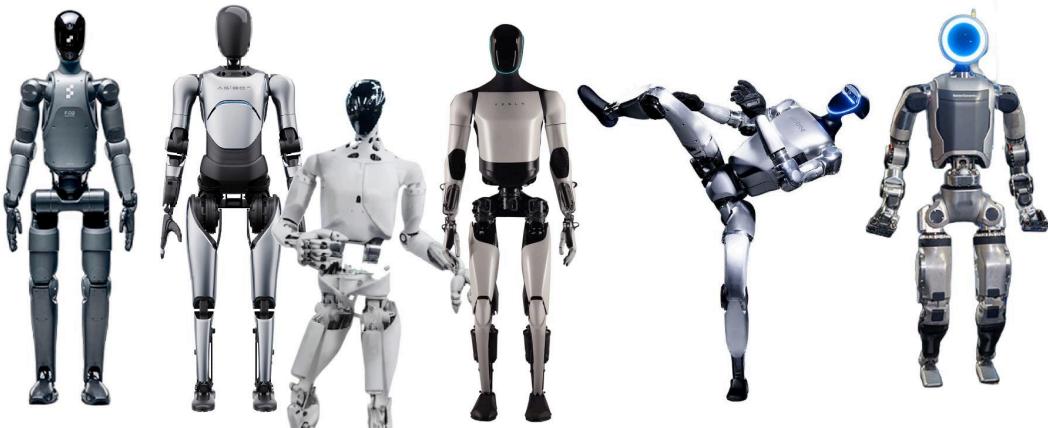


Humanoid Robotics: A Rare 0-to-Trillion Opportunity

By Chicken Genius Mar 23, 2025

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27 years ago

I invented the very 1st remote start for an automotive. To be specific, I linked my dad's RX7 to my motorola pager so I could warm the engine and start the A/C before arrival. For that, I won the merit award where I studied. Robotics has always been my interest. A combination of mechanical and software engineering: education that's actually useful to the real world

Why Trillions?

Humanoid robots are essentially human labour. Except, no sleep, no complaints, no medicare. Built in a few hours instead of 20 years. If labour is infinitely scaled, multiply by cost of production. Cost of living would move towards zero.

Ways to get exposure to humanoid robots

1. Publicly Traded Robotics Companies
2. Robotics-Focused ETFs
3. Private Companies (Via Venture Capital or Secondary Markets)
4. Component Suppliers
5. Big Tech with Robotics Ambitions

Publicly Traded Robotics Companies

1. Nvidia (NVDA)

Market Cap: \$3.19 trillion

A leader in AI chips, Nvidia powers much of the computing infrastructure for robotics, including humanoid applications. Its GPUs and software platforms like Isaac are critical for robot development, making it a strong indirect play on the humanoid robotics boom.

2. Tesla (TSLA)

Market Cap: \$780 billion

A proven leader, first principles engineering, extreme optimization, in-house manufacturing. Make great products and direct play on humanoid robots.

3. Intuitive Surgical (ISRG)

Market Cap: \$211.09 billion

While focused on medical robotics rather than general-purpose humanoids, this company demonstrates proven success in robotic automation, which could translate to broader applications over time.

4. ABB (ABBNY)

Market Cap: \$112 billion

A Swiss company specializing in industrial automation and robotics, ABB is expanding into collaborative robots that could evolve into humanoid-like systems for manufacturing.

5. Boston Dynamics: Owned by Hyundai Motor Group (HYMTF) Market Cap: \$36.15 billion

Pioneer in advanced robotics (e.g., Spot, Atlas) isn't directly investable, but buying Hyundai shares could provide indirect exposure. Hyundai Motor Group owns approximately 80% of Boston Dynamics.

6. XPeng (XPEV)

Market Cap: \$21 billion

This Chinese electric vehicle maker is also developing humanoid robots (e.g., its PX5 prototype), leveraging its AI expertise and low-cost manufacturing base.

