Recurrent Neural Networks Predictor for the Indian Monsoon

The prediction of the Indian Monsoon is a challenging forecasting problem with great practical importance.

The Indian Monsoon blows from the northeast during cooler months and reverses direction to blow from the southwest during the warmest months of the year. This effect causes huge amounts of rainfall to the region during the early summer months. The Indian economy is based on agriculture with more than 50% of the population depending on it. As a consequence, efficiently predicting when the Monsoon will happen has great practical importance. Many data-driven approaches have been proposed in the past, the most prominent based on deep learning.

In this project, the student will identify which data sources are relevant for the problem, build a predictor architecture based on deep recurrent neural networks, and test its efficiency. The student will also gain experience in machine learning software (tensorflow) and Python.

This project can be adapted to BSc/MSc.

PREREQUISITES
- Basic programming skills
- Ability to work Independently
- Eagerness to learn about ML

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