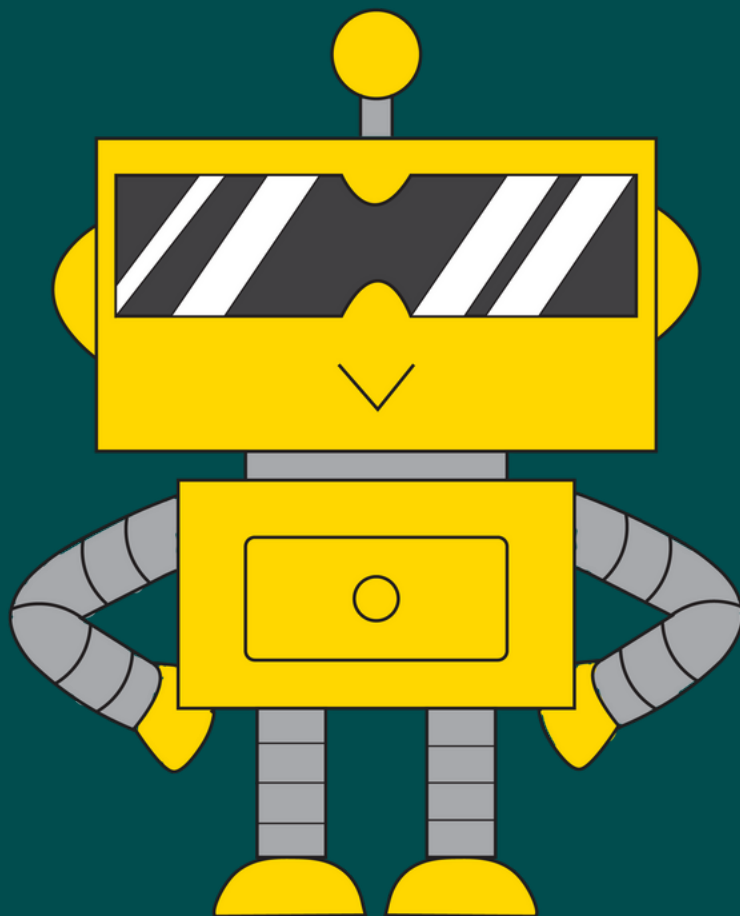# Artificial Intelligence Forecast till 2030*

*A summary report being collected from:
AI Market Report - MarketsandMarkets
AI in 2024: Over 50 Statistics and Insights That You Need To Know - Joe Aucott

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Short-term roadmap (2023-2025)

- Improvements in generative models for creating content.

- Increasing use of federated learning for training models while protecting privacy.

- Progress in making algorithms explainable and understandable for decision-making.

