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AI TOOL PREDICTS EXTREME WEATHER CORRECTLY FROM CLOUD PATTERNS 99 PERCENT OF THE TIME

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The AI outperforms other weather-detecting methods by accurately predicting 64% of severe weather events.

TECH2 NEWS STAFF JUL 08, 2019 17:37:27 IST

Researchers have developed an artificial intelligence system that can recognize clouds that have the potential to turn into severe storms.

Their model looks at the movements of the clouds from satellite images since meteorologists cannot possibly look at all the numbers and data. This tool could help weather forecasters predict the weather better, according to industry experts.

"The very best forecasting incorporates as much data as possible. There's so much to take in, as the atmosphere is infinitely complex. By using the models and the data we have [in front of us], we're taking a snapshot of the most complete look of the atmosphere," Steve Wistar, a senior forensic meteorologist at *AccuWeather* [said in a statement](#).



Representational image. Credit: NOAA

The researchers worked with meteorologists from Wistar Institute, a non-profit research institution in science and *AccuWeather*, a media company that provides weather forecasting services. They analyzed more than 50,000 weather satellite images historically, at random. Looking for 'comma-shaped' clouds that are thought to lead to cyclones and lead to high winds, blizzards, etc, the researchers taught the AI tool signatures to recognize the same.

Now, these computers can point out to signs of these clouds and help meteorologists focus their attention on detecting if these clouds can lead to bad weather. This method, the researchers found, can detect 99 percent of comma-shaped clouds accurately. It is also able to outperform other weather detecting methods by accurately predicting 64 percent of severe weather events.

Rachel Zheng, a doctoral student in the [College of Information Sciences and Technology at Penn State](#) and the main researcher on the project said, "Because the comma-shaped cloud is a visual indicator of severe weather events, our scheme can help meteorologists forecast such events."

The [findings of this study](#) have been published in the journal IEEE Transactions on Geoscience and Remote Sensing

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