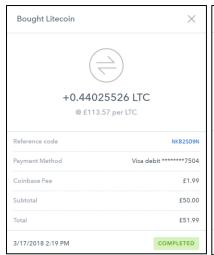
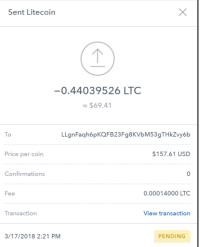
Exercise 20 - Live trading trial March 17, 2018

1. Moving funds into existing Poloniex account

Purchased 50GBP of LTC on Coinbase, 25GBP for trading and 25GBP for reserve (LTC for fast & low fees) - 0.22025526 LTC available to trade.





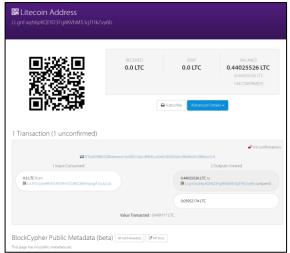


Figure 1 - bought LTC

Figure 2 - sent LTC to Polo

Figure 3 - Blockchain process of transaction

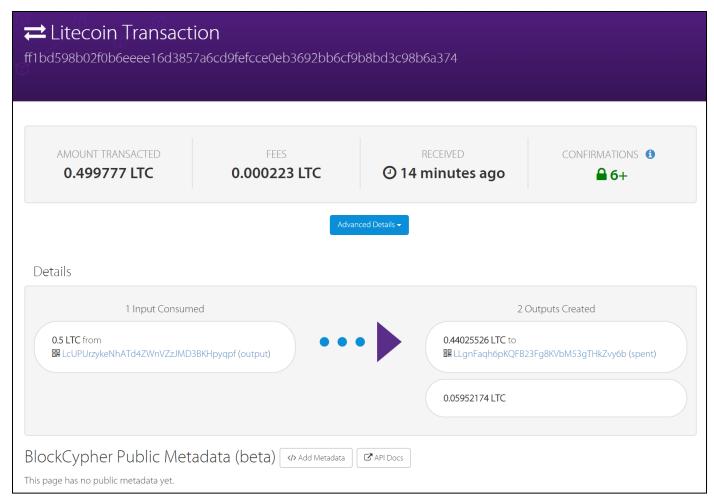


Figure 4 - Transaction public blockchain information

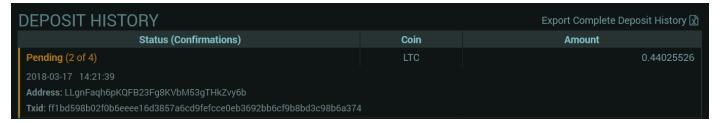


Figure 5 - Poloniex address receiving LTC (waiting for confirmation from nodes)

DEPOSIT HISTORY		Export Complete Deposit History 🖫
Status (Confirmations)	Coin	Amount
Complete	LTC	0.44025526
2018-03-17 14:21:39		
Address: LLgnFaqh6pKQFB23Fg8KVbM53gTHkZvy6b		
Txid : ff1bd598b02f0b6eeee16d3857a6cd9fefcce0eb3692bb6cf9b8bd3c98b6a37	4	

Figure 6 - Poloniex confirmed LTC received



Figure 7 - Poloniex exchange of LTC into USDT

USDT	Tether USD	68.81067332	2 0.000000	0.00857312	<u>Deposit</u> Withdraw
You hav	re 68.81067332 USDT a	available for withdrawal. 0.00000000 Us	SDT is held <u>on order</u>	<u>s</u> .	
	Address:				
	Amount:				
Transa	action Fee:				-25.00000000
	Total:				0.00000000 USDT
	TANT: Do not send Teth ently lose access to yo	er USD anywhere unless you are certair ur coins.	the destination sup	ports Omni transactions.	If it does not, you could
					Withdraw

Figure 8 - USDT total (half available for live trading, half reserve)

USDT	Tether USD	34.81067365	0.00000000	0.00434297	<u>Deposit</u> Withdraw
You have	34.81067365 USDT available for withdrawal	. 0.00000000 USDT is he	ld <u>on orders</u> .		
A	Address:				
	Amount:				
Transact	tion Fee:				-25.00000000
	Total:				0.00000000 USDT
	NT: Do not send Tether USD anywhere unless tly lose access to your coins.	s you are certain the dest	ination supports Omn	i transactions. If it does not	, you could
					Withdraw

