Exercise 16 - Investigating Neural Network architectures for cryptocurrency price predictions (in R)

Feb 27, 2018

Reran the data of minute by minute → similar results 0.57.

Decision made to move to hour by hour (stagnation issues present in minute data). Hour by hour data scraped and merged into a full clean .csv with OCLHV data of all the biggest pairs.

Hourly data & returns

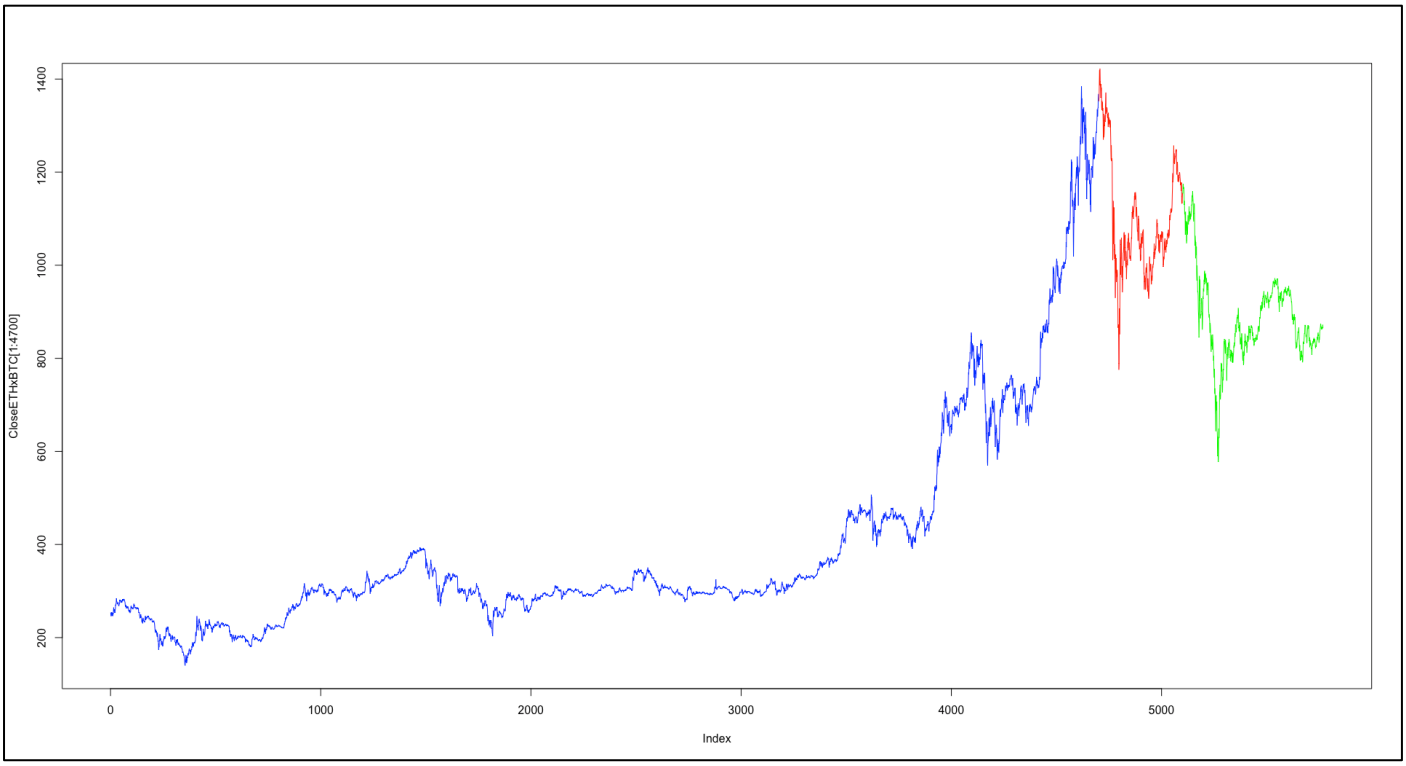

Figure 1 - Hourly BTC data (~6 months) showing timeframe used for train, dev and test

