

Title of Article: An Intelligent Foreign Exchange Robot (i-FOREXBOT) Development with Scale Conjugate Gradient Neural Network.

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Abstract: This paper describes an on-going work on the development of an intelligent foreign exchange forecast and decision support engine tagged i-FOREXBOT with an ultimate target of online deployment. FOREX market is a complex domain and an ability to forecast future price movements based on past data is highly fundamental to profitable trading by the practitioners. In order to assist traders to achieve minimal loss and high profitability, there are existing automated FOREX prediction robots which are based on technical data. Analysis using technical data involves the adoption of graphs and reoccurring patterns of price movement to forecast currency pair rate. Despite some positive results that have been recorded with this approach, technical analysis and the robots that are based on them only give scanty meaning to the market movements. The optional approach to market prediction being adopted by traders is fundamental analysis. In this method, the impact of fundamental data (such as cash flow, geopolitical factors, economic indices, government policies and news) on price movements are considered for trade forecasting. However, there are currently very little research efforts that focus on automation of FOREX prediction using fundamental data.

Therefore, in this work, we are developing an online FOREX robot based on artificial neural network (ANN) and fundamental data to forecast the exchange rate of Great Britain Pound (GBP) and US dollar (USD) pair using six fundamental indices. The preliminary experimental results of the scale conjugate gradient ANN engine we developed is very encouraging and the platform promises to be a good and reliable tool for accurate exchange rate prediction when it is fully developed and deployed.