

I.E. Livieris, E. Pintelas, P. Pintelas. [A CNN-LSTM model for gold price time series forecasting](#)

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**Abstract** - Gold price volatilities have a significant impact on many financial activities of the world. The development of a reliable prediction model could offer insights in gold price fluctuations, behavior and dynamics and ultimately provide the opportunity of gaining significant profits. In this work, we propose a new deep learning forecasting model for the accurate prediction of gold price and movement. The proposed model exploits the ability of convolutional layers for extracting useful knowledge and learning the internal representation of time-series data as well as the effectiveness of Long Short Term Memory (LSTM) layers for identifying short-term and long-term dependencies. We conducted a series of experiments and evaluated the proposed model against state-of-the-art deep learning and machine learning models. The preliminary experimental analysis illustrated that the utilization of LSTM layers along with additional convolutional layers could provides a significant boost in increasing the forecasting performance.