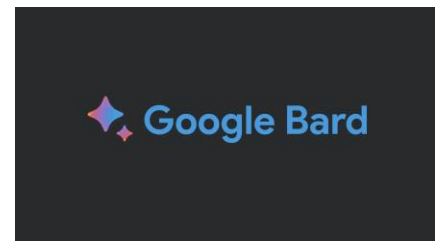


Generative AI

Till now from the ages, we are using traditional AI which was only capable to suggest, understand, predict and classify information by providing large datasets and an algorithm based on which it converts data into insight. Generative AI can generate new content, that is, data like audios, images, texts and videos. With help of neural network, it has ability to capture/analyze data pattern and generate new, unknown and unique data.

Example of some generative AI tools,



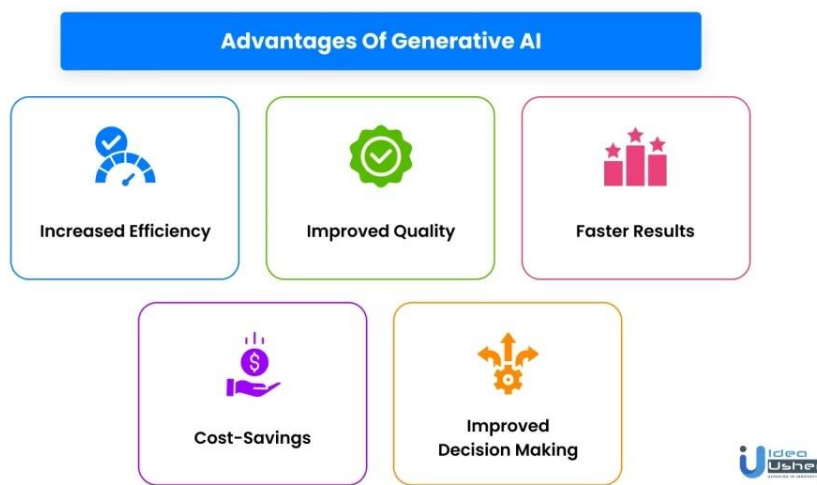
Types of Generative AI Tools they used,

- + Autoregressive model
- + Bayesian Network
- + Generative Adversarial Networks (GAN)
- + Gaussian Mixture Model (GMM)
- + Hidden Markov Model (HMM)
- + Latent Dirichlet Allocation (LDA)
- + Variational Autoencoders (VAEs)

What is the advantage?

- + **Creativity**, it enables businesses, organizations and people to generate creative and engaging content on large and small scale for example, an advertising industry, Generative-AI systems can help them to generate compelling ad copy, visuals, and even video contents. So, this shows that in future most of the content would be generated AI
- + **Time & Cost Saving**, this human invention can save a lot of time and cost by speeding up the process like generating design of any infrastructure for an architecture/civil engineering firm.

- + **Give Valuable Suggestion**, by analyzing data and extracting valuable insights from it can help us to recommend and guide in decision making tasks. For example, in the financial sector it can help by analyzing current and past market trends to suggest a well-informed market investment.
- + With the power of generating audio, videos and graphics it can very accurately **simulate realistic problem/situations**.
- + In our day-to-day life, we commonly use generative AI tools and provide feedback to them based on which it **adapts itself** to learn better and make itself align towards user preferences over the time.



Is there any disadvantage?

- + **Cost inefficient**, to build any generative tool it requires specialized hardware and software as well as skilled personnel support for its operation and maintenance. So small and medium-large companies and organizations cannot build them.
- + **Time inefficient**, it takes a lot of time to train and deploy such models. A major disadvantage for all those companies who want to move quickly.
- + For the training phase, it requires **very high-quality data** provided it is not outdated, inaccurate and unreliable.
- + It is **difficult to explain** to how it works and make predictions to somebody else.
- + It is **major concern about ethical**, that is, it can make biased/unfair decisions.