Figure 9 - USDT tradable

2. Live Trading Test Run

Step 1. Update data

After running first part of LiveAlgorithm.R, NewData object created:

Ex17.	.3_TensorFlo	wCrypto.R	× B E	x20_LiveTra	ding.R ×	P Ex20_	LiveDataPro	cessing.R >	Ne Ne	wData ×	layers
$\langle \neg \neg \rangle$		Filter									
^	T0 [‡]	T1 [‡]	T2 [‡]	T3 [‡]	T4 [‡]	T5 [‡]	T6 [‡]	T7 [‡]	BTC1 [‡]	BTC2 [‡]	втсз
1	400.92	397.67	406.97	416.09	418.97	421.94	421.22	420.87	7981.10	8027.00	8177.52
2	397.67	406.97	416.09	418.97	421.94	421.22	420.87	422.00	8027.00	8177.52	8246.66
3	406.97	416.09	418.97	421.94	421.22	420.87	422.00	423.69	8177.52	8246.66	8268.7
4	416.09	418.97	421.94	421.22	420.87	422.00	423.69	423.00	8246.66	8268.71	8305.00
5	418.97	421.94	421.22	420.87	422.00	423.69	423.00	423.00	8268.71	8305.00	8187.50
6	421.94	421.22	420.87	422.00	423.69	423.00	423.00	419.97	8305.00	8187.50	8193.44
7	421.22	420.87	422.00	423.69	423.00	423.00	419.97	421.58	8187.50	8193.44	8155.00
8	420.87	422.00	423.69	423.00	423.00	419.97	421.58	425.00	8193.44	8155.00	8198.32
9	422.00	423.69	423.00	423.00	419.97	421.58	425.00	425.00	8155.00	8198.32	8200.00
10	423.69	423.00	423.00	419.97	421.58	425.00	425.00	427.39	8198.32	8200.00	8216.00
onsole T	Ferminal ×										
	<- getOHLC 18 16:18:4						= 1800, .	start = 3	1536000, .	end = 999	9999999)
	ohlc\$BTCUS	date	high	low	open	close		oteVolume 139.09450	weightedA	verage 38.891	
3891 201	18-03-18 1 18-03-18 1 18-03-18 1	2:00:00 7	802.868 77	709.820 77	66.349 77	48.231 4	54523.7 74833.2	58.64865 87.02353	77	49.942 54.605	
3893 201	18-03-18 1	3:00:00 7	719.015 75	45.297 77	00.000 75	45.297 87	76076.7	114.60645	76	44.219	
	18-03-18 1 18-03-18 1							150.56263 352.40893		74.180 35.953	
3896 201	18-03-18 1	4:30:00 7	501.722 73	321.000 74	00.849 74	76.390 19	55694.8	263.03603	74	35.083	
	18-03-18 1 18-03-18 1							173.99241 332.44173		23.865 93.797	
JOSO 201	TO-02-TQ T	3.30.00 /4	+40./30 /3	JJU.J42 /4	.00.000 /3	/I.UO4 24:	0.0000	JJ2.441/3	/ 3	33./3/	

Figure 10 - Updated data for Live Trading (17/03/18 @ 14h00)

Step 2. Acquire prediction

After running second part of LiveAlgorithm.R, the prediction and confidence can be extracted:

Prediction: BUY or SELL

Confidence: 0-100%

Step 3. Exchange executed on Poloniex

Test run strategy: exchanged fixed amount of USDT/DASH - 1.01USDT or 0.003 DASH

Test and Fail Results

Time	14:30	15:00	15:30	16:00	16:30	17:00
Trade number	0 (test)	1 (test)	2 (test)		1 (fail)	2 (fail)
Prediction	SELL	BUY	BUY		BUY	
Confidence	51.1%	55.2%	50.7%		50.1%	
Outcome	√	X	X			

Trade 0 (test)

Market	Туре	Category	Price/Share	Amount	Fee	Total	Transaction Date
DASH/USDT	Sell	Exchange	355.000000000	0.00300000	0.00266250 USDT (0.25%)	1.06233750 USDT	2018-03-18 14:26:07

Final price at 14:30 - 353.00

Trade 1 (test)

Market	Туре	Category	Price/Share	Amount	Fee	Total	Transaction Date
DASH/USDT	Buy	Exchange	354.99999999	0.00284507	0.00000711 DASH (0.25%)	1.00999984 USDT	2018-03-18 14:44:38

Final price at 15:00 - 354.97747625

But (see problem 1)

Trade 2 (test)