7. UBTEch Robotics (Hong Kong: 9880.HK)

Market Cap: \$5 billion USD

A Chinese firm backed by Tencent, UBTEch is already producing humanoid robots for education, service, and industrial uses, offering direct exposure to the sector.

8. Xiaomi XIAOMI-W (1810.HK)

Market Cap: \$170 Billion USD

Good often doesn't come cheap except Xiaomi. They make thousands of good and cheap products. Cult like fan base. At scale, no company comes close.

Robotics-Focused ETFs

1. ROBO Global Robotics & Automation ETF (ROBO): This fund invests in a diversified portfolio of global companies involved in robotics and automation, including some with humanoid potential. It's a broad way to gain exposure without picking individual stocks.
2. Global X Robotics & Artificial Intelligence ETF (BOTZ): Another ETF that includes companies in robotics and AI, with holdings like Nvidia and Intuitive Surgical, which indirectly support humanoid advancements. These ETFs spread risk across multiple firms, though they may not focus exclusively on humanoids.

Private Companies (Via Venture Capital or Secondary Markets)

Private investments carry higher risk and require significant capital or connections, but they target the cutting edge of humanoid tech.

1. Figure AI: A U.S.-based startup developing humanoid robots for industrial tasks, recently valued at \$2.6 billion after raising \$675 million from investors like Microsoft, Nvidia, and Jeff Bezos. While private, you might access shares through secondary markets like Hiive or Forge Global if you're an accredited investor.
2. 1X: A Norwegian robotics company has raised significant funding in recent years, including a \$23.5 million Series A2 round in March 2023 led by OpenAI's Startup Fund and a \$100 million Series B round in January 2024 led by EQT Ventures, with participation from

investors like Samsung NEXT, Skagerak Capital, and Sandwater.

3. Agility Robotics: Known for its bipedal robot Digit, used by Amazon, this company raised funds at a \$1.2 billion valuation. It's another private option for those with access to venture capital networks.

Component Suppliers

1. Harmonic Drive Systems (Tokyo: 6324.T): A Japanese company making precision gears critical for robot movement. It's a small-cap stock that could benefit as humanoid production scales.

2. Keyence (Tokyo: 6861.T): A leader in sensors, which are vital for robots' perception and interaction capabilities. Its technology underpins many automation systems. These firms profit from the supply chain rather than building robots themselves, offering a less direct but potentially stable investment.

Big Tech with Robotics Ambitions

1. Microsoft (MSFT): Investing in AI and robotics through partnerships like Figure AI and its stake in OpenAI, Microsoft could see upside as humanoid applications grow.

2. Amazon (AMZN): Already testing Agility Robotics' Digit in warehouses, Amazon is poised to be a major user of humanoid robots, boosting productivity in logistics.

3. Meta (META): Rumored to be exploring humanoid robotics via its Reality Labs division, Meta could pivot its AI expertise into physical systems.

