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# AI boom and AI effect

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## 1 AI boom

The **AI boom** or **AI spring** started in late 2010s and gained prominence in early 2020s. Importance of AI is recognized and got public interest when a University of Toronto research team used artificial neural networks and deep learning techniques in the **ImageNet** challenge and in 2016 when **AlphaGo** beat Lee Sedol, a 9-dan professional in a five game match. The generative AI race is started by founding Open AI and advances made in graphical processing units(GPUs). According to recent metrics, the United States outranks rest of the world in terms of venture capital funding, startups, and patents granted in AI moreover a huge role is played the scientists immigrated to the U.S.

AI plays a significant role in biomedical field and computational biology such as protein folding and drug development. AI also got significance in text to image platforms like DALL-E, text to video platforms like Runway and Phenaki, music and voice platforms like Eleven Labs. GPT-3 is the language developed by Open AI which is capable of generating high quality human like text. Later upgraded versions GPT-3.5 and GPT-4 were also used in ChatGPT and Microsoft Bing respectively. The AI boom has an impact on cultural, social, philosophical, religious, economic aspects. The market capitalization of **Nvidia**, whose GPUs are in high demand and used in generative AI models, rose to over 3.3 trillion USD. AI investments have been increased rapidly in recent times. Concerns of AI are it has a risk of being misused by malicious persons and being attacked by cyberattackers. Most of the investments in AI are from American Big Tech companies. There were some incidents where AI has been misused for generating voices of celebrities. A large amount of electricity is required to power AI devices which damages the environment due the emission of green house gases.

## 2 AI effect

The **AI effect** refers to a phenomenon where either the definition of AI or the concept of intelligence is adjusted such as tasks that AI can now perform successfully no longer being considered part of AI its more like moving the goal posts. Tesler's theorem given by Larry Tesler mentions "AI is whatever hasn't been done yet". Applications such as computer chess, agricultural automation, etc. developed by AI researchers are not being called AI. Nick Bostrom comments 'once something becomes useful enough and common enough it's not labelled AI anymore'. Marvin Minsky writes 'an AI research goes into the public with its own distinctive name, so there is very little progress in field of AI'.

There were also the thoughts by AI researchers to avoid the name 'Artificial Intelligence' and to use the name 'Robotics' to get more funding and sell more software. When IBM's chess playing computer **Deep Blue** succeeded in defeating Garry Kasparov in 1997, public's opinion on chess changed from a difficult task to a daily routine. John McCarthy who coined the term artificial intelligence described Deep Blue as a brute force machine which didnot have any understanding of the game.