Scientists use AI to predict large-scale wildfires

Besides natural disasters, floods, earthquakes and droughts, forest fires have been and will be one of the top problems facing humanity.

A team of multidisciplinary researchers from the University of California, Irvine, USA has come together for months to create a machine learning model (artificial intelligence) that can predict performance. variables and trends of major forest fires from the moment the fire was detected, with high accuracy.

This real-time evolution analysis model will use a single data set to predict the extent of fire development, giving results far superior to test systems based on real-time data. Capital details are more complicated.

1. Successful development of an AI model that can translate languages ??into physical motion

The scale and area destroyed by forest fires is increasing due to the negative impacts of climate change

This machine learning model has been trained by the team based on data obtained on air humidity from reports related to more than 1,100 fire events in Alaska, USA during the period from 2001 to 2017 (Alaska Large Fire Database). Each fire will be labeled small, medium or large according to their actual size. After initial training, the machine learning model can accurately predict about 40% of the characteristics that could lead to a major forest fire, and 75% of the area of ??the fire over a defined period.

Although this model is trained to predict the outcome of forest fires mainly formed from Boreal forest, the type found in Alaska and northern Canada, but overall, a tissue Such an image may be used as an additional support for fire agencies in areas where forest fires are common, not only in the United States, but also in many other countries (in school). This technology is allowed to share widely.)

1. Successfully developing self-propelled bicycles using AI chips capable of deduction and learning like humans

Boreal forests are commonly found in Alaska and northern Canada

This simple artificial intelligence-based classification system can give managers an insight into the evolution of fires, thereby developing a plan to allocate resources and optimize capacity. fire fighting, and especially deploying backup plans more effectively.

'The collection and analysis of information on major fires as well as their impact in recent years can be useful for national fire management, ecosystem protection and in particular. is the life of the people. Areas where forest fires have been frequent in the past require more thorough management, prevention, and remediation efforts, thereby minimizing the impact on vulnerable people and ecosystems', The research team said.

1. DeepMind's AI model can learn how to create videos just by watching clips on YouTube

Areas where forest fires frequently occur require more thorough management efforts

According to statistics, the forest fires are responsible for the deaths of more than 300,000 people a year worldwide, and also contribute to a huge amount of carbon emissions into the atmosphere which is very ' fragile 'of the planet.

A study by the University of New Hampshire predicts that the size and area destroyed by wildfires could double by 2050 compared to levels recorded in the 1990s. The rate of forest fires will also increase and become more unpredictable as a result of climate change.

The above prediction models based on artificial intelligence technology will be an important factor in the fight against natural disasters in general, in the context of climate change situation. more extreme. For example, in Brazil, from the beginning of this year, officials have recorded nearly 79,000 fires, large and small, and half of which occurred in the Amazon rainforest, which is considered the "green lung" of onions. planet. In particular, there are large-scale fires that can cover an area of ??up to several square kilometers, seriously threatening the stability of ecosystems as well as human health.

1. AI uses tweets to help researchers analyze the flood situation

There have been nearly 79,000 forest fires, large and small in Brazil since the beginning of the year

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