THE HUMANOIDS

🔥🔥🔥🔥 = BEST
🔥 = SHIT



NEO Gamma

Ability to scale - 🔥

Tech - 🔥🔥🔥

Price - 🔥🔥



Atlas

Ability to scale - 🔥🔥

Tech - 🔥🔥🔥🔥

Price - 🔥



Optimus

Ability to scale - 🔥🔥🔥🔥

Tech - 🔥🔥🔥

Price - 🔥🔥



G1

Ability to scale - 🔥🔥🔥🔥

Tech - 🔥🔥🔥

Price - 🔥🔥🔥



Figure 2

Ability to scale - 🔥🔥

Tech - 🔥🔥🔥

Price - 🔥

Iron

Ability to scale - 🔥🔥🔥🔥

Tech - 🔥🔥🔥

Price - 🔥🔥🔥

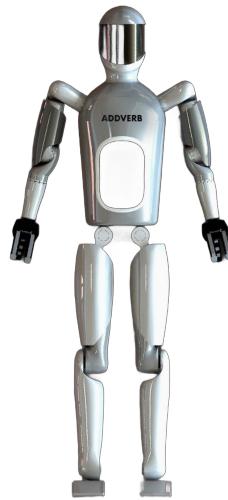


CyberOne

Ability to scale - 🔥🔥🔥🔥

Tech - 🔥

Price - 🔥🔥🔥



Addverb

Ability to scale - 🔥

Tech - 🔥

Price - 🔥



A2

Ability to scale - 🔥🔥

Tech - 🔥🔥🔥🔥

Price - 🔥🔥🔥🔥



Digit

Ability to scale - 🔥🔥🔥

Tech - 🔥🔥🔥

Price - 🔥🔥🔥

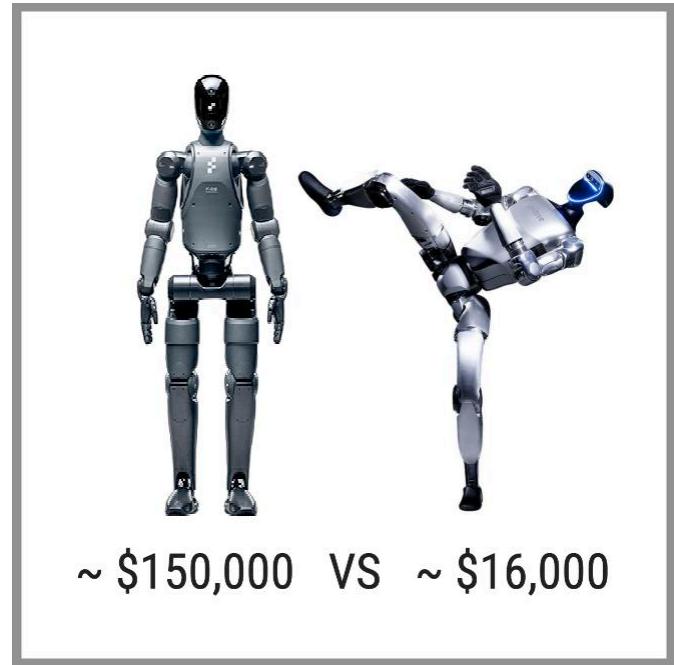
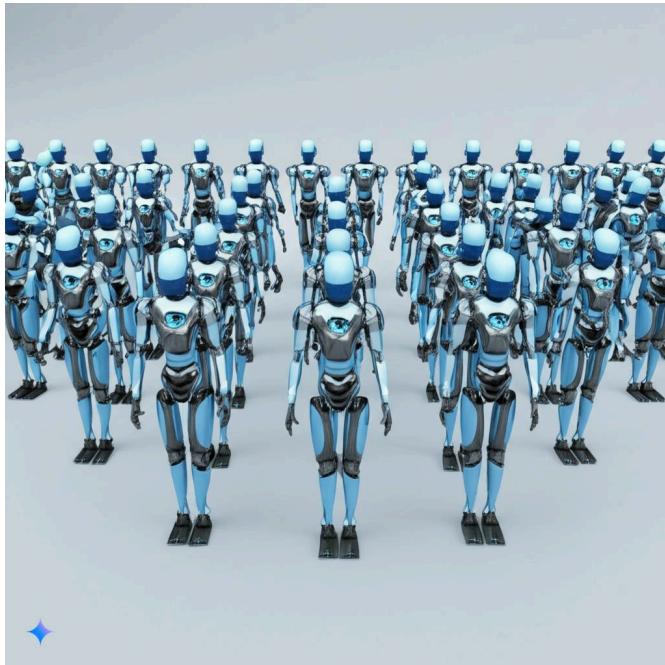
Note: There are about 50 others not included eg:

Apptronik, Sanctuary AI's Phoenix, GR-1, Boardwalk Robotics, Engine AI, Clone, UBT, TLIBOT etc...
approximately 1 new startup every 2 weeks.

THE FOCUS

Tech doesn't matter 😱
Software doesn't matter 🤖

What matters?



