Gen AI in Software Development Market - Global Outlook & Forecast 2025-2030

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Report description:

The global generative AI in software development market is expected to grow at a CAGR of 16.71% from 2024 to 2030.

GENERATIVE AI IN SOFTWARE DEVELOPMENT MARKET TRENDS & DRIVERS

Multimodal Generative AI Powering the Next Wave of Growth

Multimodal AI, which processes and understands different types of data such as text, images, audio, and video, is playing a major role in transforming industries by enhancing content creation, audience engagement, and search capabilities. It combines advanced technologies such as NLP, computer vision, speech recognition, machine learning, and LLMs to provide a deeper understanding of information, enabling more personalized and efficient user experiences. This powerful technology is closely connected to Gen AI, as many Gen AI tools rely on multimodal capabilities to deliver high-quality results. For instance, tools that generate images or videos from written prompts, or those that convert voice to text and create multimedia content, use multimodal models to operate effectively. As a result, Gen AI becomes more adaptable and valuable across industries. In today's business landscape, multimodal Gen AI is fueling market growth by helping companies create engaging content, automate tasks, and improve decision-making. In marketing, for example, AI can quickly generate ad copy, visuals, and video content. In healthcare, it assists doctors by analyzing images and patient records at once. The education sector benefits from AI-powered platforms that produce interactive lessons with text, video, and audio. Meanwhile, customer support systems are becoming smarter, understanding both text and images shared by users. These practical applications are pushing more organizations to invest in Gen AI software, accelerating market expansion.
The impact of multimodal Gen AI on the future is significant. It will enable more intelligent virtual assistants that can read, listen, and see, allowing users to communicate through voice, visuals, and text all at once. It will also boost creativity, helping writers, designers, and content creators produce richer outputs. Businesses will be able to analyze data faster and more accurately, leading to quicker, better decisions. Personalized digital experiences will become the norm, as apps and services adapt in real-time to a user's actions and preferences. Several key trends are emerging in the gen-AI software development market, including the integration of text and images, the rise of AI-generated video, real-time multimodal interactions, multilingual

support, and a growing focus on ethical AI use and data privacy. The growing influence of multimodal AI is making generative AI more powerful, flexible, and widely adopted. As the technology continues to evolve, it is set to reshape the way people live, work, learn, and communicate, driving long-term growth in the generative AI software development market and opening up exciting new possibilities across industries.

Generative AI and Cloud Storage Shape the Next Frontier of Digital Transformation

In 2024, the powerful combination of Generative AI and cloud storage is reshaping digital transformation across industries. Tools such as ChatGPT, DALL?E, and Synthesia are creating large volumes of text, images, videos, and code, driving the need for scalable and secure cloud platforms. Companies such as Microsoft, Google, and Amazon are enhancing their cloud services to support these AI workloads. For example, Microsoft's USD 13 billion investment in OpenAI has brought AI tools into Azure, making advanced AI accessible to more users.
This synergy helps businesses work faster and smarter-marketing teams can auto-generate campaigns, developers can build code quicker, and educators can create interactive content more easily. With the rise of hybrid and multi-cloud strategies, businesses can also maintain control over performance, cost, and data privacy. As cloud platforms continue to evolve, they're making AI tools more widely available and user-friendly. In short, the integration of Gen AI and cloud storage is not just boosting market growth-it is paving the way for a more efficient, intelligent, and accessible digital future.

Large Language Models (LLMs) Fuel the Next Wave of Growth in Gen-AI Software Development Market

LLMs such as OpenAI's GPT-4, Google's Gemini, Meta's LLaMA 2, and Anthropic's Claude are now at the heart of the growing gen-AI software development market. These advanced models are capable of doing things that once seemed impossible for machines, such as writing content, generating images, creating code, answering questions, and even making music. Thanks to these abilities, LLMs are becoming essential tools for businesses, developers, and creators across industries. Companies are using them to automate tasks, improve customer experiences, and develop innovative products faster and more efficiently.
This shift is pushing the demand for flexible and easy-to-integrate Gen AI software development solutions. As more organizations adopt these tools, Gen AI is moving from being just an experimental technology to a core part of how businesses operate. This change is not only driving market growth but also shaping the future of work, communication, and content creation. Going forward, we'll see more personalized and intelligent applications, smarter business operations, and new revenue models-all powered by LLMs. In short, LLMs are fueling the next big leap in Gen AI software, making it more powerful, useful, and widespread than ever before.

