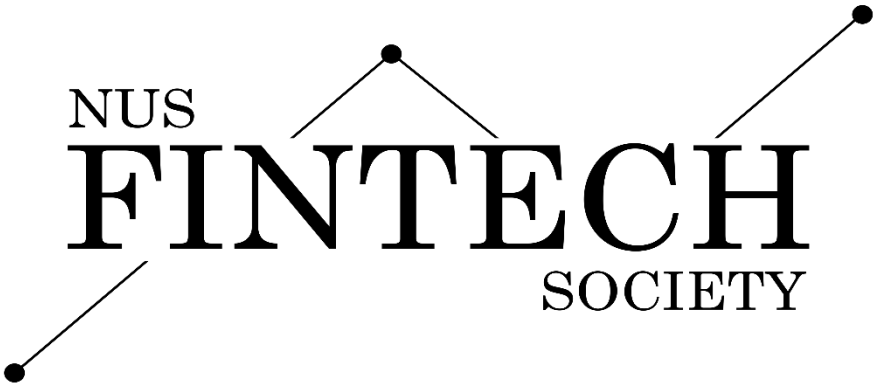


AUD-USD STACKED ENSEMBLE MULTI-STRATEGY

Recurrent Neural Nets | Random Forest | Boosting | Bagging

Authors

Kaustubh Jagtap | Nicklaus Ong | Sung Zheng Jie

NUS FINTECH SOCIETY
nusfintech@gmail.com

For this report, we will run a backtest for the period 7th Nov – 20th Nov, and comment on the trades that were placed or that should have been placed.

Below are several screenshots for our analysis:

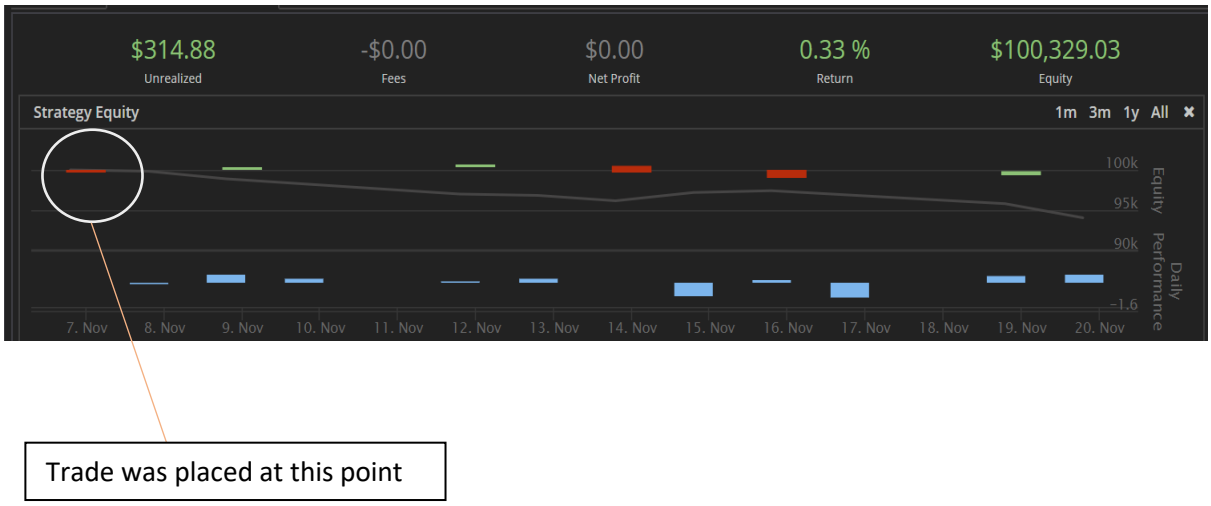
Trades Summary:

Trades Summary

Date Time	Symbol	Type	Price	Quantity	Operation
2018-11-07 00:00:00	AUDUSD	Market	$0.72616 USD	-123,000	Sell

Our model placed one trade, on 7th Nov, and it was a short of quantity 123000. Our model picked up the sell signal during the backtest itself, and when the new instance came in, it predicted a decrease in price and immediately shorted.

