

SAIP2013



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Detecting Lightning Distribution Changes using Satellite Imagery

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Abstract :

The distribution of lightning across the Earth's surface varies both with location and time. Seasonal changes in lightning activity recorded in Low Earth Orbit (LEO) satellite data have been studied by various authors, who used classical time series analysis techniques. We present an alternative analysis based on automated pattern recognition, which identifies the changing state of lightning distributions using computer vision techniques. Due to the large quantity of data available, machine learning algorithms were the most efficient way of achieving our goals. This model not only has significant application in the analysis of historical lightning data but also in the forecasting of future lightning distributions.

Award :

Yes

Level :

Hons

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Paper :

No

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