GENERATIVE AI IN SOFTWARE DEVELOPMENT MARKET SEGMENTATION INSIGHTS

INSIGHTS BY COMPONENT

In the gen-AI software development market, the component segment is divided into two key categories: solutions and services. Among these, the solution segment holds the dominant position, driven by the widespread adoption of AI-powered software across industries. The growing adoption of AI-powered solutions across various industries, including media & entertainment, BFSI, healthcare, IT & telecom, and gaming, has significantly driven the demand for generative AI software.
While multimodal generative AI models, which integrate text, image, and audio processing, are gaining traction due to their ability to handle complex AI-driven applications, LLMs continue to dominate due to their versatility, widespread adoption, and continuous improvements in NLU and generative reasoning. As a result, both LLMs and multimodal AI will co-exist, with LLMs remaining a stronghold in customer interactions, content creation, and enterprise automation, while multimodal solutions cater to industries requiring comprehensive AI capabilities across multiple data formats.

Segmentation by Component

-Solution
-Services

INSIGHTS BY DEPLOYMENT MODE

Cloud-based deployment is currently the most popular way to use generative AI software. This is because it is easy to set up, cost-effective, and can be scaled up quickly when needed. Many companies prefer cloud-based solutions since they do not need to invest in expensive hardware or infrastructure. Major cloud providers such as Amazon Web Services (AWS), Microsoft Azure, and Google Cloud offer ready-to-use generative AI tools, which have helped increase adoption across industries such as media, IT, marketing, and retail. Cloud-based tools also allow companies to get real-time updates, use the latest AI models, and work with teams from anywhere. Such factors have contributed to the cloud-based segmental growth in the global gen-AI software development market.
However, on-premise deployment is still important for organizations that need to keep their data safe and private. This is common in industries such as healthcare, banking, and government, where strict data regulations are in place. On-premise solutions give businesses full control over their data and systems but often require higher costs and technical support. Cloud-based generative AI will continue to lead the market due to its flexibility and lower costs, but on-premise solutions will also remain in use, especially in industries that prioritize data security and control.

Segmentation by Deployment Mode
-Cloud-based
-On-premises

INSIGHTS BY TECHNOLOGY

The gen-AI software development market by technology is segmented into generative adversarial networks, transformer-based Gen AI software, variational auto-encoders, diffusion networks, and others. GANs continue to dominate the generative AI software development market due to their ability to create highly realistic images, videos, and synthetic data. GANs leverage two competing neural networks, a generator and a discriminator, to refine outputs and enhance image synthesis, deepfake generation, and data augmentation across industries such as media & entertainment, fashion, gaming, and healthcare. Their capability to generate high-quality synthetic content has made them the backbone of AI-powered content creation, style transfer, and automated image enhancement.
While transformers have revolutionized NLP and text-based AI models, and Diffusion Networks are gaining traction in AI-generated art and high-resolution image synthesis, GANs remain dominant in generative AI applications that require high-fidelity visual outputs, data simulation, and creative AI-driven design solutions. As a result, GANs will continue to lead the generative AI software development market, shaping the future of AI-driven content generation.

Segmentation by Technology
-Generative Adversarial Networks
-Transformer-based Gen AI Software
-Variational Auto-Encoders
-Diffusion Networks
-Others

INSIGHTS BY MODEL

The generative AI software development market by model is segmented into large language models, image & video generative models, multi-modal generative models, and others. LLMs continue to dominate the generative AI software development market

due to their unparalleled advances in NLP, text generation, and conversational AI. LLMs, such as GPT, BERT, and LLaMA, have transformed the way businesses engage with AI by enabling highly coherent text generation, content summarization, machine translation, and contextual chatbots.
Industries including media & entertainment, IT & telecom, BFSI, and healthcare rely heavily on LLMs for automated content creation, intelligent virtual assistants, and sentiment analysis. While image & video generative models and multi-modal generative models are rapidly evolving, LLMs remain the dominant force, driving innovation in AI-driven customer interactions, enterprise automation, and multilingual AI applications. The continuous development of more powerful, scalable, and fine-tuned LLMs will further strengthen their leadership in the generative AI ecosystem.