Market	Туре	Category	Price/Share	Amount	Fee	Total	Transaction Date
DASH/USDT	Buy	Exchange	356.23225213	0.00283522	0.00000709 DASH (0.25%)	1.00999680 USDT	2018-03-18 15:10:30

Final price at 15:30 - 350.00000000

Trade 1 (fail)

Market		Туре	Category	Price/Share	Amount	Fee	Total	Transaction Date
DASH/US	SDT	Buy	Exchange	348.87633909	0.00289500	0.00000724 DASH (0.25%)	1.00999700 USDT	2018-03-18 16:02:39

Final price at 16:30 -

Trade 2 (fail)

Live Trade Results

Time	17:30	18:00	18:30	19:00	19:30	20:00	20:30	21:00	21:30
Trade number	1	2	3	4	5	6	7	8	9
Prediction	BUY	BUY	SELL	SELL	SELL	BUY	BUY	SELL	SELL
Confidence	50.6%	61.8%	57.7%	60.3%	60.2%	53.6%	55.1%	51.2%	50.2%
Outcome	√	√	X	√	√	X	√	√	X

Trade 1

Market	Туре	Category	Price/Share	Amount	Fee	Total	Transaction Date
DASH/USDT	Buy	Exchange	342.00000017	0.00295321	0.00000738 DASH (0.25%)	1.00999782 USDT	2018-03-18 17:02:15

Final price at 17:30 - 343.70550011 USD

<u>Trade 2</u> (order placed delay)

I	Market	Туре	Category	Price/Share	Amount	Fee	Total	Transaction Date
	DASH/USDT	Buy	Exchange	343.70550011	0.00293856	0.00000735 DASH (0.25%)	1.00999923 USDT	2018-03-18 17:32:39

Final price at 18:00 - 353.90000054 USD

Trade 3

Market	Туре	Category	Price/Share	Amount	Fee	Total	Transaction Date
DASH/USDT		Exchange	353.90000054	0.00300000	0.00265425 USDT (0.25%)	1.05904575 USDT	2018-03-18 18:01:33

Final price at 18:30 - 357.46004700 USD

<u>Trade 4</u> (forgot to pull data before)

Market	Туре	Category	Price/Share	Amount	Fee	Total	Transaction Date
DASH/USDT		Exchange	357.46004700	0.00300000	0.00268095 USDT (0.25%)	1.06969919 USDT	2018-03-18 18:33:54

Final price at 19:00 - 353.89410133 USD

$\underline{\text{Trade } 5}$

Market	Туре	Category	Price/Share	Amount	Fee	Total	Transaction Date
DASH/USDT		Exchange	353.89410133	0.00300000	0.00265421 USDT (0.25%)	1.05902809 USDT	2018-03-18 19:01:47

Final price at 19:30 - 351.61006900 USD

Trade 6

Market	Туре	Category	Price/Share	Amount	Fee	Total	Transaction Date
DASH/USDT	Buy	Exchange	351.61006900	0.00300000	0.00000750 DASH (0.25%)	1.05483020 USDT	2018-03-18 19:31:53

Final price at $20{:}00$ - 351.02000000 USD

Trade 7

Market	Туре	Category	Price/Share	Amount	Fee	Total	Transaction Date
DASH/USDT	Buy	Exchange	351.02000000	0.00300000	0.00000750 DASH (0.25%)	1.05306000 USDT	2018-03-18 20:02:02

Final price at 20:30 - 351.59000030

$\underline{\text{Trade } 8}$

Market	Туре	Category	Price/Share	Amount	Fee	Total	Transaction Date
DASH/USDT		Exchange	351.59000030	0.00300000	0.00263693 USDT (0.25%)	1.05213308 USDT	2018-03-18 20:31:28

Final price at 21:00 - 356.11190027

$\underline{\text{Trade } 9}$

Market	Туре	Category	Price/Share	Amount	Fee	Total	Transaction Date
DASH/USDT		Exchange	356.11190027	0.00300000	0.00267084 USDT (0.25%)	1.06566486 USDT	2018-03-18 21:01:53

Final price at 21:30 - 374.48733258

Total

 $4~\mathrm{BUYs},\,5~\mathrm{SELLs}$

Overall: 6 correct, 3 wrong \rightarrow ~66.67%)

Confidence of $55\% \rightarrow 75\%$

Confidence of 60% \rightarrow 100%

Problem 1:



Buying delay was clearly a problem in trade 1 (test) $\,$

Data delays in trade (fail)

API time to respond