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This document will allow you to understand what LSTM is, and how we can use it in order to improve predictive monitoring in business processes. It explains what is deep learning and in what field we can apply it.
First of all we need to explain what LSTM stands for. Long Short-Term memory is an artificial intelligence which can remember the information that we give him for a given period of time. This characteristic allows businesses to use it for daily tasks and input sequential data(it means that the order of the data is crucial).
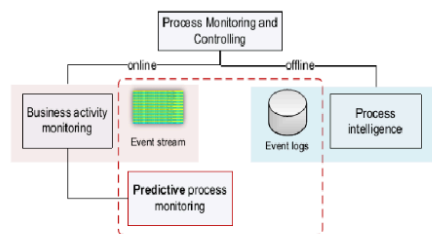
Figure 1. Process monitoring and controlling methods
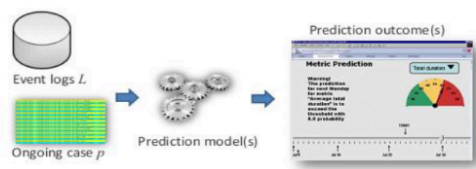
This figure illustrates how it works. The AI predicts future events thanks to the event stream (sequence of business events ordered by time) and the event logs (the record of events that happen).
The author considers LSTM as a very important tool in deep learning, because it Is better than traditional neural networks which cannot remember the information for a long time. LSTM is a network designed with an individual structure with memory cells and gates composed of inputs, outputs and forget gates. Thanks to this design the AI is capable to control the flow of information and remember crucial information, delete the superfluous ones and by the end predict outcomes.

LSTM can be considered as a strong framework which allows modeling and predicting complex behaviors in business processes. This model of AI allows business to identify how the process execution works easier than if the business used AI conventional predictive models. As we have explained before, it is thanks to its long term memory that LSTM can be considered better.

However, LSTM cannot be used on its own, it has to be integrated within software applications(in order to have data and to predict business process outcomes).Those software applications must be able to analyze a lot of information using deep learning models. If it is the case, the framework will allow LSTM to predict outcomes.

We can resume the text by saying that LSTM is a new approach that can be considered as a superior one, this AI model captures and predicts the behavior of business processes over time.