

What can Machine Learning do in Atmospheric Science

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Abstract

Six categories in machine learning which can be used in atmospheric science were introduced in this short article. The purposes of this article focus on the general meaning and key issues but the individual details. Six categories include: Kalman filtering, learning trees, classification/regression, dimensionality reduction, and ensemble learning. The background domain knowledge covers from linear algebra, variational method, probability and statistics. These knowledges have implanted in atmospheric science many decades ago, and now they are going to be rearranged, remodified and recomposed in machine learning or AI algorithms.