



SAM ALTMAN, CEO OPEN AI

## ChatGPT or Deepseek

*The Cloud investigates potentially damning allegations from tech industry leaders who suggest the invasive LLM market monopoly of proprietary ChatGPT from OpenAI & Microsoft is now over*

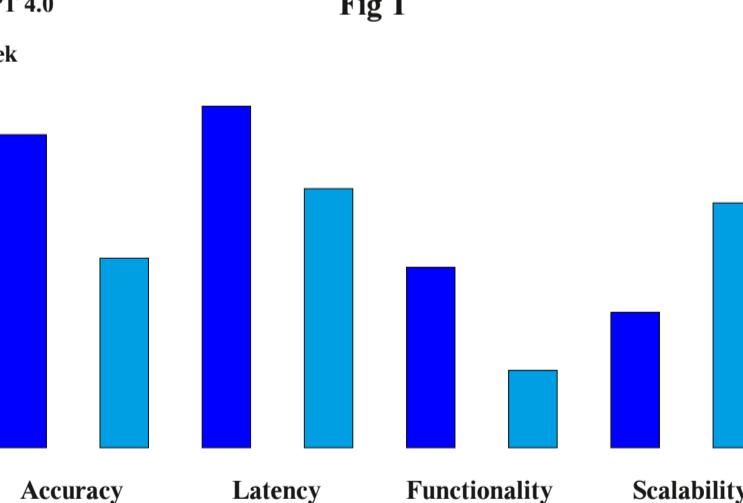
In today's digital landscape, choosing the right AI writing assistant offers significant benefits in terms of productivity and creativity. While platforms like OpenAI offer their globally renowned ChatGPT LLM, others provide open-source alternatives that might better suit the daily requirements of AI LLM assistant users. This article aims to help readers decide to procure a ChatGPT subscription or opt for a DeepSeek

open-source LLM for everyday use. Known for its versatility, ChatGPT excels in areas like text re-generation & query based reasoning that encapsulates a broad range of diverse subjects. Even prose, poetry, song and music composition is possible. Access to premium features requires a monthly subscription; however, basic use of ChatGPT is free of charge. The model is portable across devices but hindered by Internet connectivity

inter-dependency issues. DeepSeek on the other hand is, in layman terms, very similar in terms of performance characteristics to ChatGPT, but offers significant enhancements in niche areas specifically associated with open-source software. DeepSeek is free to download and install. Open-source software often offers considerable financial savings, especially in comparison to commercially licensed software.

To fairly assess, analyze, effectively determine and interpolate a pre-determined array concerning key strategic strengths and weaknesses, that should be considered when cross referencing data from unrelated sources in order to validate a decision indicating whether or not a proprietary or open-source AI model would be more suitable for everyday use. The comparison of five standard variables of significant importance should be initiated prior to considering implications arising from cost price analysis. If benchmark testing has been unanimously considered by analysts to be the preferred method of conceptualizing raw data into an understandable format, specifically where software is concerned, then by its very nature, the data must be methodically collated, edited and presented in order to enhance the effective summarization of empirical test results. This can often be achieved by incorporating popular mathematical data visualization tools that provide results that are easier to interpret. For example, incorporation of diagrams, graphs, or charts into a report.

ChatGPT 4.0  
DeepSeek



## Key Observations

Our criterion for assessment in this particular instance is bar chart based critical path analysis. This method significantly simplifies identification of trends congruent with summarization of the performance characteristics of a specific AI model. In retrospect, our comparison involves analyses of results derived from benchmark testing of multiple LLM's. Key observations show ChatGPT outperformed Deepseek slightly in terms of latent speed. It is generally perceived as being more user friendly than DeepSeek, thereby

making it more suitable for quick, less data intensive operations. DeepSeek shows better results regarding scalability in comparison to ChatGPT, making it more efficient for large-scale operations. DeepSeek's LLM's are considered open-source, specifically DeepSeek-R1. It was released under an MIT license granting users freedom to use, modify, and distribute it, thereby giving DeepSeek a significant advantage over proprietary AI models where access to source code and its distribution is strictly prohibited without a license.

