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What's New In Gartner's Hype Cycle For AI, 2020



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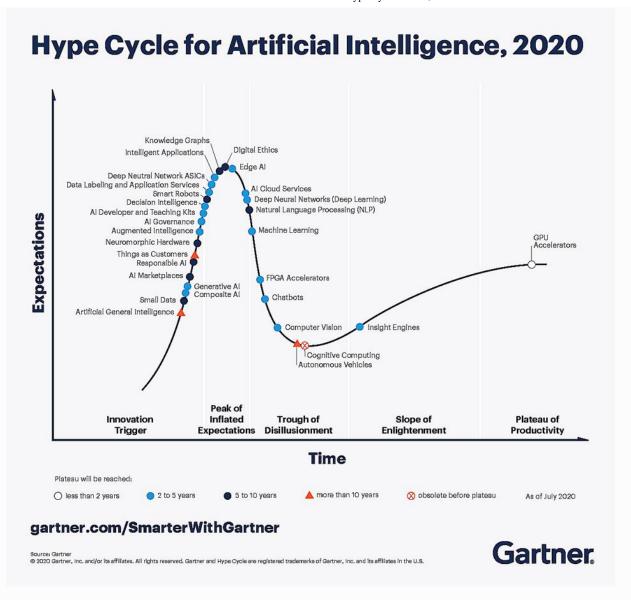


Al is starting to deliver on its potential and its benefits for businesses are becoming a reality GETTY

- 47% of artificial intelligence (AI) investments were unchanged since the start of the pandemic and 30% of organizations plan to increase their AI investments, according to a recent Gartner poll.
- 30% of CEOs own AI initiatives in their organizations and regularly redefine resources, reporting structures and systems to ensure success.

- AI projects continue to accelerate this year in healthcare, bioscience, manufacturing, financial services and supply chain sectors despite greater economic & social uncertainty.
- Five new technology categories are included in this year's Hype Cycle for AI, including small data, generative AI, composite AI, responsible AI and things as customers.

These and many other new insights are from the *Gartner Hype Cycle for Artificial Intelligence*, *2020*, published on July 27th of this year and provided in the recent article, **2** Megatrends Dominate the Gartner Hype Cycle for Artificial Intelligence, **2020**. Two dominant themes emerge from the combination of 30 diverse AI technologies in this year's Hype Cycle. The first theme is the democratization or broader adoption of AI across organizations. The greater the democratization of AI, the greater the importance of developers and DevOps to create enterprise-grade applications. The second theme is the industrialization of AI platforms. Reusability, scalability, safety and responsible use of AI and AI governance are the catalysts contributing to the second theme. The Gartner Hype Cycle for Artificial Intelligence, **2020**, is shown below:



SMARTER WITH GARTNER, 2 MEGATRENDS DOMINATE THE GARTNER HYPE CYCLE FOR ARTIFICIAL INTELLIGENCE, 2020.

Details Of What's New In Gartner's Hype Cycle for Artificial Intelligence, 2020

• Chatbots are projected to see over a 100% increase in their adoption rates in the next two to five years and are the leading AI use cases in enterprises today. Gartner revised the bots' penetration rate from a range of 5% to 20% last year to 20% to 50% this year. Gartner points to chatbot's successful adoption as the face of AI today and the technology's contributions to streamlining automated, touchless customer interactions aimed at keeping customers and employees safe. Bot vendors to watch include Amazon

Web Services (AWS), Cognigy, Google, IBM, Microsoft, NTT DOCOMO, Oracle, Rasa and Rulai.

- GPU Accelerators are the nearest-term technology to mainstream adoption and are predicted to deliver a high level of benefit according to Gartner's' Priority Matrix for AI, 2020. Gartner predicts GPU Accelerators will see a 100% improvement in adoption in two to five years, increasing from 5% to 20% adoption last year to 20% to 50% this year. Gartner advises its clients that GPU-accelerated Computing can deliver extreme performance for highly parallel compute-intensive workloads in HPC, DNN training and inferencing. GPU computing is also available as a cloud service. According to the Hype Cycle, it may be economical for applications where utilization is low, but the urgency of completion is high.
- AI-based minimum viable products and accelerated AI development cycles are replacing pilot projects due to the pandemic across Gartner's client base. Before the pandemic, pilot projects' success or failure was, for the most part, dependent on if a project had an executive sponsor and how much influence they had. Gartner clients are wisely moving to minimum viable product and accelerating AI development to get results quickly in the pandemic. Gartner recommends projects involving Natural Language Processing (NLP), machine learning, chatbots and computer vision to be prioritized above other AI initiatives. They're also recommending organizations look at insight engines' potential to deliver value across a business.
- Artificial General Intelligence (AGI) lacks commercial viability today and organizations need to focus instead on more narrowly focused AI use cases to get results for their business. Gartner warns there's a lot of hype surrounding AGI and organizations would be best to ignore vendors' claims of having

commercial-grade products or platforms ready today with this technology. A better AI deployment strategy is to consider the full scope of technologies on the Hype Cycle and choose those delivering proven financial value to the organizations adopting them.

- Small Data is now a category in the Hype Cycle for AI for the first time. Gartner defines this technology as a series of techniques that enable organizations to manage production models that are more resilient and adapt to major world events like the pandemic or future disruptions. These techniques are ideal for AI problems where there are no big datasets available.
- Generative AI is the second new technology category added to this year's Hype Cycle for the first time. It's defined as various machine learning (ML) methods that learn a representation of artifacts from the data and generate brand-new, completely original, realistic artifacts that preserve a likeness to the training data, not repeat it.
- Gartner sees potential for Composite AI helping its enterprise clients and has included it as the third new category in this year's Hype Cycle. Composite AI refers to the combined application of different AI techniques to improve learning efficiency, increase the level of "common sense," and ultimately to much more efficiently solve a wider range of business problems.
- Concentrating on the ethical and social aspects of AI,
 Gartner recently defined the category Responsible AI as an
 umbrella term that's included as the fourth category in the
 Hype Cycle for AI. Responsible AI is defined as a strategic term
 that encompasses the many aspects of making the right business and
 ethical choices when adopting AI that organizations often address
 independently. These include business and societal value, risk, trust,

transparency, fairness, bias mitigation, explainability, accountability, safety, privacy and regulatory compliance.

- The exponential gains in accuracy, price/performance, low power consumption and Internet of Things sensors that collect AI model data have to lead to a new category called Things as Customers, as the fifth new category this year.

 Gartner defines things as Customers as a smart device or machine or that obtains goods or services in exchange for payment. Examples include virtual personal assistants, smart appliances, connected cars and IoT-enabled factory equipment.
- Thirteen technologies have either been removed, reclassified, or moved to other Hype Cycles compared to last **year.** Gartner has chosen to remove VPA-enabled wireless speakers from all Hype Cycles this year. AI developer toolkits are now part of the AI developer and teaching kits category. AI PaaS is now part of AI cloud services. Gartner chose to move AI-related C&SI services, AutoML, Explainable AI (also now part of the Responsible AI category in 2020), graph analytics and Reinforcement Learning to the Hype Cycle for Data Science and Machine Learning, 2020. Conversational User Interfaces, Speech Recognition and Virtual Assistants are now part of the Hype Cycle for Natural Language Technologies, 2020. Gartner has also chosen to move Quantum computing to the Hype Cycle for Compute Infrastructure, 2020. Robotic process automation software is now removed from the Hype Cycle for AI, as Gartner mentions the technology in several other Hype Cycles.

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