

# **AI Code Tools Market by Offering (Tools (Technology (ML, NLP, Generative AI), Deployment Mode) and Services), Application (Data Science & Machine Learning, Cloud Services & DevOps, Web Development), Vertical and Region - Global Forecast to 2028**

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## **Abstracts**

The global AI code tools market is valued at USD 4.3 billion in 2023 and is estimated to reach USD 12.6 billion by 2028, registering a CAGR of 24.0% during the forecast period. The driving factor behind the rapid adoption and advancement of AI code tools, particularly generative AI coding tools, lies in the transformative impact they have on software development. These tools are ushering in a new era of AI-assisted engineering workflows, enabling developers to code more efficiently and productively. With the emergence of generative AI coding tools, developers receive code suggestions and even entire functions by simply using natural language prompts or working with existing code. These innovations are quickly altering the coding landscape.

The tools segment is projected to hold the largest market size during the forecast period

AI code tools, often referred to as AI code generators, have revolutionized software development by incorporating artificial intelligence and machine learning into the coding process. These tools are designed to assist developers in writing, optimizing, and managing code efficiently. They offer a wide range of functionalities, from code autocompletion and suggestions to automated testing, code review, and even code generation. AI code tools have significantly increased developers' productivity, enabling them to work faster and more effectively. These tools hold the potential to transform the future of software development by making it more accessible, efficient, and error-free.

By Technology, Machine Learning Segment is registered to grow at the highest CAGR during the forecast period

AI code tools, specifically within the domain of machine learning, encompass a dynamic set of technologies, including deep learning, recurrent neural networks (RNNs), and long short-term memory (LSTM) networks. Deep learning techniques delve into the intricate layers of neural networks to extract complex patterns, making them ideal for tasks like image recognition and natural language processing. RNNs and LSTMs, on the other hand, excel in sequential data analysis, allowing for tasks such as time series forecasting and language modeling. These AI code tools in the realm of machine learning form the backbone of intelligent systems, enabling data-driven decision-making and the development of applications that can understand, learn from, and respond to intricate real-world data.

Asia Pacific is projected to witness the highest CAGR during the forecast period.

The Asia-Pacific region stands as a dynamic powerhouse of economic strength and technological advancement, poised to contribute a substantial 70% of global growth in 2023, surpassing other regions. As the region holds more than 50% of the world's population, any technological shifts like those being heralded by AI are expected to shape the future of the region. Many Asian countries such as China, India, Japan, and others are leveraging information-intensive AI technologies, with conversational AI being one of the leading technology trends. Countries like China, Japan, South Korea, India, and Singapore are heavily investing in artificial intelligence (AI), positioning the APAC region as the world's fastest-growing AI market. This emphasis on AI offers vast growth potential and innovation opportunities for software companies.

#### Breakdown of primaries

In-depth interviews were conducted with Chief Executive Officers (CEOs), innovation and technology directors, system integrators, and executives from various key organizations operating in the AI code tools market.

By Company: Tier I: 35%, Tier II: 45%, and Tier III: 20%

By Designation: C-Level Executives: 35%, Directors: 25%, and Others: 40%

By Region: North America: 45%, Asia Pacific: 30%, Europe: 20%, RoW: 5%

Major vendors offering AI code tools and services across the globe are IBM (US), Microsoft (US), Google (US), AWS (US), Salesforce (US), Meta (US), OpenAI (US), , Tabnine (Israel), Replit (US), Sourcegraph (US), Moolya (India), Snyk (US), CircleCI (US), JetBrains (Czech Republic), AdaCore (France), WingWare (US), Datadog (US), Lightning AI (US), Kodezi (US), Sourcery.AI (England), CodeWP (US), SinCode AB (Sweden), SQLAI.ai (Germany), Seek AI (US), Enzyme (US), Assistiv.ai (Germany), CodiumAI (Israel), MutableAI (US), Judini (US), and Safurai (Italy).

## Research Coverage

The market study covers AI code tools across segments. It aims at estimating the market size and the growth potential across different segments, such as offering, application, vertical, and region. It includes an in-depth competitive analysis of the key players in the market, along with their company profiles, key observations related to product and business offerings, recent developments, and key market strategies.

## Key Benefits of Buying the Report

The report would provide the market leaders/new entrants in this market with information on the closest approximations of the revenue numbers for the overall market for AI code tools and its subsegments. It would help stakeholders understand the competitive landscape and gain more insights better to position their business and plan suitable go-to-market strategies. It also helps stakeholders understand the pulse of the market and provides them with information on key market drivers, restraints, challenges, and opportunities.

The report provides insights on the following pointers:

Analysis of key drivers (Rapid advancements in generative AI is revolutionizing software development, Increased efficiency and productivity with AI code tools, Need to assist developers in tackling complex coding tasks, Transformative shift in the roles of software developers), restraints (Presence of inaccuracies and limitations in AI-generated code poses a significant restraint and Overreliance on AI code tools to hinder the problem-solving abilities), opportunities (Evolution of Application Development with AI-Powered Virtual Developers, Unlocking Innovation through Augmented Software Development (ASD), Emergence of Prompt Engineering in Software Industry), and challenges (Legal and Ethical

Complexities in AI Code Tools, Security challenges faced in AI coding tools, Concerns for biasness in the code generated) influencing the growth of the AI code tools market

Product Development/Innovation: Detailed insights on upcoming technologies, research & development activities, and new product & service launches in the AI code tools market.

Market Development: Comprehensive information about lucrative markets – the report analyses the AI code tools market across varied regions.

Market Diversification: Exhaustive information about new products & services, untapped geographies, recent developments, and investments in AI code tools market strategies; the report also helps stakeholders understand the pulse of the AI code tools market and provides them with information on key market drivers, restraints, challenges, and opportunities.

Competitive Assessment: In-depth assessment of market shares, growth strategies and service offerings of leading players such as IBM (US), Microsoft (US), Google (US), AWS (US), Salesforce (US), Meta (US), OpenAI (US) among others in the AI code tools market.

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