## Benchmark Test Results

*Unbiased quantitative and qualitative analysis conclusively indicates that DeepSeek is the undisputed leader in terms of AI LLM's*

By EDEN LATTIBEAUDIERE

Based on the final analysis resulting from a benchmark test comparison between ChatGPT and DeepSeek Artificial Intelligence Large Language Models, ChatGPT initially emerges as the best AI assistant for everyday use due to its broad applicability, accessibility and portability. While it may not require a learning curve as steep as DeepSeek, ChatGPT's versatility and effectiveness make for a strong contender as the best overall AI assistant of choice for most users. Understanding the unique characteristics of each individual Large Language Model empowers users to make informed decisions based on their own personal requirements, whether they be business, personal or otherwise. Where investment of time and money are a defining factor, the right choice depends on balancing functionality with budgetary constraints. Does evidence suggest opting for the flexibility of ChatGPT or the precision and considerable savings offered by the free, open-source DeepSeek LLM? Will cost remain a major defining factor in the long term adoption of a specific AI assistant? It must be taken into consideration that the most significant barrier to entry for any organization or individual considering how to leverage the considerable benefits and advantages posed by AI based technologies, not only locally but also regionally or even on a national scale, is cost. Education, with time and effort is a significantly easier obstacle to overcome than those encountered solely by financial

constraints. Especially where a marginalized demographic with limited resources and restricted access to technologically and autocratically led advanced learning and educational institutions is concerned. Financial constraints will always be and have always been a fundamentally and significantly more limited resource than access to technological innovations and training, especially with the emergence of the Internet. With regard to technological innovation, new technologies will continue to emerge to relegate the old to history and financial investment will continue to exponentially increase as quickly as the adoption of the technological innovation itself. It is clear to say that ChatGPT held sway during the earlier stages of the product development life-cycle, then as growth transitioned to maturity, it ultimately relinquished market dominance to the open-source DeepSeek Large Language Model. The reasons for ChatGPT's demotion in terms of its relevance in the AI LLM industry becomes evident following a clear assessment of the detailed analyses provided in this report. An additionally important defining factor has been the emergence of frameworks such as Ollama and Microsoft ONNX that provide platforms that support installation of AI LLM's at a local level and require technology that is significantly easier and cheaper to resource and configure than AI technologies requiring the massive amounts of memory and computing power found in data centers populated with powerful servers and workstations operating on high speed fiber networks.

## Sourcing DeepSeek R1 LLM

The Ollama AI Large Language Model Framework is required to run the latest DeepSeek R1 LLM locally on a laptop or personal computer. Ollama can be downloaded for free from <https://ollama.com/download>.

The latest open-source, distilled DeepSeek R1 LLM is available as a free download for Windows, Mac or Linux from <https://ollama.com/library/deepseek-r1>.

The DeepSeek AI Assistant for Android can be downloaded and installed from [https://play.google.com/store/apps/details?id=com.deepseek.chat&hl=en\\_ZA&pli=1](https://play.google.com/store/apps/details?id=com.deepseek.chat&hl=en_ZA&pli=1). If you require a DeepSeek API Key for developing DeepSeek applications, visit

<https://platform.deepseek.com/> to retain an API key for free. An API key permits developers to access the functions associated with the open-source DeepSeek Application Programming Interface (API). The API permits access to a suite of functions that cost thousands of dollars where other AI LLM's are concerned.