- Growing popularity of edge AI for decentralized processing and decision-making.
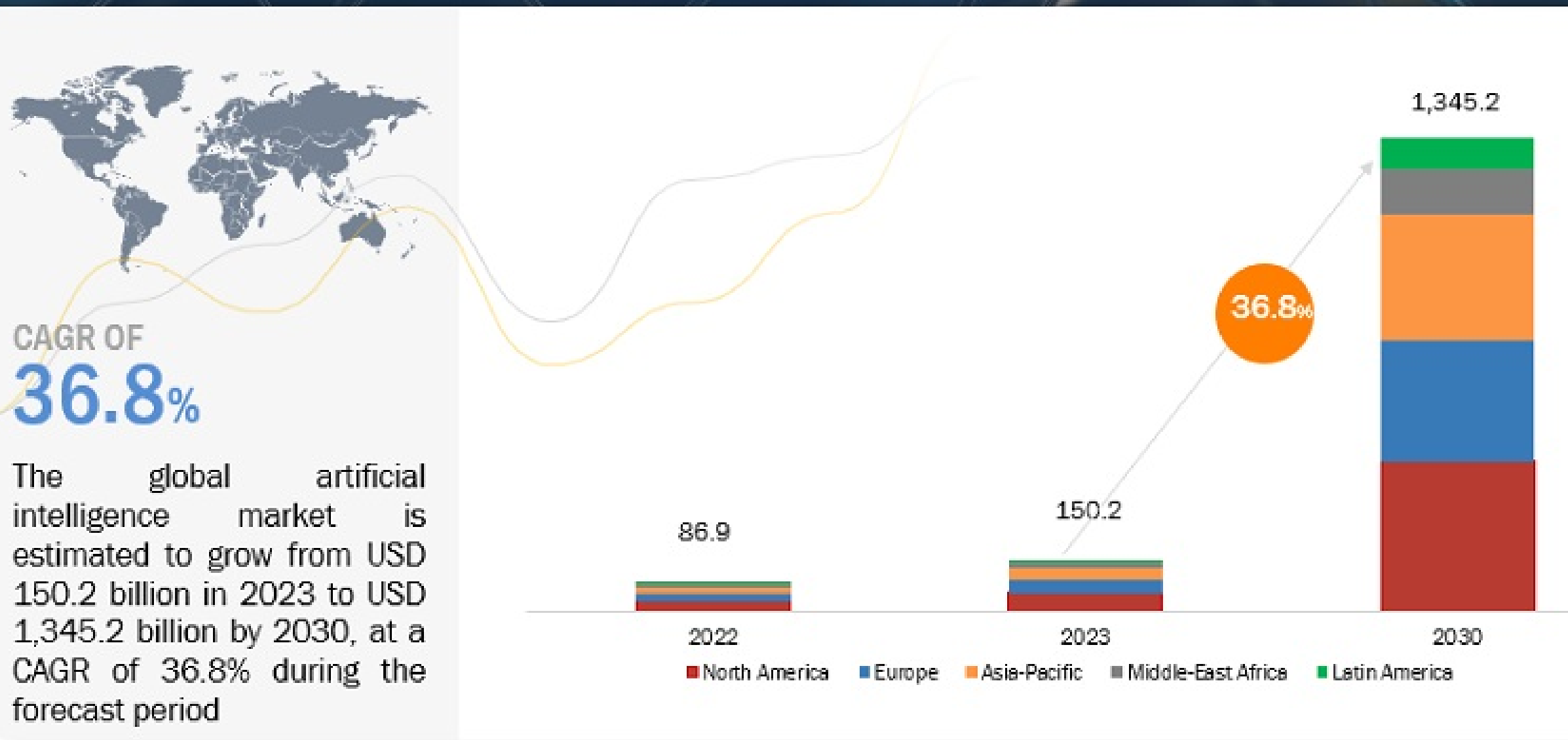
Mid-term roadmap (2025-2028)

- Advanced generative AI models improve the quality and variety of outputs.

- Progress in federated optimization algorithms and secure aggregation methods enhances the scalability and performance of federated learning systems.

- Explainable AI will make AI models more interpretable and transparent.

- Edge AI will become more advanced, utilizing improved hardware and algorithms.

Long-term roadmap (2028-2030)

- AI-generated content reaches human-level sophistication, reshaping artificial and human creative boundaries.

- Extensive adoption of federated learning enables secure and scalable solutions in various industries.

- Explainable AI becomes a fundamental necessity for AI systems in all industries.

- Advanced AI processing on edge devices enables autonomous decision-making, real-time intelligence, and efficient data processing in different environments.

ARTIFICIAL INTELLIGENCE MARKET GLOBAL FORECAST TO 2030 (USD BN)

CAGR OF
36.8%

The global artificial intelligence market is estimated to grow from USD 150.2 billion in 2023 to USD 1,345.2 billion by 2030, at a CAGR of 36.8% during the forecast period

1,345.2

36.8%

150.2

86.9

2022   2023   2030

■ North America ■ Europe ■ Asia-Pacific ■ Middle-East Africa ■ Latin America

As we creep towards 2024, the global AI landscape presents a picture of rapid growth and boundless potential.

The market value of AI has soared, with current estimates placing it around $150 billion, and projections suggesting a trajectory that could reach $1,345.2 billion the end of the decade.

This exponential growth is fuelled by relentless innovation, increased investment, and a huge demand for AI across all sectors of the economy.

ATTRACTIVE OPPORTUNITIES IN THE ARTIFICIAL INTELLIGENCE MARKET

Emerging economies in the Asia Pacific regions to provide numerous opportunities across industry verticals

ASIA PACIFIC

The continuous improvements in AI algorithms, machine learning techniques, and natural language processing drives the adoption of artificial intelligence.

