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Planning an EOS Data Federation to deal with Climate Change using AI

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The National Institute for Space Research - INPE (Brazil) is leading a research program: Intelligent Early Warning System for Climate Extremes - SIPEC. The project aims at predicting the likelihood of climate extremes, months in advance using a diverse source of data coming from satellites and an array of intelligent sensors spread across the country. Such data streams will feed both classical meteorological models and AI machine learning algorithms for the ultimate early warning of climate extremes.

Given the number of institutions producing large amounts of data needed to train the ML algorithms by scientists dealing with different parts of the problem, at different places, we are implementing an EOS Data Federation in Brazil. The implementation of the EOS family of tools, in addition to being capable to deal with large volumes of distributed data, also takes care of security controls for who has access to what portions of the datasets.

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