LIANG WENGFENG, OWNER OF DEEPSEEK

# Copilot in The Cloud wi

In the shifting terrain of modern technology, the software industry stands on the cusp of another revolution. It's not about new programming languages or the latest framework to emerge from Silicon Valley. It's about intelligence — artificial intelligence. And at the heart of this transformation sits Microsoft Copilot, a tool that promises to change how code is written, reviewed and deployed across the globe. Copilot, developed by OpenAI and integrated deeply into Microsoft's ecosystem, has already sparked enthusiasm and apprehension in equal measure. It's an AI-powered assistant designed to

**Write code faster and smarter with GitHub Copilot powered by ChatGPT. Get real-time suggestions, complete functions and boilerplate tests with ease**

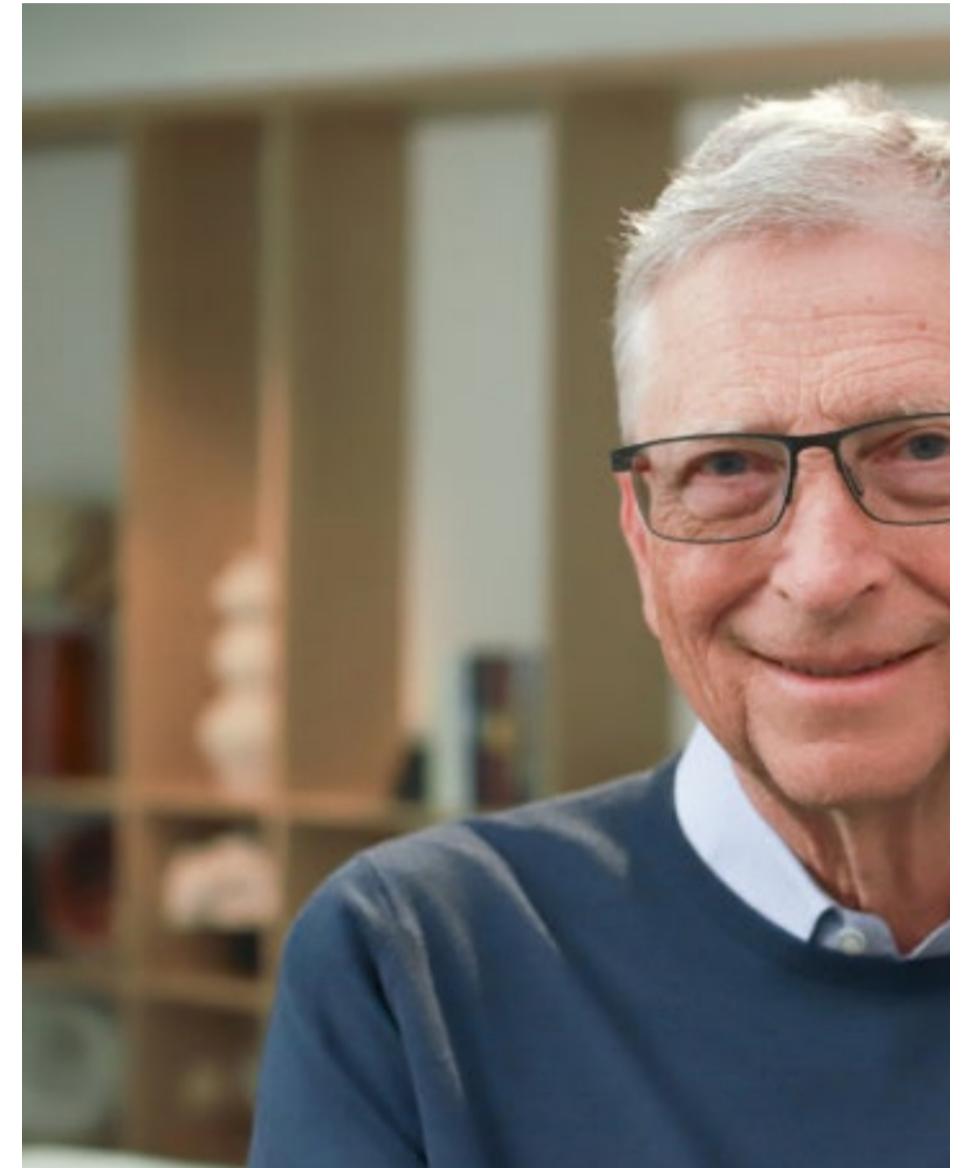
support developers through every step of the coding process — from the mundane to the complex. And as businesses race to digitize and developers face mounting pressure to deliver faster, smarter, cleaner code. Copilot may be the game-changer they've been waiting for. Until recently, writing code was a solitary, often tedious task. Developers spent hours scanning documentation, debugging errors and rewriting functions for the hundredth time. Enter Copilot — a tool that acts less like an auto-complete engine and more like a thinking partner. At its core, Microsoft Copilot is powered by ChatGPT, one of the most advanced Large Language Models in the world. For many developers, especially those new to the field, Copilot reduces the learning curve. It suggests best practices, helps interpret cryptic error messages and shortens the time between idea and execution. For experienced programmers, it offloads the repetitive work, allowing them to focus on architectural decisions and innovation. But it doesn't work in isolation. Copilot thrives in