Acquisitions and mergers would offer lucrative opportunities to the market players in the next seven years.

The growing investments in artificial intelligence research and development by business and government drives the growth market.

The proliferation of technology in businesses is leading to the growth of the artificial intelligence market.

North America, led by the United States and Canada, continues to be at the forefront, with widespread adoption across industries such as healthcare, automotive, and finance.

Asia-Pacific regions, particularly China and Japan, are not far behind, with substantial investments in AI research and applications in manufacturing and consumer electronics.

Europe, with its stringent data protection laws, has been more cautious but is steadily embracing AI, particularly in the automotive, healthcare, and financial sectors.

Emerging economies in Latin America, Africa, and parts of Asia are also beginning to harness AI, albeit at a slower pace, focusing on sectors like agriculture and education to leapfrog traditional development hurdles.

AI Trends in 2024

Investment in AI Research & Development:

- Global investment in AI R&D is soaring, with a projected annual growth rate of 26.6% leading up to 2024.

- In 2023 alone, venture capital funding for AI startups hit a record high, with over $93 billion invested worldwide.

Emerging Breakthroughs in AI:

- **Quantum Machine Learning**: Combining quantum computing with AI to process information at unprecedented speeds.

- **AI-Powered Natural Language Generation:** Advanced systems that can create human-like text, opening new avenues in content creation and interaction.

- **Neurosymbolic AI**: A fusion of neural networks with symbolic AI, aiming to create machines that can understand and reason like humans.

- **Autonomous Systems**: From self-driving cars to drones, these systems are expected to become more sophisticated and integrated into daily life.

Predictions for the AI Frontier:

- **AI in Edge Computing**: AI processing at the edge is predicted to be the next frontier, reducing latency and enabling real-time analytics in remote locations.

- **Emotion AI:** Systems that can interpret and respond to human emotions are expected to revolutionize customer service and mental health care.

- **AI Governance and Ethics**: As AI becomes more prevalent, the development of ethical frameworks and governance models is anticipated to be a major focus area.

How AI Will Affect The Global Economy

Global Economic Impact:

- AI could add up to $15.7 trillion to the global GDP by 2030, with $6.6 trillion likely from increased productivity and $9.1 trillion from consumption-side effects.

- By 2024, AI is expected to account for a significant portion of this growth, with some sectors potentially seeing a boost in productivity by as much as 40%.

Employment Dynamics:

Job Creation:

- The World Economic Forum predicts AI could create 97 million new jobs by 2025.

- In the tech sector alone, AI-related job postings have seen an increase of 74% over the past four years.

Job Displacement:

- McKinsey estimates that by 2030, up to 30% of current jobs could be automated.

- Specific sectors like manufacturing and transport may see a higher rate of automation, potentially displacing millions of workers.

Post-Pandemic Economic Recovery:

- AI's role in streamlining operations has led to a 50% reduction in downtime for some industries due to predictive maintenance.

- Remote work technology, powered by AI, has seen a 300% increase in adoption since the beginning of the pandemic, facilitating business continuity.

- AI-driven analytics have helped retailers achieve a 2-3% increase in inventory efficiency, crucial for post-pandemic recovery.

AI in IT: Revolutionising the Backbone of Technology

Automation and Efficiency:

- AI-driven automation tools are streamlining IT operations, reducing the need for manual intervention, and increasing efficiency.

- Predictive analytics powered by AI are enhancing decision-making processes, leading to more proactive and less reactive IT management.

Cybersecurity Enhancements:

- AI algorithms are at the forefront of cybersecurity, offering advanced threat detection and response mechanisms that evolve with the threat landscape.

- Machine learning models are being trained to identify and neutralise potential security breaches before they can cause harm.

Software Development:

- In software engineering, AI is being used to optimise the development lifecycle, from coding to testing, deployment, and maintenance.

- AI-powered code review tools are helping developers to improve code quality and consistency, reducing bugs and security vulnerabilities.

Data Management:

- AI is revolutionising data management with the ability to handle vast amounts of data more efficiently, providing insights that were previously unattainable.