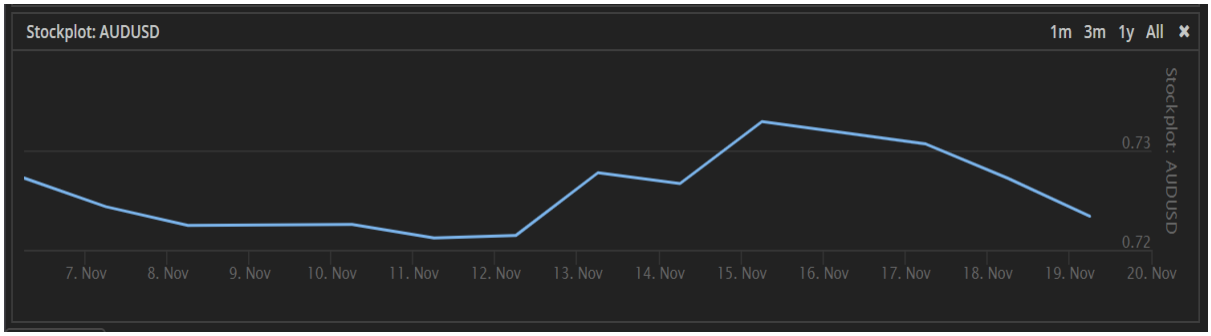
Backtest Equity Chart:



Trade was placed at this point

It turns out that our trade was right! The AUD/USD indeed fell initially, and our equity portfolio went up. However, our model did not liquidate at the bottom, but rather held on to the short position. This is because we programmed the risk management strategy to have a higher take-profit.

Movement in AUD/USD

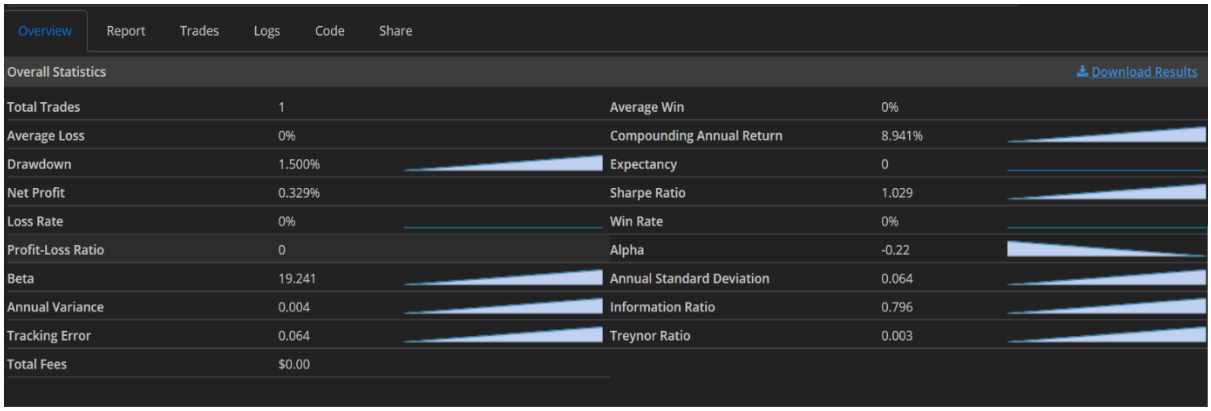


Because our first trade did not liquidate, we missed out on the long trade that would have been placed around 14th Nov, and the short trade that would have been placed on 15th. In hindsight, we might have programmed our liquidation to kick off at a lower take-profit level, and sought a higher win percentage, over taking profit at a higher level and expecting a lesser number of trades.

However, we could also argue that given the short time window, our model did not have enough time to be exposed to all the different market conditions that generally unfold in the longer term. Hence, our higher profit-seeking strategy might still have been better in the longer term. Indeed, our 220-day backtest had cumulative returns of 12+% (see interim report).

It is interesting to note here that our strategy could have been augmented by a model that can detect events – for example, on 14th November, Trump had a negative brush with Macron, and that is probably why the AUD/USD increased – due to the USD depreciating. Web crawlers that scrape online news and perform sentiment analysis on the data would therefore have been well suited as an additional layer on our technical indicators.

Overall Statistics



Drawdown – Our maximum drawdown hit 1.5%. This was when we were holding the short while the AUD/USD was appreciating from 12th – 15th November. This is quite a safe number still, as there are hedge funds out there with an appetite to withstand up to 20% drawdown.

Net Profit – The single trade we placed gave positive returns; however, it didn't liquidate. We would have expected it to liquidate in the near future when our take profit condition would hit.

Compounding Annual Return – It is at 8.941%, which seems high; however we cannot take it at face value as the trading period was less than 2 weeks and its performance cannot be extrapolated for the entire year.

Sharpe Ratio – Above 1 hence it is decent, however, could have been better if we hadn't held on to the short during the increase in our security price.