environments where connectivity, collaboration and cloud are part of the workflow — which brings us to the modern developer's digital workspace. Today's software teams are global, remote and always online. This makes cloud computing not just convenient, but essential. Platforms like Microsoft Azure offer the scalable infrastructure necessary to support the massive computing power Copilot requires. In return, Copilot transforms the way developers interact with cloud platforms. Consider a team of engineers working from three different continents. In a pre-cloud world, they'd need local environments, version control headaches and constant sync-ups. Now, with Copilot running in cloud-based integrated development environments (IDE's), developers can share context instantly, build together in real time and deploy updates in seconds. Azure supports this integration through services like GitHub Codespaces, Azure DevOps and its robust API's. The result? An ecosystem where developers no longer just write code — they co-create with AI.

If the cloud is where development happens, then GitHub is where it's managed. Often called the "home of open-source", GitHub has evolved far beyond a simple version control system. It's now a dynamic collaboration hub for teams, enterprises and open-source contributors. Microsoft Copilot integrates directly into GitHub's workflow. This isn't just a matter of convenience; it represents a fundamental shift in the development process. By embedding Copilot into GitHub repositories, developers gain access to AI assistance during every commit, push and pull request. The integration allows for real-time suggestions during code reviews, automatic generation of test cases and even contextual explanations of legacy code. For large teams working on complex codebases, this kind of intelligence is invaluable and the benefits aren't purely theoretical. Enterprises already report significant gains in productivity, particularly in reducing time spent on code maintenance and documentation.

development timelines by cutting down the initial build time. The user experience of Copilot is intentionally seamless. Rather than working as a separate interface or application, it lives inside the tools developers already use — Visual Studio Code, JetBrains IDE's, GitHub and now integrated in Microsoft 365 for non-developers.

Its responses are contextual, responsive and increasingly accurate. Ask it to create a function to validate email addresses, and it provides one instantly. Ask it to explain what a complex snippet does and it will provide a natural language description. These capabilities have brought new possibilities into play; Copilot acts as a tutor for aspiring developers, answering questions and showing best practices in real time. Developers with disabilities can now interact with code in more flexible, less tactile ways. Teams can test ideas faster by letting Copilot generate skeleton applications or suggest API's to integrate. Yet, the impact of Copilot isn't just technical — it's cultural. In many companies, the role of the developer is being redefined. No longer seen as lone coders behind screens, today's developers are collaborators, problem-solvers and even storytellers. Copilot supports this shift by freeing developers from the mechanics of syntax and allowing them to focus on logic, structure and design. Moreover, the democratization of AI through tools like Copilot is making programming more accessible. You don't need 10 years of coding experience to build a robust application anymore. With the right prompts and a basic understanding of programming logic, AI can help fill in the gaps. Of course this raises questions, will Copilot make some developer roles obsolete? Will junior engineers lose out on the learning curve traditionally offered by trial and error? These are real concerns — and the industry must address them with thoughtful implementation and clear boundaries. In real world cases innovative companies are taking advantage of current technological advancements in Artificial Intelligence LLM assistants and experimenting with implementation of Microsoft Copilot in customer facing, fully operational production environments.

