

ARTIFICIAL INTELLIGENCE

Presenting the Future of intelligence and learning

Most simply A.I. is the science of training machines to perform human related tasks. The term Artificial Intelligence introduced in 1950s when scientists explore how computers can perform tasks on their own.

History

The term Artificial Intelligence was coined in 1956 but the popularity increases till today. Thanks to the advancement in algorithms, data space and improved computing power and storage. But the huge limitation till this time is the computation power and storage efficiency is very low and costs more, which are the basic need of the AI.



During 1987-1993

As computing technology improved, cheaper alternatives emerged. During this period, expert systems proved too expensive to maintain and update, eventually falling out of favour.

From 2000 onwards

New efficient algorithms invented and new research papers are published, making the AI more elegant and more intelligent. Google makes breakthroughs in speech recognition and introduces the feature in its pixel phones. Google makes the first self-driving car to pass a state driving test.

Machine learning and A.I

Are they seem alike or is there a difference? Are the terms inter-related?

-- Let's answer this easily --

There is a broad network of research in AI, much of which feeds into the complements of each other. Machine Learning is a subset of Artificial Intelligence that trains a machine how to learn. AI in other hand is machines which are given human like properties.

Leading Firms in AI

Each tech firm is playing with AI to develop robust AI and ML algorithms to concur the race. Although it is probably Google with its DeepMind AI AlphaGo that has probably made the biggest impact on the public awareness of AI.

Leading Country in AI

That'd be a big mistake to think the US tech giants have the field of AI sewn up. Chinese firms Alibaba, Baidu, and Lenovo are investing heavily in AI in fields ranging from ecommerce to autonomous driving.

As a country China is pursuing a three-step plan to turn AI into a core industry for the country

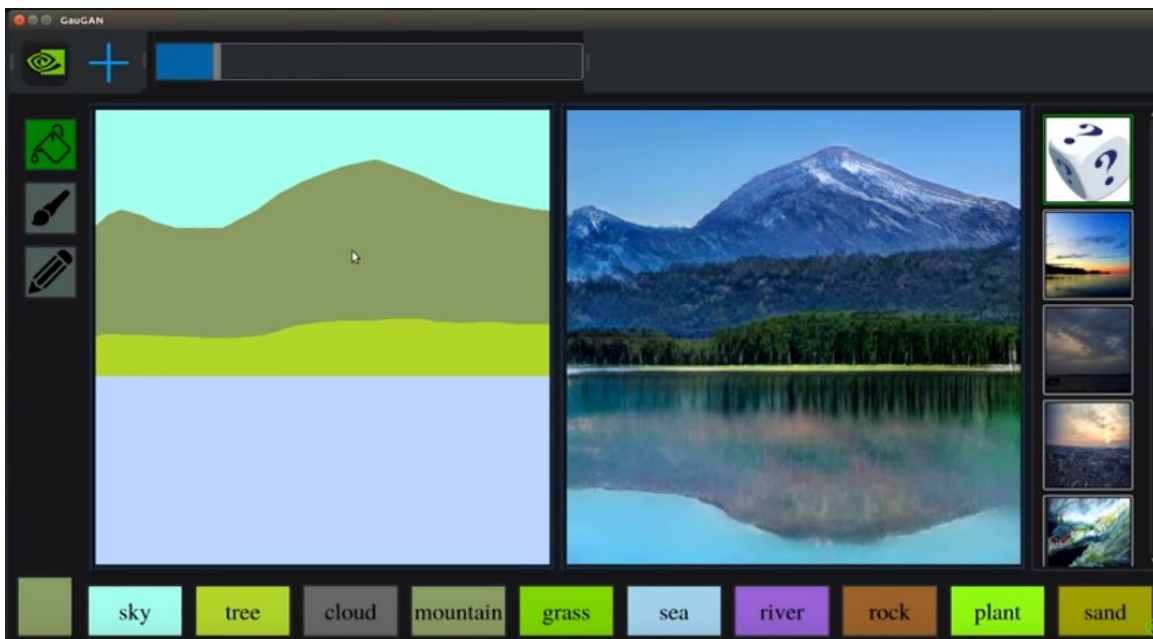
Getting started with AI

All of the major tech firms offer various AI services, from the infrastructure to build and train your own machine-learning models through to web services that allow you to access AI-powered tools such as speech, language, vision and sentiment recognition on demand.

Awesome AI

Generative models in AI used for generating a whole new type of data (not in dataset) based on the training on datasets. These generative models can be used in the field of inventions too.

NVIDIA's research on GauGAN i.e. Generative Adversarial Networks turns doodles into Stunning Photorealistic Landscapes. The model is trained on a million real images. This tool also allows users to add a style filter, changing a generated image to adapt the style of a particular painter, or change a daytime scene to sunset.

