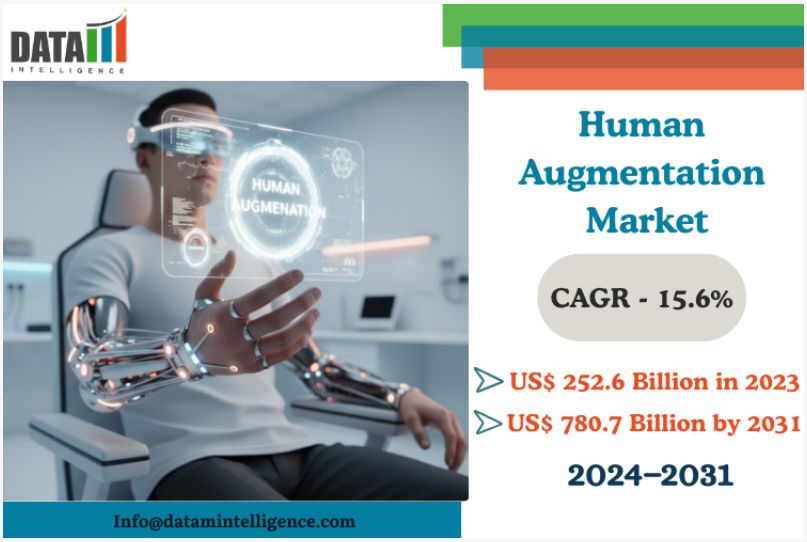
Human-Centered AI Market Set to Transform Industries | USD$ 780.7 by 2032 | DataM Intelligence

Human-Centered AI Market Expansion 2024-2032 | Key Drivers, Industry Developments, Future Growth and Investment Opportunities

AUSTIN, TX, UNITED STATES, February 17, 2026 /EINPresswire.com/ -- Market Size and Growth



Human Augmentation Market Size 2025

According to DataM Intelligence, the Human Augmentation Market was valued at US$ 252.6 Billion in 2023 and is projected to reach US$ 780.7 Billion by 2031, growing at a CAGR of 15.6% from 2024 to 2031.

The surge is driven by technological innovations in exoskeletons, wearable robotics, brain-computer interfaces (BCIs), augmented reality (AR), and sensory enhancement devices. Growing demand spans healthcare rehabilitation, industrial productivity, defense, and consumer fitness applications, enabling humans to extend physical and cognitive capabilities beyond natural limits.

> United States Human-Centered AI Market to hit US$ 780.7 Billion by 2031, Growth in Human Analysis and Artifical Intelligence 2025”
>
> *DataM Intelligence 4Market Research LLP*

Human augmentation integrates AI, robotics, neurotechnology, and wearable computing, offering real-time monitoring, enhanced mobility, and cognitive assistance. These technologies improve workforce efficiency, patient rehabilitation outcomes, and human-machine collaboration in both commercial and military settings.

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Growth Drivers

Over 3.5 million wearable exoskeletons were deployed globally in 2024 across healthcare and industrial sectors, projected to exceed 24 million units by 2032.

Rising workplace musculoskeletal injuries, costing USD 70 billion annually in the US alone, drive adoption of industrial exoskeletons for injury prevention.

Defense investments in augmented soldiers, including exosuits and cognitive enhancement devices, exceeded USD 1.2 billion in 2024, expected to double by 2032.

AR and sensory augmentation devices adoption in medical training and rehabilitation grew 200% between 2020–2024.

Cognitive enhancement interfaces and BCIs projected to unlock USD 5.4 billion additional value in neuro-rehabilitation and human-machine interaction by 2032.

Market Segmentation Analysis

By TechnologyExoskeletons & Wearables: Accounted for 42% of the market in 2024 (USD 1.31B), projected to reach USD 13.6B by 2032.

Brain-Computer Interfaces (BCIs): Held 20% share in 2024 (USD 624M), expected to grow to USD 6.8B by 2032.

AR & Sensory Enhancement: Represented 18% of the market in 2024 (USD 562M), forecasted at USD 5.9B by 2032.

Prosthetics & Implants: Made up 12% in 2024 (USD 374M), projected to reach USD 3.7B by 2032.