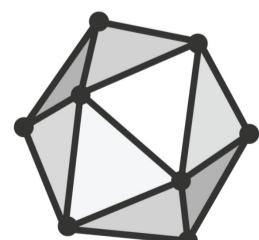


## Microsoft 365 Copilot



THOMAS DOHMKE, CEO, GITHUB

## ONNX AutoML Framework is now available and fully supported in Microsoft Azure



ONNX

ONNX (Open Neural Network Exchange) is an open standard for machine learning models that enables portability between different frameworks. Microsoft Azure supports ONNX through its Cognitive Services and Databricks MLflow, allowing developers to deploy trained

models efficiently within a cloud environment. ONNX models benefit from reduced file size, optimized performance via techniques like quantization and cross-platform compatibility. Azure's support for ONNX fosters easier collaboration across teams and

accelerates model deployment, making it a versatile choice for AI integration in monolithic systems. In essence, by incorporating ONNX and its runtime environment within a monolithic architecture, organizations can benefit from improved portability, stability and security.

# th Microsoft and Github



BILL GATES, CO-FOUNDER, MICROSOFT

Startups are using Copilot to accelerate MVP development, often completing weeks of work in a matter of days. Large enterprises are integrating it into CI/CD pipelines to catch bugs earlier and deploy faster. Even government agencies are exploring its use in modernizing legacy systems — a task traditionally mired in time and technical debt. For instance, a financial technology firm reported that Copilot helped reduce the time spent on writing unit tests by 40%. A healthcare provider used it to automate repetitive compliance code updates across multiple microservices. In all these cases, the takeaway is the same; when combined with human expertise, Copilot doesn't replace developers — it empowers them.

The challenges of AI-Driven development like any transformative technology, will undoubtedly impact Copilot.

One of the biggest concerns is data privacy. Because Copilot is trained on public code, there are ongoing debates about intellectual property and fair use. Microsoft has introduced measures to filter out sensitive or copyrighted code suggestions, but vigilance remains key. Another issue is accuracy. While Copilot is remarkably effective, it's not infallible. It can generate insecure code or suggest solutions that work technically but are inefficient or poorly aligned with architectural goals. Developers must remain the final authority — reviewing, refining and rejecting AI suggestions as needed. There's also a skills gap, not all developers are equipped to understand or verify what Copilot generates, especially if they're just starting out. This is where education, training and clear documentation must bridge the gap. AI as a standard development tool empowered software developers and

*Take your programming competency level to new heights with Github Copilot*

revolutionized programming in the 1980's and version control in the 2000's. By 2030 AI assistants are likely to become an integral part of every IOT device on the planet. What might this look like? AI is helping identify performance bottlenecks before they arise. AI-driven design reviews can even offer architectural suggestions and real-time language translation of code comments for multilingual teams. Voice-to-code development for 3D printer based engineering projects is also in development, the possibilities are endless, especially with recent advancements in quantum computing. In this envisioned future, developers are not just coders — they are AI orchestrators, guiding systems to create software faster, smarter and more securely than ever

before. The integration of Microsoft Copilot with Azure and GitHub isn't just about productivity — it's about rethinking what it means to develop software in the 21st century. We are witnessing a quiet revolution — one that doesn't scream headlines, but steadily redefines the foundations of modern software development. And, like all impactful societal, revolutionary paradigm shifts, it's not about man versus machine, but about man with machine. In an industry known for speed, Copilot represents a pause — a moment to rethink process, practice and possibility. As it continues to evolve, the true potential of Copilot lies not in the lines of code it can write, but in the space it frees for human creativity to flourish. Despite its advantages, there are challenges associated with using Copilot in conjunction with Azure and GitHub. Accessibility remains one issue; not all developers may have the necessary training to utilize advanced AI tools effectively. Additionally, while

