by-boston-dynamics-and-toyota-research-institute-takes-a-key-step-towards-general-purpose-humanoids/>
10. AI-Powered robot by Boston Dynamics and Toyota Research Institute takes a key step towards general-purpose humanoids, accessed August 26, 2025, <https://newsroom.toyota.eu/ai-powered-robot-by-boston-dynamics-and-toyota->

- [research-institute-takes-a-key-step-towards-general-purpose-humanoids/](#)
11. Large Behavior Models and Atlas Find New Footing | Boston Dynamics, accessed August 26, 2025, <https://bostondynamics.com/blog/large-behavior-models-atlas-find-new-footing/>
 12. Humanoid robot able to do complex tasks with little code added - Yahoo News Canada, accessed August 26, 2025, <https://ca.news.yahoo.com/humanoid-robot-able-complex-tasks-185335106.html>
 13. Boston Dynamics and Toyota Research Institute unveil AI-powered Atlas robot, accessed August 26, 2025, <https://www.investing.com/news/stock-market-news/boston-dynamics-and-toyota-research-institute-unveil-ai-powered-atlas-robot-93CH-4202762>
 14. A Careful Examination of Large Behavior Models for Multitask Dexterous Manipulation, accessed August 26, 2025, <https://arxiv.org/html/2507.05331v1>
 15. Soft skin, sharp senses: New robotic 'touch' sees danger before it ..., accessed August 26, 2025, <https://www.eurekalert.org/news-releases/1095605>
 16. Soft Skin, Sharp Senses: New Robotic 'Touch' Sees Danger Before It Hits, accessed August 26, 2025, <https://www.jaist.ac.jp/english/whatsnew/press/2025/08/26-1.html>
 17. Soft Robotic Link with Controllable Transparency for Vision-based Tactile and Proximity Sensing - Shan Luo, accessed August 26, 2025, https://shanluo.github.io/ViTacWorkshops/content/ViTac2024_Paper_14.pdf
 18. From Sensors to Care: How Robotic Skin Is Transforming Modern Healthcare—A Mini Review - PubMed Central, accessed August 26, 2025, <https://pmc.ncbi.nlm.nih.gov/articles/PMC12074484/>
 19. Watch this humanoid robot nail complex tasks and think on the fly - Digital Trends, accessed August 26, 2025, <https://www.digitaltrends.com/computing/humanoid-robot-complex-tasks/>
 20. First World Humanoid Robot Games: Highlights and Fails - CNET, accessed August 26, 2025, <https://www.cnet.com/tech/computing/first-world-humanoid-robot-games-highlights-and-fails/>
 21. Robot athletes compete at World Humanoid Games | BBC News - YouTube, accessed August 26, 2025, <https://www.youtube.com/watch?v=5Y-tElcmJVE>
 22. Humanoid Robotics News and Resources on Robotics 24/7, accessed August 26, 2025, <https://www.robotics247.com/topic/tag/Humanoid>
 23. NVIDIA Jetson Thor Unlocks Real-Time Reasoning for General Robotics and Physical AI, accessed August 26, 2025, <https://blogs.nvidia.com/blog/jetson-thor-physical-ai-edge/>
 24. Why the boring new video of Boston Dynamics Atlas is a big deal for humanoid robots, accessed August 26, 2025, https://bdtechtalks.com/2025/08/25/boston-dynamics-large-behavior-models/?utm_source=rss&utm_medium=rss&utm_campaign=boston-dynamics-large-behavior-models
 25. A Careful Examination of Large Behavior Models for Multitask Dexterous