Others: Contributed 8% in 2024 (USD 249M), expected to grow to USD 2.8B by 2032.

By Application
Healthcare & Rehabilitation: Valued at USD 1.02B in 2024, projected to reach USD 9.8B by 2032.

Industrial & Manufacturing: Market size USD 864M in 2024, expected to grow to USD 8.3B by 2032.

Defense & Military: Held USD 624M in 2024, forecasted to reach USD 6.2B by 2032.

Consumer & Fitness: Valued at USD 468M in 2024, projected at USD 4.7B by 2032.

Research & Education: Contributed USD 124M in 2024, expected to grow to USD 2.8B by 2032.

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By Region
North America: USD 1.12B in 2024 → USD 11.8B by 2032 (largest market, driven by US defense and healthcare adoption)

Europe: USD 876M in 2024 → USD 8.5B by 2032 (strong industrial exoskeleton uptake in Germany, France, and UK)

Asia-Pacific: USD 784M in 2024 → USD 7.9B by 2032 (fastest CAGR of 35%, led by Japan, South Korea, and China in robotics and healthcare augmentation)

Middle East & Africa: USD 208M in 2024 → USD 2.1B by 2032 (increasing defense and industrial applications)

South America: USD 150M in 2024 → USD 1.6B by 2032 (healthcare rehabilitation and fitness tech adoption rising)

Competitive Landscape

The human augmentation market is moderately fragmented, with robotics firms, neurotechnology startups, and multinational defense contractors developing solutions to extend human capability.

Key Players

Global Technology Leaders:

1. SAMSUNG
2. Panasonic Corporation
3. Microsoft
4. TOYOTA MOTOR CORPORATION
5. General Motors
6. Google
7. FOSSIL GROUP
8. Raytheon Technologies Corporation
9. Life Sense Group
10. Garmin Ltd.

Human Augmentation Leaders:

1. Ekso Bionics
2. ReWalk Robotics
3. Cyberdyne
4. Lockheed Martin
5. Panasonic

Startups & Innovators:

1. CTRL-Labs (Meta)
2. OpenBCI
3. SuitX
4. Cyberdyne HAL
5. HeroWear

Key Highlights

Ekso Bionics shipped 8,500 industrial exoskeletons globally in 2024, with 35% adoption in North America.

ReWalk Robotics deployed over 2,000 mobility exosuits for healthcare rehabilitation.

Cyberdyne HAL reported 120% YoY growth in hospital-assisted mobility programs in Japan and Europe.

CTRL-Labs demonstrated brain-computer interface prototypes enabling gesture control with over 10,000 users in pilot studies.

Recent Developments

Panasonic launched AR-assisted assembly exoskeletons for automotive plants (April 2025).

Lockheed Martin integrated lightweight powered exosuits for soldier mobility and load-bearing enhancement (February 2025).

ReWalk Robotics expanded into neuro-rehabilitation markets in Europe (March 2025).

Cyberdyne introduced HAL robotic suits with AI-assisted gait training for hospitals (January 2025).

OpenBCI collaborated with research institutes for cognitive augmentation studies in the US and Asia-Pacific (December 2024).

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Market Outlook & Opportunities
Exoskeleton and wearable robotics segment expected to reach USD 13.6B by 2032, accounting for 43% of the market.

Healthcare rehabilitation applications projected to generate USD 9.8B by 2032, led by hospitals and therapy centers.

Asia-Pacific anticipated to record the fastest CAGR (35%), driven by robotics and defense adoption.

Integration of AR, AI, and BCIs expected to unlock an additional USD 4.5B in industrial productivity by 2032.

Rising interest in consumer cognitive enhancement and neurogaming opens emerging market opportunities in North America and Europe.

Conclusion

The Human Augmentation Market is poised for rapid expansion. With wearable exoskeletons, brain-computer interfaces, and AR-enabled devices reshaping healthcare, industrial, and defense sectors, human augmentation is redefining human potential.

Technological advancements, rising labor optimization needs, and neuro-innovation investments are making augmentation devices essential across industries. Market leaders such as Ekso Bionics, ReWalk Robotics, Cyberdyne, and Lockheed Martin supported by innovative startups like CTRL-Labs and OpenBCI are driving adoption and mainstream integration globally.

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