

Candlestick Patterns Decoded by Neural Network

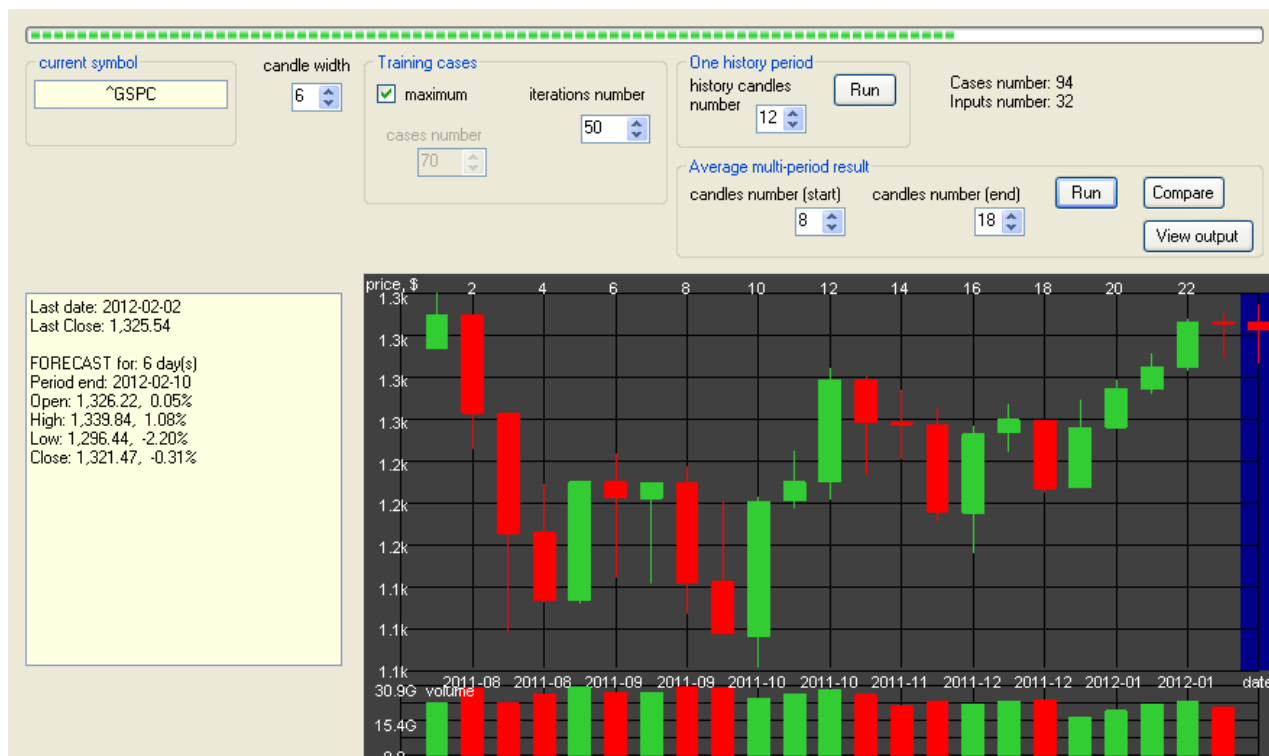
February 2, 2012 by [admin](http://www.addaptron.com/blog/author/admin/) (<http://www.addaptron.com/blog/author/admin/>)

Candlestick patterns can signal a trend continuation or reversal. Many traders and investors know how to benefit from candlesticks analysis. As a rule, a simple chart analysis is used that requires analysts to remember and correctly interpret, at least, typical candlestick patterns. However, the number of possible different candlestick shapes and their combinations in a row can be huge. Besides, some patterns interpretations might be considered as contradictory or doubtful.

Fortunately, statistical methods combined with computer power can be a good solution to make the candlestick patterns recognition works less time-consuming and more effective. These days, Neural Network (NN) can help to automate a candlestick patterns recognition task. NN should be properly trained in order to be able to predict the next candlestick parameters with the highest probability. One of the obvious problems of implementing a candlestick pattern NN predicting system is a formalization of inputs.

Numerous tests show many possibilities of improving NN candlestick patterns recognition systems. For example, output result can be composed from selected optimized calculations based on different historical periods. Also there are many different ways to formalize the shapes and relative positions of candlesticks. As well as, as back- and forward-testing show, it is reasonable to re-train NN for each particular type of shares and latest historical periods to make the forecast more accurate.