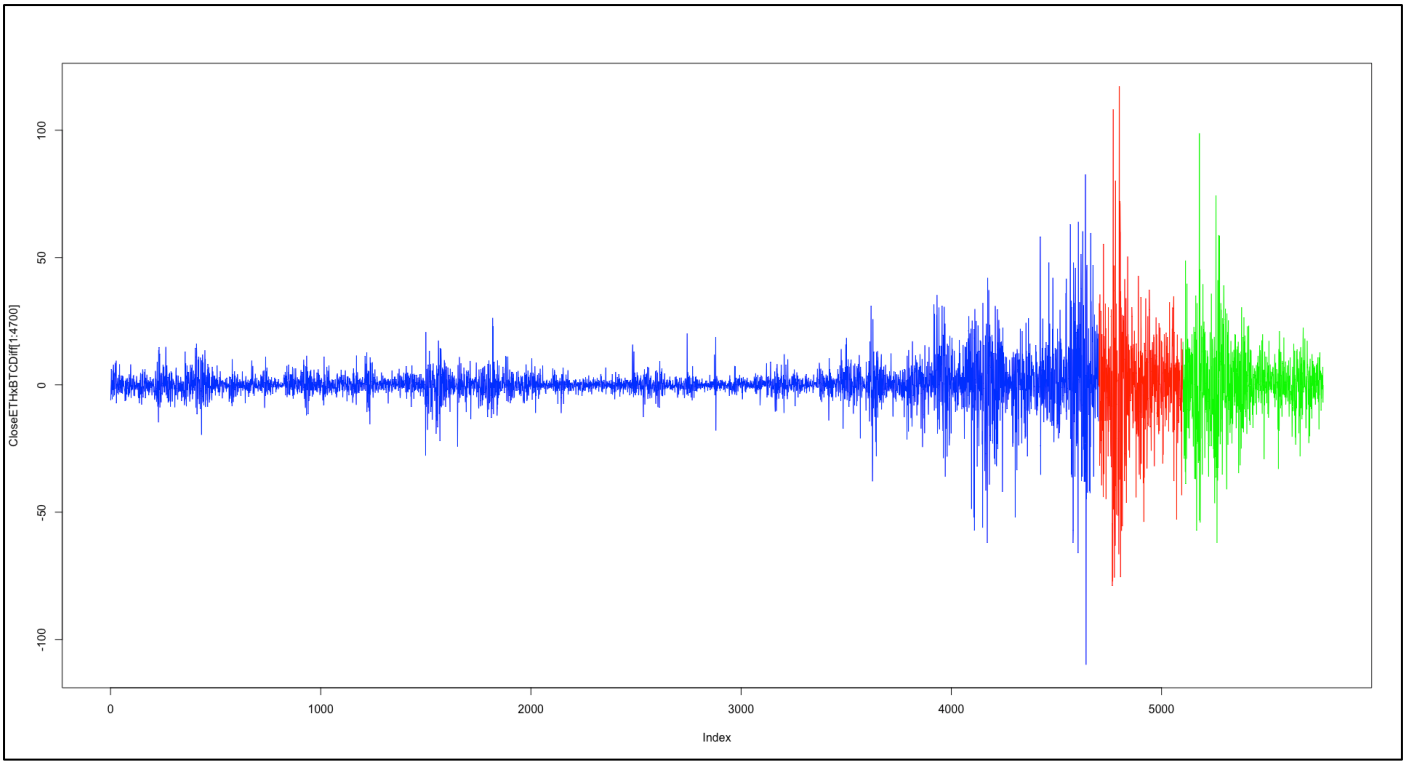

Figure 2 - Returns data of full timeframe

Various architectures explored

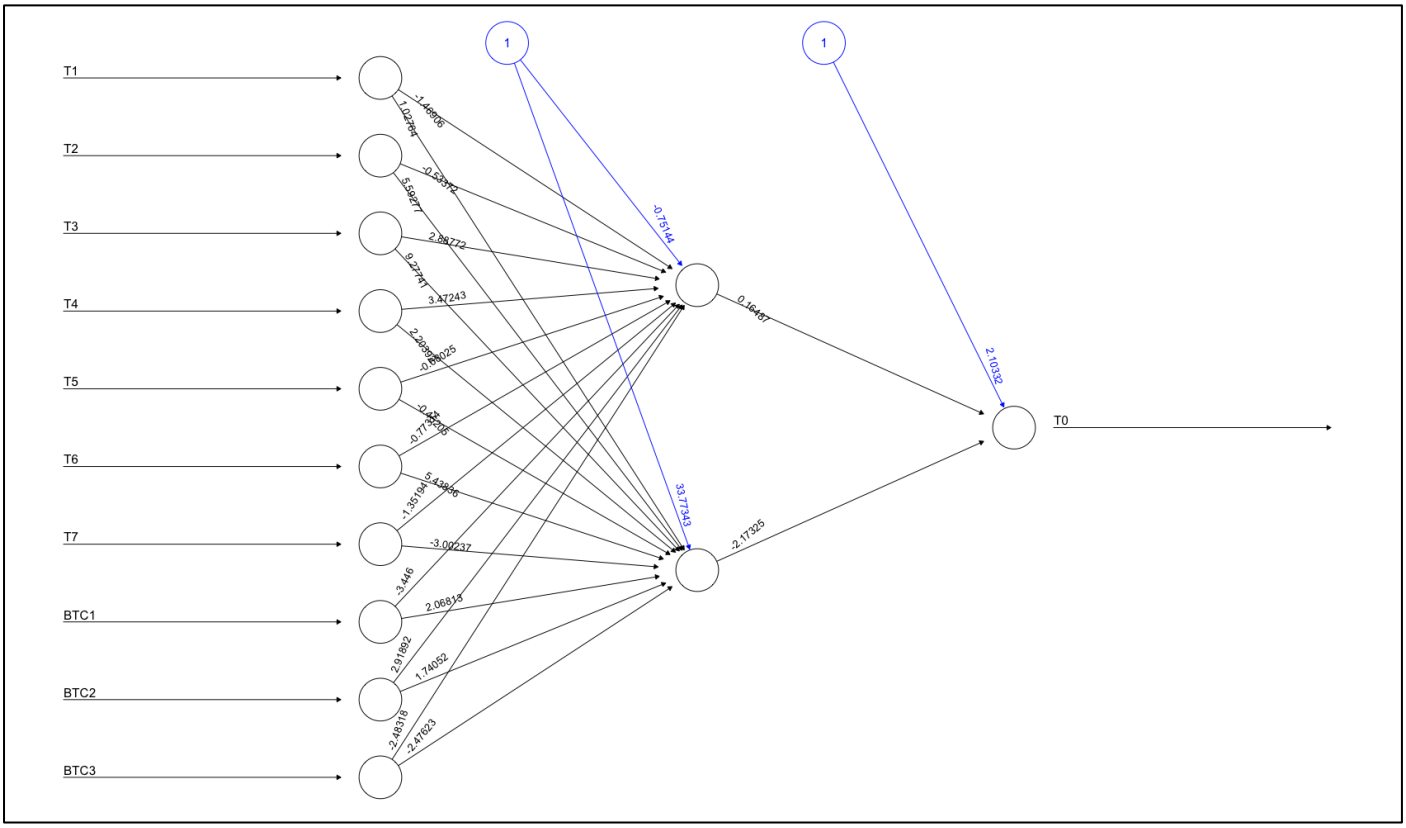

Figure 3 - Unoptimized neural network used

Hidden Layers	1	1	1	1	1	1	1	1	1
Hidden Neurons	1	2	3	4	5	6	7	8	9
Predictability (dev)	~0.50	0.54	NC	NC	NC	NC	NC	NC	NC
Predictability (test)	~0.50	0.50	NC	NC	NC	NC	NC	NC	NC

