

Optimization of Cloud Classification Using Particle Swarm Algorithm

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Abstract : A cloud is made up of small particles of liquid water or ice suspended in the atmosphere, which generally do not reach the ground. Various methods are used to classify clouds. This article focuses specifically on a technique known as particle swarm optimization (PSO), an AI approach inspired by the collective behaviors of animals living in groups, such as schools of fish and flocks of birds, and a method used to solve complex classification and optimization problems with approximate solutions. The proposed technique was evaluated using a series of second-generation METOSAT images taken by the MSG satellite. The acquired results indicate that the proposed method gave acceptable results.

Keywords : remote sensing, particle swarm optimization, clouds, meteorological image

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