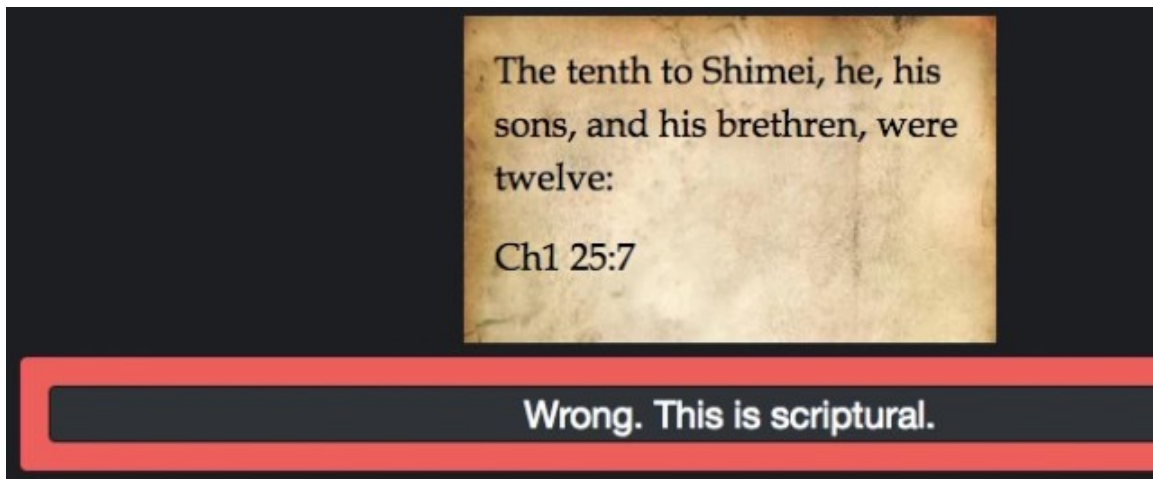


It is developed on PyTorch deep learning framework.

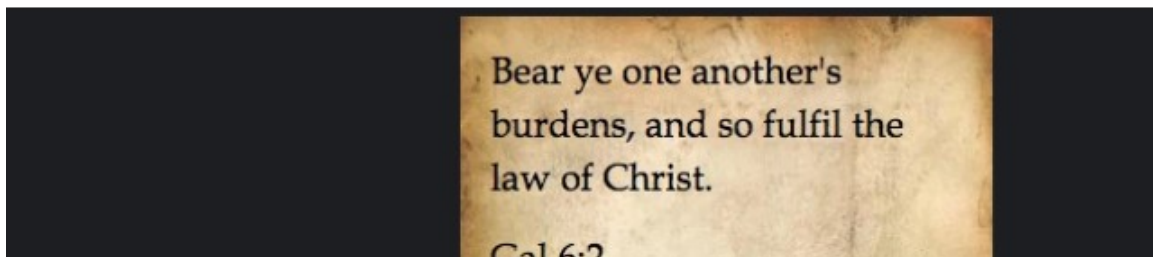
AI tries to play GOD

A developer made neural network trained on the Bible and asks can you distinguish what's "divine" and what's "benign"?

"Divine or Benign" quiz, developed by developer Tobias Hermann in 2016. The quiz feeds you ten images of text. Your job is to determine if a line is actually from the Bible, or if it's just nonsense generated by a neural network.



SCREENSHOT FROM [DIVINE OR BENIGN](#).



The "Benign" text is generated using a recurrent neural network. Neural networks learn to produce new outputs—like text, or an image—after being "trained" on a large amount of input data i.e. Bible in this case.

In any event, it's just amusing to see a neural network literally try to play god.

Recent uses of AI

- Smart assistants (like Siri and Alexa)
- Disease mapping and prediction tools
- Manufacturing and drone robots
- Optimized, personalized healthcare treatment recommendations
- Conversational bots for marketing and customer service
- Robo-advisors for stock trading
- Spam filters on email
- Social media monitoring tools for dangerous content or false news
- Song or TV show recommendations from Spotify and Netflix

Is AI safe?

Yes, AI can be dangerous. Most researchers agree that a super intelligent AI is unlikely to exhibit human emotions like love or hate, and that there is no reason to expect AI to become intentionally benevolent or malevolent.

1. **The AI is programmed to do something devastating:** Autonomous weapons are artificial intelligence systems that are programmed to kill. In the hands of the wrong person, these weapons could easily cause mass casualties.
2. **The AI is programmed to do something beneficial, but it develops a destructive method for achieving its goal:** If you ask an obedient intelligent car to take you to the airport as fast as possible, it might end up with rash driving and police chase like GTA in real life.

A super intelligent AI will be extremely good at accomplishing its goals, but if the process to the goal isn't align with ours, we got problems. A key goal of AI safety research is to never place humanity.

Interesting Controversies

What sort of future do you want? Will we control intelligent machines or will they control us? Should we develop lethal autonomous weapons? What career advice would you give today's kids? Do you prefer new jobs replacing the old ones, or a jobless society where everyone enjoys a life of leisure and machine-produced wealth? Will intelligent machines replace us, coexist with us, or merge with us? What will it mean to be human in the age of artificial intelligence?

Note : This article gives the basic knowledge of AI in simple words so that every person can get the basic understanding and huge diversity AI.