Artificial Intelligence Technical Analysis:
AI's Growth in Foreign Exchange and Cryptocurrency

Automated Trading: An Introduction

Automation, Machine Learning (ML), and Artificial Intelligence (AI) all involve substituting human activity with machines and technology. Now that computational means of completing tasks have become more advanced and cheaper, using machines to solve problems and generate answers is becoming more widespread, in theory and in practice. It is expected that over the next five years, investment in AI technology will increase substantially, with interest particularly focused on Machine Learning and cognitive analytics. So how is this affecting the foreign exchange and cryptocurrency markets?

In reality, both AI and ML have been in use for many years, but were not widely used or broadcasted, as they were confined to specific industries because of the cost entailed in their complex configurations. Now, whether from social trading sites claiming to have developed AI experts advisors for cryptocurrency trading, to the foreign market exchange enlisting automation capabilities to increase profitability, news of the positive potential of ML in these industries is spreading quickly.

This doesn't come as a major surprise, as financial markets have a history of being the first sector to employ new AI techniques, due to the obvious benefits of automation and reducing the need for human logic and error. One of the first pioneers when AI technology was first cropping up was Jim Simons of Renaissance Technologies, who built his wealth by putting together a team of researchers who traded using advanced quantitative methods, which proved to be one of the most successful methods of acquiring financial market investments, by numerical means. Meanwhile, other financial institutions such as IC markets have a long history of investing in AI technology and ML techniques.

Industries within the financial sector are also enlisting the help of AI and ML, banks in particular, who need to find new ways of keeping up with continuous changing regulations every year. Capital markets strategist Peter Farley puts this down to the 2008 banking crisis, during which this onslaught of new regulations upon banks "compounded cost pressures and drove up capital requirements," which in the end created "the perfect storm for the industry, creating just the right environment to accelerate its flirtation with automation." According to Farley, AI and ML had always been on the radar of changing the face of banking, and this is now translating to the fx and cryptocurrency markets also - in both exciting and uncertain ways.

AI in the foreign exchange market

The FX market has always been ready to adopt new technologies and ways to improve the speed and accuracy of currency trading. So how could AI and prediction software play a potentially useful role in forex?

A large majority of research analysts predict that AI is set to transform foreign trade. Firstly, the transparency which these technologies bring to the market are enabling banks all over the world to trade with more confidence. Over the next year, electronic trading is estimated to account for almost 75% of FX trades, marking a leap from 66% in 2013 and 20% in 2001.

Another major benefit that AI promises to bring to the foreign exchange market is reducing the cost of numerous processes throughout the trade lifecycle. Automation tools can be applied to trades to capture potential errors, thereby reducing the need for future corrections and damage to reputation. Essentially, all fx trades pit the value of one currency against one another, and as it is impossible to employ a single market analysis to these activities due to interrelated factors (such as interest rates and other global markets), AI could offer a viable solution in improving efficiency. By implemented these technologies, computers involved in fx trading and markets could undoubtedly make more accurate decisions, saving time and energy. Advances in big data, open-source software, cloud computing, and increased processing speeds all also have a role to play in this scenario.

Platforms and entrepreneurs are also building AI advisors, which use deep learning and artificial neural networks, providing outcomes which couldn't possibly be achieved by a human mind. In the fx market, this involves formulae, allowing machines to adapt and learn from the latest technical trends, and adjusting positions based on all currency pairs' market variations. High frequency trading (HFT) also uses algorithm to execute swift trades, based on analysis and pre-defined programmes and conditions, activities towards which AI could have a massive contribution.

AI and ML technologies could also potentially offer a more reliable alternative to the well-known forex trading robot, a computer program which runs on a pre-defined algorithm which allow the robot to make automatic decisions about whether to buy or sell a particular currency pair. However these robots have a history of being either highly unpredictable and therefore of no use, or requiring the trader to have technical and coding knowledge, as well as experience in forex trading techniques.

Several AI softwares built specifically for the fx markets have been cropping up, and traders are relying on their intermarket analysis capabilities to increase their profits and estimate which currencies will affect targeted pairs. VantagePoint Artificial Intelligence is a forex trading software which puts this kind of data through a neural network process, which they have patented, to produce a range of indicators for trend forecasts. The company has pointed out that often, fx traders often miss out on big moves by following strict strategies, and that by using AI technology, they are able to alert traders to first-hand opportunities, boasting 86% accuracy on all major US dollar pairs. ROFX Trading Platform is another innovator on the scene, positioning themselves as the only automated forex trading platform which provides a loss coverage guarantee. Again, they aim to base trading around AI and neural networks which function according to internal algorithms. The appeal is strong for novice traders, as use of these platforms does not require previous coding or analyzing abilities.

AI in cryptocurrency

While it is common knowledge in the cryptocurrency world that you shouldn't put all your eggs in one basket, and rather aim to diversify your portfolio using the help of several expert advisors, the concept of AI expert trading advisors has quickly been growing momentum. The attraction of AI to cryptocurrency is obvious, most notably in its ability to streamline information, processes, data, and payments. This basically hails an era of super-human traders which may just prove to be the most profitable crypto personal assistant you'll ever need. AI in crypto is suitable for both those with limited experience, and for professional use, and some of the benefits touted include low risk, high profits, and predictions in cryptocurrency trends.

AI Trader is currently leading the way, with the company claiming that automation technologies are powering their crypto trading ecosystem with deep learning. They currently support exchanges in Binance and BitMex, with more expected to be added soon. The software and application is built based on the knowledge of traders themselves, and with the addition of ML and AI, this presents a powerful and attractive option for users looking to overcome various factors currently limiting their investing potential. Again, the idea of a "supercomputer backed personal assistant" which trades automatically is the main theme.

Other exciting AI-powered platforms include Cryptoindex, which promises to predict the next Bitcoin using the Zorax algorithm and a fully-automated index, and MATRIX, an open-source public intelligence blockchain platform which hopes to leverage its AI

technology to resolve some of the blockchain industry's most pressing challenges. Meanwhile, Alcoin is using similar methods with the aim of building wealth by combining in-house AI models, which can identify and trade cryptocurrency patterns which are otherwise hidden, with token holders, startups and investment capital, and capital generation strategies.

It's no doubt that the realm of blockchain will continue to draw from AI and its predictive analytics, which offer a hybrid intelligence model which utilises human intelligence yet is enhanced by the efficiency, speed and accuracy of machine learning.

On the Ability of Robots

While it is clear that AI's contribution to the fx and crypto markets has the potential to significantly decrease costs and increase profits, there have been practical and ethical issues raised about the ability of automation to consistently generate institutional orders in the market. Another problem with replacing human strategy with AI is that technology can often produce models and data which can only be described as random. Some suggestions point towards the short term profitability of these technologies, but uncertainty still remains about the long term impact.

One thing is certain, is that professional software engineers will need to work together with experience fx and crypto traders in the future, if AI technology is expected to be able to learn as much from its mistakes as humans can - and most importantly, to act on them.