Table 1 - Hourly data with training split as in fig1 and fig2

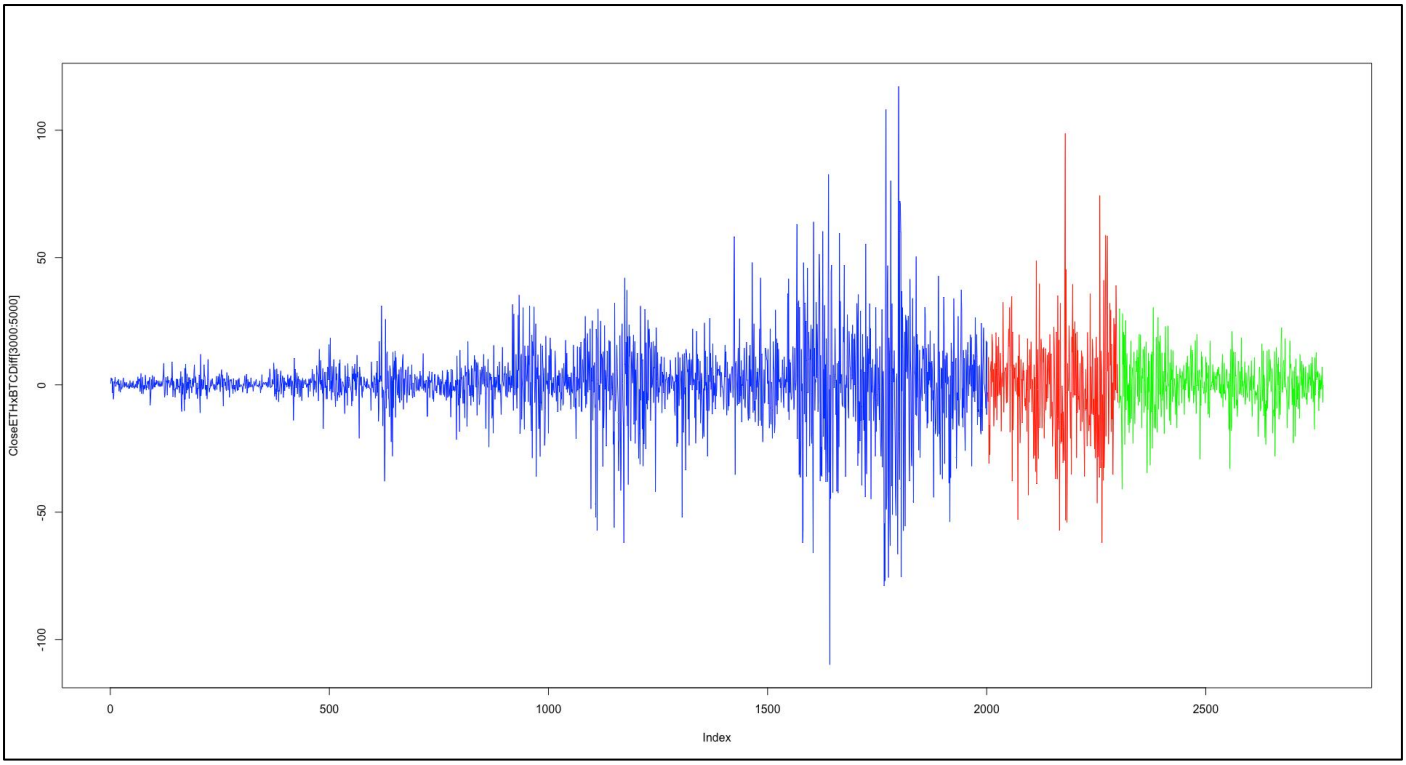

Figure 4 - Returns data for cropped timeframe

Hidden Layers	1	1	1	1	1	1	1	1	1
Hidden Neurons	1	2	3	4	5	6	7	8	9
Predictability (dev)	~0.50	0.51	NC	NC	NC	NC	NC	NC	NC
Predictability (test)	~0.50	0.50	NC	NC	NC	NC	NC	NC	NC

Table 2 - Hourly data with training from index of 3000 onward as in fig4