Azure provides a robust cloud infrastructure as a basis for setting up integrations between Copilot and GitHub, more advanced technical expertise is still required to provide effective custom based solutions for individual organizations. Several companies have successfully implemented Copilot in their workflows. For instance, startups leveraging Copilot for rapid application development have reported significant productivity gains. Enterprises using Azure to host Copilot driven projects have experienced streamlined debugging processes, enhancing overall software quality. The future of AI integration with cloud platforms like Azure and version control systems such as GitHub is promising. As more businesses adopt AI-driven tools, we can expect further advancements in cross-platform integrations. This trend will likely lead to even more seamless collaboration environments, where developers can harness the power of AI across various stages of software development. Microsoft Copilot's integration with the cloud environment represents a significant change in how developers approach coding tasks. Its ability to assist with code generation, testing and debugging offers significant productivity gains, particularly for teams navigating complex projects. Meanwhile, GitHub's role as a collaborative hub complements these advancements by providing a seamless platform for version control and team coordination. Together, Microsoft Copilot and GitHub exemplify the power of AI in modern software development. By leveraging cloud-based technologies, developers can enhance their workflow, foster collaboration and drive innovation

at an unprecedented scale. As these tools continue to evolve, they promise to shape the future of software development, offering new opportunities for creativity and efficiency. Github's role in facilitating this integration underscores the broader impact of Copilot on the developer ecosystem. As Artificial Intelligence technology continues to evolve, especially with the introduction of OpenAI's ChatGPT 6.0, Microsoft Copilot will undoubtedly become an indispensable tool for modern software engineers, web developers, cloud computing architects and full stack developers.

 GitHub Copilot

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 Microsoft Copilot Studio

print('hello multiverse')



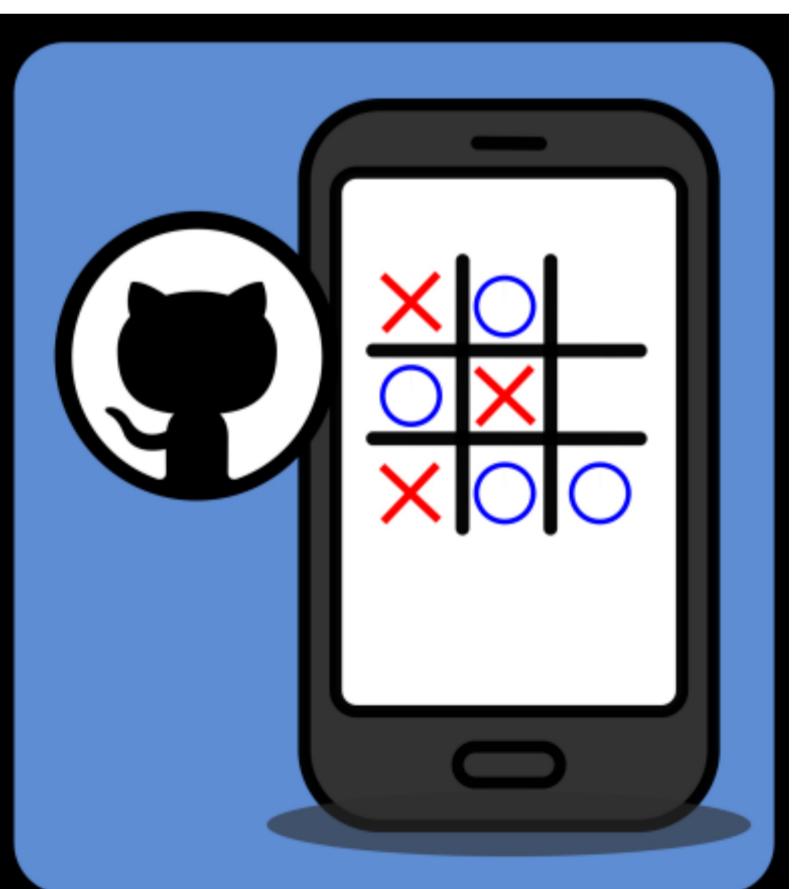
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## SCIENCE, TECHNOLOGY, ENGINEERING & MATHEMATICS (STEM)