- Natural language processing (NLP) is enabling more intuitive data querying, allowing users to gain information and analytics through conversational interfaces.

Cloud Computing:

- AI is enhancing cloud computing by optimising resource allocation, improving load balancing, and reducing costs.

- AI is also enabling the development of intelligent cloud services that can automatically scale and adapt to user needs.

User Experience:

- AI is playing a crucial role in personalising user experiences, with recommendation engines and personalised content delivery becoming the norm.

- Chatbots and virtual assistants, powered by AI, are providing users with more natural and interactive ways to engage with technology.

Emerging Technologies:

- AI is the driving force behind emerging IT technologies such as edge computing, quantum computing, and the Internet of Things (IoT).

- These technologies are set to redefine the IT landscape, with AI at their core, enabling smarter, faster, and more connected systems.

AI in Education

Advancements in AI Educational Tools:

- AI-driven platforms are providing adaptive learning experiences, capable of tailoring content to meet the unique needs of each student.

- The effectiveness of these tools is evident in improved engagement rates and measurable gains in student performance, with some programs reporting a reduction in dropout rates by as much as 20%.

Personalisation and Accessibility:

- Personalised learning algorithms are enabling students to learn at their own pace, receive instant feedback, and engage with material that matches their learning style and proficiency level.

- AI is breaking down barriers to education, offering language translation services and learning support for students with disabilities, thereby fostering an inclusive learning environment.

AI Adoption in Educational Institutions:

- Recent surveys indicate that over 47% of educational software used in schools now incorporates some form of AI.

- In higher education, about 60% of institutions have invested in AI systems for purposes ranging from admissions processes to personalised learning pathways for students.

- The use of AI in education is expected to grow by 45% annually, reflecting the increasing trust and reliance on AI to deliver educational content and administration.

AI's Impact on Other Sectors

Below is a table of the estimated additional gross value that AI is predicted to create on each sector:

Industry	Baseline	Additional AI Contribution
Accommodation and Food Services	£1.2 trillion	£396.5 billion
Agriculture, Forestry, and Fishing	£449 billion	£174 billion
Arts, Entertainment and Recreation	£367 billion	£70.5 billion
Construction	£2.2 trillion	£421 billion
Education	£810 billion	£88 billion
Financial Services	£2.7 trillion	£932 billion
Healthcare	£1.8 trillion	£373 billion
Information and Communication	£3 trillion	£770 billion
Manufacturing	£6.8 trillion	£3 trillion
Other Services	£443 billion	£77 billion
Professional Services	£6 trillion	£1.5 trillion
Public Services	£3.2 trillion	£800 billion
Social Services	£875 billion	£175 billion
Transportation and Storage	£1.7 trillion	£603 billion
Utilities	£780 billion	£246 billion
Wholesale and Retail	£5 trillion	£1.8 trillion

Business Models of Artificial Intelligence Market

The AI industry report explores different business models in the AI market, highlighting innovative approaches based on artificial intelligence.

AI Saas Product Vendor

- Create and support AI applications and services tailored for specific industries or use cases.

- Provide a scalable and user-friendly platform that allows customers to utilize AI capabilities without requiring extensive technical knowledge.

AI Platform Vendor

- Provide a comprehensive set of tools, frameworks, and services to support every stage of AI development.

- Empower developers and organizations to utilize the platform's capabilities for building and deploying AI models at a large scale.

AI Licensing and Intellectual Property Vendor

- Includes developing, licensing, and monetizing AI technologies and intellectual property assets.

- Utilizes intellectual property assets to generate revenue and foster innovation in the AI market.

AI Technical Consulting Vendor

- Provide a variety of services such as AI strategy development, implementation planning, algorithm design, and model deployment.

- Bridges the gap between AI expertise and client needs, facilitating successful adoption of AI technologies.

AI Management Consulting Vendor

- Provide expertise in assessing organizational readiness, optimizing business processes, and developing AI implementation plans.

- Focus on driving organizational transformation and maximizing the value of AI investments.

AI Research and Development Vendor

- Invest in research and development (R&D) to discover new algorithms, models, and applications.

- Focus on driving innovation and shaping the future of the AI industry.