		Referen	ce Points	
Trading strategy	Buy-and-hold stra	tegy	Perfect knowledge	of target
	Profit	Number of trades	Profit	Number of trades
BTC				
Price movement (binary)	279.56%	2.0	151,887.02%	247.1
Extrema (min/max) +/- 7 days	-	-	1,191.32%	35.1
Extrema (min/max) +/- 14 days	-	-	1,266.22%	16.6
Extrema (min/max) +/- 21 days	-	-	1,191.31%	10.3
ETH	Î			
Price movement (binary)	85.99%	2.0	46,297.82%	164.6
Extrema (min/max) +/- 7 days	-		327.47%	22.6
Extrema (min/max) +/- 14 days	-	-	257.06%	11.7
Extrema (min/max) +/- 21 days	ī -		213.23%	8.3

Crypto price forecasting performance for various target variables by model and training data

Model										(Ridge) 0	LS / Logit									
Training data	Causal stationary	data			Causal stationary	data + Twitter Rober	ta		Causal stationary	data + BART MNLI			Causal stationary	lata + Full Pretraine	1 NLP		Causal stationary	data + Finetuned NL	Р	
	Excess profit	Number of trades	ROC AUC	Accuracy	Excess profit	Number of trades	ROC AUC	Accuracy	Excess profit	Number of trades	ROC AUC	Accuracy	Excess profit	Number of trades	ROC AUC	Accuracy	Excess profit	Number of trades	ROC AUC	Accuracy
BTC																				
Price movement (regression)	-36.70%	217.7	0.5257	0.5293	-21.14%	219.1	0.5266	0.5305	-9.80%	211.1	0.5293	0.5342	37.11%	209.1	0.5268	0.5317	-25.45%	217.1	0.5257	0.5293
Price movement (classification)	106.22%	106.9	0.5326	0.5556	117.96%	111.4	0.5339	0.5556	105.01%	104.6	0.5304	0.5559	135.45%	115.1	0.5309	0.5553	120.14%	108.9	0.5312	0.5553
Extrema (min/max) +/- 7 days	7.40%	2.0	0.7396	0.9546	3.97%	2.0	0.7405	0.9569	7.26%	2.0	0.7437	0.9580	12.04%	2.3	0.7444	0.9570	7.40%	2.0	0.7402	0.9538
Extrema (min/max) +/- 14 days	5.72%	2.3	0.7573	0.9767	6.91%	2.3	0.7654	0.9791	6.91%	2.3	0.7619	0.9803	7.08%	2.8	0.7704	0.9792	3.93%	2.3	0.7630	0.9760
Extrema (min/max) +/- 21 days	5.00%	2.3	0.8005	0.9848	2.77%	2.0	0.7995	0.9872	2.77%	2.0	0.8016	0.9884	7.15%	2.0	0.7937	0.9873	9.95%	2.0	0.7922	0.9840
ETH																				
Price movement (regression)	136.62%	105.7	0.5418	0.5462	126.23%	110.3	0.5418	0.5457	148.00%	128.6	0.5412	0.5443	152.08%	119.7	0.5459	0.5486	121.48%	108.3	0.5376	0.5414
Price movement (classification)	275.06%	83.7	0.5626	0.5719	300.73%	80.0	0.5650	0.5752	304.98%	77.1	0.5570	0.5676	302.06%	80.0	0.5586	0.5710	295.88%	67.7	0.5574	0.5690
Extrema (min/max) +/- 7 days	41.44%	2.0	0.7199	0.9517	17.84%	2.0	0.7235	0.9500	22.15%	2.0	0.7208	0.9493	31.41%	2.0	0.7343	0.9567	36.96%	2.3	0.7254	0.9441
Extrema (min/max) +/- 14 days	29.90%	2.6	0.8003	0.9768	19.17%	2.6	0.7687	0.9750	16.58%	2.3	0.8019	0.9743	20.32%	2.6	0.8069	0.9819	13.59%	2.3	0.7700	0.9690
Extrema (min/max) +/- 21 days	30.47%	2.3	0.8003	0.9809	30.47%	2.3	0.8102	0.9790	30.47%	2.3	0.8014	0.9784	30.47%	2.3	0.8048	0.9860	30.47%	2.3	0.8046	0.9730