**Course Title: Introduction to Artificial Intelligence, Python, GitHub and Copilot.**

**Episode One: Building a two player Tic-Tac-Toe game in Python with an AI Opponent upgrade.**

<https://github.com/skelphx/thecloud.git>



# Modus Operandi

SCIENCE, TECHNOLOGY, ENGINEERNG AND MATHEMATICS (STEM)

The technological revolution has brought about unprecedented growth in various sectors, with industries adapting to new innovations and demands. In 2025, the job market is projected to be even more dynamic, driven by advancements in artificial intelligence (AI), cloud computing, programming, web development, data warehousing and computer networking. These fields are not only expanding due to intrinsic demand but also because of the increasing reliance on digital technologies in everyday business operations. AI has become a cornerstone technology of the modern IT industry, with roles requiring machine learning engineers, data scientists, AI developers and AI specialists expecting to experience robust growth over the next decade. The demand for AI experts is expected to rise significantly in 2025, driven by the proliferation of data-driven applications across industries like healthcare, finance, retail and manufacturing.

According to industry reports, the global AI talent market is projected to grow at a compound annual growth rate (CAGR) of over 15% from 2025 to 2027. This growth will be fueled by the increasing need for organizations to leverage AI to optimize decision-making processes, automate tasks and enhance operational efficiency. Salaries for AI professionals are expected to rise due to premiums placed on specialized skills in this high-demand area. Machine