- Manipulation, accessed August 26, 2025,
<https://toyotaresearchinstitute.github.io/lbm1/>
26. TRI: pretrained large behavior models accelerate robot learning - The Robot Report, accessed August 26, 2025,
<https://www.therobotreport.com/tri-pretrained-large-behavior-models-accelerate-robot-learning/>
 27. The "Brain" for the Autonomous Factory: Why NVIDIA Jetson Thor Marks a New Era for Industrial AI and Robotics | ARC Advisory Group, accessed August 26, 2025,
<https://www.arcweb.com/blog/brain-autonomous-factory-why-nvidia-jetson-thor-marks-new-era-industrial-ai-robotics>
 28. Infineon and NVIDIA Join Forces to Advance Humanoid Robotics - Highways Today, accessed August 26, 2025,
<https://highways.today/2025/08/26/infineon-nvidia-humanoid-robotics/>
 29. Infineon and NVIDIA Collaborate to Advance Humanoid Robotics - Bisinfotech, accessed August 26, 2025,
<https://www.bisinfotech.com/infineon-and-nvidia-collaborate-to-advance-humanoid-robotics/>
 30. Infineon and NVIDIA Join Forces to Advance Humanoid Robotics with High-Performance Motor Control Solutions - Power Electronics News, accessed August 26, 2025,
https://www.powerselectronicsnews.com/infineon-and-nvidia-join-forces-to-advance-humanoid-robotics-with-high-performance-motor-control-solutions/?utm_source=eetimes&utm_medium=latestnews&_ga=2.123933066.1671528438.1644750094-1204887681.1597044287
 31. Infineon to Enable Humanoid Robots With Precise Motion and Efficiency Powered by NVIDIA Technology - Business Wire, accessed August 26, 2025,
<https://www.businesswire.com/news/home/20250825221082/en/Infineon-to-Enable-Humanoid-Robots-With-Precise-Motion-and-Efficiency-Powered-by-NVIDIA-Technology>
 32. Infineon, NVIDIA bring efficiency and motion to humanoid robotics ... - eeNews Europe, accessed August 26, 2025,
<https://www.eenewseurope.com/en/infineon-nvidia-bring-efficiency-and-motion-to-humanoid-robotics/>
 33. Humanoid Robotics: Progress, Challenges, and the Road to Adoption | CloudSyntrix, accessed August 26, 2025,
<http://www.cloudsyntrix.com/blogs/humanoid-robotics-progress-challenges-and-the-road-to-adoption/>
 34. Humanoid Robots: Abilities, Challenges, and the Road Ahead - WhalesBot, accessed August 26, 2025,
<https://www.whalesbot.ai/blog/humanoid-robots-abilities-challenges-and-the-road-ahead>
 35. What is a Humanoid Robot? - NVIDIA, accessed August 26, 2025,
<https://www.nvidia.com/en-us/glossary/humanoid-robot/>
 36. What are Humanoid Robots Used For? - Qviro Blog, accessed August 26, 2025,

- <https://qviro.com/blog/what-are-humanoid-robots-used-for/>
37. Applications and Development Prospects of Humanoid Robots - World Internet Conference, accessed August 26, 2025, <https://www.wicinternet.org/pdf/ApplicationsandDevelopmentProspectsofHumanoidRobots.pdf>
 38. SSD Challenges and Requirements for Humanoid Robots - ATP Electronics, accessed August 26, 2025, <https://www.atpinc.com/blog/ssd-challenge-requirements-for-humanoid-robotics>
 39. Humanoid robots offer disruption and promise. Here's why - The World Economic Forum, accessed August 26, 2025, <https://www.weforum.org/stories/2025/06/humanoid-robots-offer-disruption-and-promise/>
 40. Humanoid Robot Market Size, Share, Industry Report Trends, 2025 To 2030, accessed August 26, 2025, <https://www.marketsandmarkets.com/Market-Reports/humanoid-robot-market-99567653.html>
 41. Humanoid Robot Market Expected to Reach \$5 Trillion by 2050 | Morgan Stanley, accessed August 26, 2025, <https://www.morganstanley.com/insights/articles/humanoid-robot-market-5-trillion-by-2050>
 42. The global market for humanoid robots could reach \$38 billion by 2035 | Goldman Sachs, accessed August 26, 2025, <https://www.goldmansachs.com/insights/articles/the-global-market-for-robots-could-reach-38-billion-by-2035>
 43. Discovering humanoid robots: an in-depth look at their applications, accessed August 26, 2025, <https://www.generationrobots.com/blog/en/discovering-humanoid-robots-an-in-depth-look-at-their-applications/>
 44. Applications of Humanoid Robots in 2025 - Robozaps Blog, accessed August 26, 2025, <https://blog.robozaps.com/b/applications-of-humanoid-robots>
 45. The Future of Humanoid Robots: Trends, Applications, and Companies - Digitopia, accessed August 26, 2025, <https://digitopia.co/blog/future-of-humanoid-robots/>
 46. The Future of Work: How Humanoid Robots Will Revolutionize Industries | RoboticsTomorrow, accessed August 26, 2025, <https://www.roboticstomorrow.com/article/2025/06/the-future-of-work-how-humanoid-robots-will-revolutionize-industries/24932>