Optimal Solution. There is an automated tool [FTA-2](http://www.addaptron.com/investment-analyzer.htm) (<http://www.addaptron.com/investment-analyzer.htm>) (free use of fully-functional version for one month). It has module which enables using Neural Network to recognize typical candlestick patterns and predict future prices (open, high, low, close). This module predicts only one next candlestick but the prediction can be successfully used for different widths of candlestick, i.e., the number of trading days in one candlestick. The module has been enhanced to calculate result that is composed from different historical periods that allows making the forecast more accurate. Also it can perform comparative forecast analysis for many symbols.



(<http://www.addaptron.com/blog/wp-content/uploads/2012/02/new-mod.png>)

Useful resources:

- Candlestick basics – [major signals](http://stockcharts.com/school/doku.php?id=chart_school:chart_analysis:introduction_to_candlesticks) (http://stockcharts.com/school/doku.php?id=chart_school:chart_analysis:introduction_to_candlesticks)
- Neural Network basics – [introduction](http://www.emilstefanov.net/Projects/NeuralNetworks.aspx) (<http://www.emilstefanov.net/Projects/NeuralNetworks.aspx>)
- The computer program which enables using Neural Network to recognize typical candles patterns and predict future prices – [software FTA-2](http://www.addaptron.com/investment-analyzer.htm) (<http://www.addaptron.com/investment-analyzer.htm>)

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6 Comments



Brad

February 11, 2012 at 08:01 (<http://www.addaptron.com/blog/candlestick-patterns-decoded-by-neural-network/#comment-3470>)

Candle stick analysis patterns is one of several indicators. One needs to also analyze volume-MA, RSI & Stoch patterns to pull the trigger; especially with swing trading within short time frame, so which stocks currently show the best pattern repetition with this NN candlestick output? I will analyze against my key indicators & provide feedback.



admin

February 13, 2012 at 21:33 (<http://www.addaptron.com/blog/candlestick-patterns-decoded-by-neural-network/#comment-3482>)

Hi Brad,

Thanks for your comment. I agree with you about using many different methods, please read the article: <http://www.addaptron.com/articles/multi-model-forecast.htm> (<http://www.addaptron.com/articles/multi-model-forecast.htm>) As an experiment, let's try CME for this week – candlesticks-NN shows around 3-4% uptrend.



Muhammad Abu-Izzah

March 7, 2012 at 19:40 (<http://www.addaptron.com/blog/candlestick-patterns-decoded-by-neural-network/#comment-3535>)

if you are able to predict one candlestick, you can explore several timeframes. Meaning, if you are able to predict the next hourly candle, you could concurrently predict the next 15 min candle, 5min candle, and lastly the 3min candle, if you have many that point to one direction you can enter a trade on the smallest timeframe ie 3min in this case



Shawn McConnell

March 8, 2012 at 18:26 (<http://www.addaptron.com/blog/candlestick-patterns-decoded-by-neural-network/#comment-3537>)

The tool then uses the closing candle stick to calculate it's next move in trend? I would think that this is good for reversals. What about multiple days of the same kind of candle say at a ceiling or floor?



admin

April 3, 2012 at 22:15 (<http://www.addaptron.com/blog/candlestick-patterns-decoded-by-neural-network/#comment-3598>)

Thanks for your comment, Shawn. In general, if typical shapes and candles in row combination are repeatable at tops and bottoms, the tool should be able to decode reversals. However, your idea looks interesting to check. If we focus only on reversal patterns, it can give a clearer signal. Is that what you meant?



Mookie

June 1, 2012 at 05:07 (<http://www.addaptron.com/blog/candlestick-patterns-decoded-by-neural-network/#comment-3893>)

Volatility in the foreign exchange is rather a matter of the right timeframe. I wouldn't use less than the 1hr chart, ideally you'd want to use the daily or 4hr chart. Candle stick patterns should always be used in conjunction with other indicators since these patterns merely sign a potential reversal from a support/resistance level. Popular reversal patterns are bearish/bullish engulfing, inside bars, doji spinning top, hammer-reverse hammer, evening/morning star. You could study other patterns but are in my opinion less effective. They don't have to be exact text book examples on a chart. There's most of the time a degree of distortion, the more distorted the less valid it becomes. This is something you learn through experience. Overall, spotting a reversal candle pattern is fairly straight forward and simple, when there's a good amount of doubt don't trade it. Another advantage of candle patterns is that it enables one to set a stop loss, usually inserted a couple of pips away from the other extreme of the pattern.

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