Segmentation by Model
- Large Language Models
- Image & Video Generative Models
- Multi-modal Generative Models
- Others

INSIGHTS BY END-USER

Enterprises dominate the global gen-AI software development market by end-users as businesses increasingly rely on AI for automation, content generation, customer engagement, and data-driven decision-making. Enterprises use generative AI for tasks such as marketing automation, product design, financial modeling, and personalized customer interactions, driving efficiency and innovation across industries such as retail, healthcare, finance, and technology. Their large-scale adoption and investment in AI-powered tools make them the primary drivers of market growth. While individuals use generative AI for creative projects, content generation, virtual assistance, and learning, enterprise adoption remains dominant due to higher scalability, demand for automation, and integration into business operations. As businesses continue to explore AI-driven efficiencies, enterprises will shape the future of the gen-AI software development market.

Segmentation by End Users
- Enterprise
- Individual

INSIGHTS BY ENTERPRISE

The media & entertainment segment continues to dominate the global gen-AI software development market, driving innovation in content creation, video editing, scriptwriting, animation, and special effects. With the increasing demand for hyper-realistic AI-generated content, automated dubbing, deepfake technology, and personalized media experiences, generative AI is transforming how films, advertisements, and digital experiences are produced. Moreover, streaming platforms, production houses, and gaming studios are integrating Gen AI-powered tools for automated voiceovers, AI-driven storytelling, virtual influencers, and AI-generated music, reducing production costs and enhancing creativity. As AI-driven media personalization and real-time content generation gain momentum, generative AI adoption in media & entertainment is set to redefine audience engagement, immersive experiences, and digital content landscapes.

Segmentation by Enterprise
- Media & Entertainment
- BFSI
- IT & Telecommunication
- Healthcare
- Automotive & Transportation

-Gaming
-Others

GENERATIVE AI IN SOFTWARE DEVELOPMENT MARKET GEOGRAPHICAL ANALYSIS

The global gen-AI software development market is witnessing rapid expansion across major regions, driven by advances in AI, increasing adoption across industries, and continuous investments in AI infrastructure. The gen-AI software development market's growth trajectory is influenced by regional technological capabilities, regulatory frameworks, industry demand, and AI-related research and development (R&D) initiatives. North America continues to dominate the gen-AI software development market, fueled by strong AI ecosystems, heavy investments from tech giants, and early adoption of AI technologies. The generative AI software development market in North America is expected to grow with the fastest CAGR of 18.11% during the forecast period. The presence of leading AI companies, cloud service providers, and research institutions in the US and Canada strengthens the region's position. The widespread integration of Gen AI in media, BFSI, healthcare, and IT sectors, coupled with government support for AI innovation, is accelerating market growth. In addition, venture capital funding and corporate investments in AI-driven startups further enhance the market landscape.
Europe is emerging as a key player in the gen-AI software development market, with countries such as the UK, Germany, and France leading AI adoption. The region benefits from strong regulatory frameworks promoting responsible AI, increasing R&D investments, and demand for AI-driven automation in financial services, automotive, and industrial applications. European organizations are leveraging Gen AI for multilingual NLP, generative design, and advanced analytics, while EU policies focus on ethical AI development and data privacy regulations.
APAC is experiencing exponential growth in the gen-AI software development market, led by China, Japan, India, and South Korea. APAC's booming tech ecosystem, rapid digitalization, and strong government initiatives for AI and automation contribute to the rising demand for generative AI software. China, in particular, is investing heavily in LLMs, AI-powered robotics, and deep learning innovations, making it a global leader in AI development. Meanwhile, India's IT and telecom sectors are rapidly integrating AI-driven applications, fueling gen-AI software development market expansion.
Latin America is witnessing the growing adoption of generative AI software as businesses across BFSI, media, and retail leverage AI-powered automation and customer engagement solutions. Countries such as Brazil and Mexico are at the forefront, with increasing AI-driven chatbots, intelligent virtual assistants, and predictive analytics tools transforming industries. While AI infrastructure is still developing, the demand for AI-powered solutions is steadily rising in the digital banking, e-commerce, and entertainment sectors and supporting the generative AI software development market growth.
The Middle East & Africa (MEA) region is seeing a gradual increase in Gen AI adoption, driven by smart city projects, government AI strategies, and investments in digital transformation. The UAE and Saudi Arabia are spearheading AI-led innovation, leveraging generative AI in media, finance, and public services. With growing cloud adoption, AI-driven automation in oil & gas, and a shift toward AI-powered healthcare solutions, the region is poised for steady growth. However, challenges such as limited AI talent and infrastructure gaps may impact adoption rates. Overall, the generative AI software development market is expanding globally, with North America and APAC leading in innovation and adoption, while Europe focuses on regulatory AI frameworks, and Latin America and MEA gradually integrate AI solutions across industries.

