The aim of this paper is to present a deep neural network architecture and use it in time series weather prediction. It uses multi stacked LSTMs to map sequences of weather values of the same length. The final goal is to produce two types of models per city (for 9 cities in Morocco) to forecast 24 and 72 hours worth of weather data (for Temperature, Humidity and Wind Speed). Approximately 15 years (2000-2015) of hourly meteorological data was used to train the model. The results show that LSTM based neural networks are competitive with the traditional methods and can be considered a better alternative to forecast general weather conditions.

References

2. Douglas Eck and Jürgen Schmidhuber. Learning the long-term structure of the blues. In

**Index Terms**

Computer Science  
Networks

**Keywords**

Deep Learning, Sequence to Sequence Learning, Artificial Neural Networks, Recurrent Neural Networks, Long-Short Term Memory, Forecasting, Weather