~ \$150,000 VS ~ \$16,000

Ability to Scale

"It's relatively easy to make a prototype but extremely difficult to mass manufacture a vehicle reliably at scale." - Elon Musk

Price

Mass market = price. No debate. Every monkey has a cell phone. Why? Price

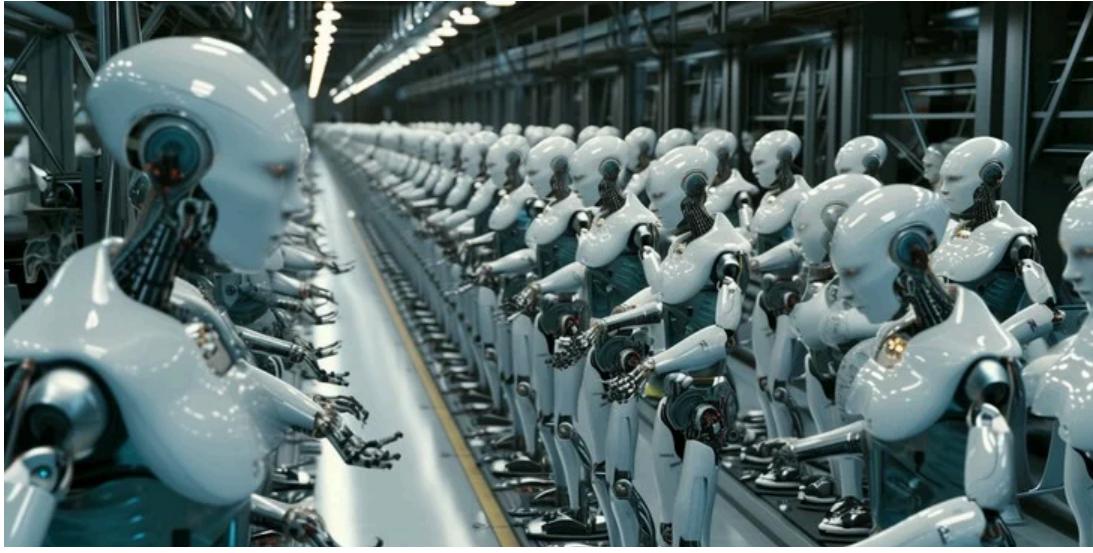
“Technology doesn't matter”

You don't need the highest tech robot to perform 100% of the task. You just need enough tech to perform 99% of the task. It's like asking a PHD Havard professor to make a sandwich. Optimizing for the last 1% requires 1000% effort.

“Software doesn't matter in the world of AI.”

— Chicken Genius, renowned X.com shitposter

In a world where open source LLMs are as good or better VS multi billion dollar trained LLMs. There's no intrinsic value attached.



Ability To Scale

Difficulty Level 100. To achieve large-scale production, a comprehensive approach is required, encompassing the entire supply chain—from the procurement and processing of raw materials to the optimization of cost. This involves not only securing a robust network of suppliers and refining logistics but also mastering the intricacies of high-volume manufacturing. It demands expertise in industrial engineering, advanced automation, and process optimization, alongside a deep understanding of material science to ensure quality and cost-efficiency at every stage. Furthermore, scaling effectively necessitates strategic foresight to anticipate bottlenecks, integrate cutting-edge technologies and adapt to fluctuating market demands.

Tesla, Unitree, Xpeng & Xiaomi 🔥🔥🔥🔥

TLDR

Unitree is the obvious winner. However, as I dug the rabbit hole, there are links to the CHINESE GOVERNMENT 😐

Else, each option varies in risk and reward. Don't expect 10X returns from a Trillion Mcap. Public stocks and ETFs are straightforward for retail investors, while private companies require more connections and resources. Component suppliers and big tech offer indirect exposure with potentially lower volatility. The humanoid robotics market is projected to grow significantly—estimates range from \$38 billion by 2035 (Goldman Sachs) to trillions long-term. Always research current valuations and market conditions before investing, as hype can inflate prices beyond fundamentals.

If you want to know what I'm buying, as always I'll disclose it real time on X.

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