-North America
o The U.S.
o Canada
-APAC
o China
o Japan
o India
o Australia
o South Korea

o Singapore
o Malaysia
- Europe
o Germany
o France
o The U.K.
o Italy
o Russia
o Norway
o Spain
o Denmark
o Poland
- Latin America
o Brazil
o Argentina
o Mexico
- Middle East & Africa
o UAE
o Saudi Arabia
o South Africa

GENERATIVE AI IN SOFTWARE DEVELOPMENT MARKET VENDOR INSIGHTS

The global gen-AI software development market is highly competitive, driven by continuous advances in AI models, increasing enterprise adoption, and investments from leading tech companies. Key players such as OpenAI, Google DeepMind, Microsoft, Meta, Anthropic, AWS, IBM Watson AI, Cohere, and Stability AI dominate the gen-AI software development market through LLMs, image & video generation models, and AI-driven automation tools. Cloud service providers such as AWS, Microsoft Azure, and Google Cloud play a crucial role in scaling AI adoption by offering cost-effective, high-performance Gen AI solutions.
The competition in the global gen-AI software development market is fueled by product innovations, industry-specific AI solutions, and ethical AI development, as companies strive to enhance model accuracy, reduce bias, and comply with regulations. Strategic partnerships, acquisitions, and AI research collaborations further intensify the competitive landscape. With North America and APAC leading AI adoption, and Europe enforcing strict AI regulations, the market is poised for rapid growth, transforming industries such as media & entertainment, BFSI, healthcare, IT, and gaming. As Gen AI continues to evolve, the competitive dynamics will push companies to refine multimodal AI capabilities, improve efficiency, and expand global reach.

Global Generative AI in Software Development Market Latest News & Developments

- In January 2024, Synopsys announced its intention to acquire engineering software company Ansys for USD 35 billion. This move aimed to enhance Synopsys' prominence in simulation software and systems design, catering to industries such as chip design, automotive, and aerospace. The acquisition is expected to close in the first half of 2025, pending regulatory approvals and other customary closing conditions. The transaction has already received approval from the European Commission, albeit with conditions related to the divestment of certain software assets to ensure fair competition in the market.
- On October 30, 2024, Altair announced a definitive agreement to be acquired by Siemens for USD 10.6 billion. Siemens completed the acquisition of Altair Engineering Inc. on March 26, 2025, for an enterprise value of approximately $10.6 billion. This strategic move enhances Siemens' capabilities in simulation, high-performance computing, data science, and artificial intelligence. The integration of Altair's technology into Siemens' Xcelerator platform is expected to create the world's most comprehensive AI-powered design, engineering, and simulation portfolio.

Key Company Profiles
- Adobe Inc.
- Amazon Web Services, Inc.
- OpenAI
- Anthropic
- Meta
- Microsoft
- NVIDIA

Other Prominent Vendors
- IBM
- Cohere Inc.
- Mistral AI
- Hugging Face
- Salesforce
- Stability AI
- Character.AI
- Baidu
- Alibaba DAMO Academy
- D-ID
- MOSTLY AI Inc
- Rephrase.ai
- Synthesia
- Grammarly
- Jasper AI
- Copy.ai
- SoundHound AI
- Runway AI, Inc
- Descript
- Replit
- Notion Labs, Inc
- Perplexity AI
- Writer.ai

KEY QUESTIONS ANSWERED:

1. How big is the global gen-AI software development market?
2. What is the growth rate of the global gen-AI software development market?
3. What are the significant trends in the gen-AI software development market?
4. Which region dominates the global gen-AI software development market share?
5. Who are the key players in the global gen-AI software development market?

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