## 1. AI / Machine Learning Engineer

## 2. Cyber Security Consultant

## 3. Cloud Architect

## 4. Database Analyst

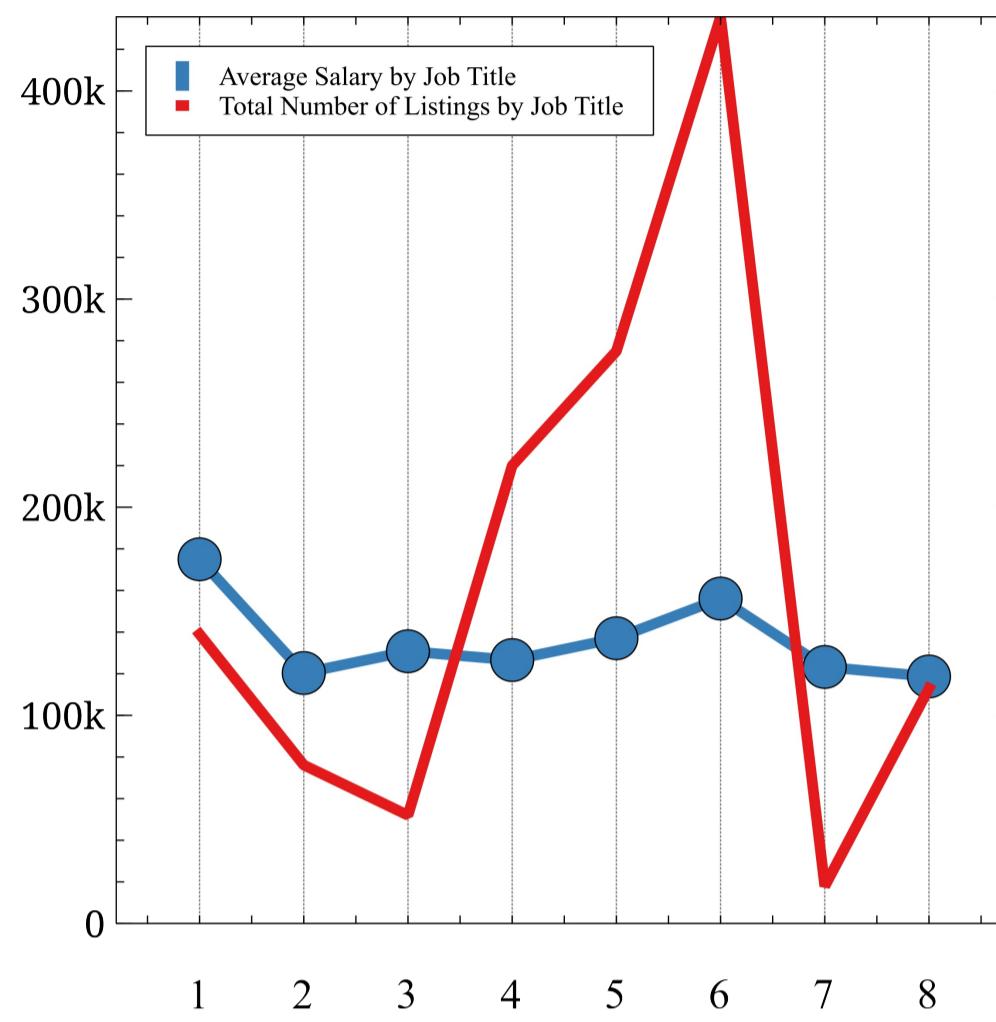
## 5. Web Developer

## 6. Programmer

## 7. Graphic Designer

## 8. Network Administrator

learning engineers with experience in deep learning frameworks like TensorFlow or PyTorch are expected to earn salaries ranging from \$120,000 to over \$150,000 per year. Data scientists working with big data or blob technologies such as Hadoop and Spark may command even higher salaries, depending on their expertise and industry. Cloud computing continues its rapid expansion, driven by companies seeking to optimize their operations through cloud-based solutions. Positions such as cloud architect, cloud engineer and senior cloud developer are expected to remain abundant, with salary ranges potentially expanding as the competition for skilled professionals intensifies. The global cloud computing market is projected to grow at a CAGR of 23% from 2025 to 2028, according to Gartner. This growth will be supported by the increasing adoption of cloud technologies in industries such as finance,



healthcare and e-commerce. Cloud engineers who can work with platforms like AWS, Azure and Google Cloud are expected to see consistent employment opportunities over the next five years. Salaries for cloud computing professionals are likely to reflect the growing complexity of cloud infrastructure roles. For example, cloud architects with expertise in designing scalable and secure cloud environments may earn upwards of \$150,000 per year, while cloud engineers working on day-to-day operations can expect salaries ranging from \$90,000 to over \$120,000.

increasing complexity of software applications and the need for developers to create robust, scalable and secure systems. Salaries for programming roles are likely to vary depending on the specific skill set and industry. For example, software developers with experience in full-stack development (combining front-end and back-end technologies) may earn salaries ranging from \$100,000 to over \$130,000 per year. Web application developers working with modern frameworks like React, Angular or Vue.js can expect salaries of around \$85,000 to \$120,000 annually, depending on their level of education and experience.

Web development, a critical component of digital marketing and e-commerce, is forecasted to experience steady job availability in 2025. Salaries for web developers may grow due to the increasing cost of living in tech-centric cities like San Francisco, Miami and New York, as well as the growing demand for industry professionals who have an in-depth understanding of complicated online computing processes. The global web development market is projected to reach \$14.3 billion by 2028, according to Statista. This growth will be supported by the increasing demand for web-based integration of AI API's. Cloud computing, programming, systems security, stack development, data analysis and computer networking continue to offer competitive salaries and a wide range of opportunities for professionals at all levels.



# ChatGPT-5