Model										XG	Boost									Į.
Training data	Causal stationary	data			Causal stationary	data + Twitter Rober	ta		Causal stationary	iata + BART MNLI			Causal stationary of	data + Full Pretrained	1 NLP		Causal stationary	data + Finetuned NL	P	
	Excess profit	Number of trades	ROC AUC	Accuracy	Excess profit	Number of trades	ROC AUC	Accuracy	Excess profit	Number of trades	ROC AUC	Accuracy	Excess profit	Number of trades	ROC AUC	Accuracy	Excess profit	Number of trades	ROC AUC	Accuracy
BTC																				
Price movement (regression)	216.35%	186.9	0.5242	0.5360	317.41%	143.4	0.5202	0.5409	201.68%	90.9	0.5198	0.5357	300.96%	94.0	0.528	0.5394	351.34%	70.9	0.5262	0.5458
Price movement (classification)	177.05%	61.7	0.5418	0.5653	203.69%	143.7	0.5458	0.5696	217.23%	116.0	0.5438	0.5656	202.01%	157.7	0.5488	0.5659	184.13%	132.6	0.5408	0.5623
Extrema (min/max) +/- 7 days	14.13%	2.3	0.7626	0.9579	16.00%	2.3	0.7683	0.9577	50.42%	2.3	0.7651	0.9580	64.77%	2.9	0.768	0.9574	62.80%	2.6	0.7661	0.9576
Extrema (min/max) +/- 14 days	26.91%	2.3	0.8031	0.9794	31.76%	2.3	0.8069	0.9795	31.76%	2.3	0.7986	0.9799	19.50%	2.3	0.8000	0.9797	27.28%	2.3	0.8060	0.9795
Extrema (min/max) +/- 21 days	7.22%	2.0	0.8531	0.9872	16.97%	2.3	0.8517	0.9873	13.73%	2.3	0.8567	0.9873	20.38%	2.3	0.848	0.9875	19.14%	2.3	0.8501	0.9875
ETH																				
Price movement (regression)	163.06%	93.7	0.5291	0.5314	200.77%	112.9	0.5293	0.5300	164.15%	84.9	0.5314	0.5314	210.53%	108.3	0.533	0.5333	195.57%	93.4	0.5254	0.5238
Price movement (classification)	311.69%	103.4	0.5614	0.5705	290.29%	110.9	0.5624	0.5719	258.89%	102.0	0.5675	0.5748	291.43%	98.6	0.5616	0.5714	370.77%	94.9	0.5607	0.5729
Extrema (min/max) +/- 7 days	25.77%	2.0	0.7435	0.9571	46.60%	2.6	0.7458	0.9571	40.10%	2.3	0.7418	0.9576	30.07%	2.3	0.7474	0.9574	43.23%	2.3	0.7476	0.9569
Extrema (min/max) +/- 14 days	48.95%	2.0	0.8187	0.9824	64.22%	2.3	0.8325	0.9821	42.15%	2.9	0.8335	0.9824	53.28%	2.6	0.8334	0.9821	29.54%	2.6	0.8305	0.9817
Extrema (min/max) +/- 21 days	33.80%	2.3	0.8248	0.9864	28.90%	2.3	0.8275	0.9862	13.61%	2.3	0.8358	0.9864	29.67%	2.3	0.8216	0.9864	15.97%	2.3	0.8500	0.9864

Model										MLF	(FNN)									
Training data	Causal stationary	iata			Causal stationary	data + Twitter Rober	ta		Causal stationary	iata + BART MNLI			Causal stationary	data + Full Pretraine	d NLP		Causal stationary	data + Finetuned NL	P	
	Excess profit	Number of trades	ROC AUC	Accuracy	Excess profit	Number of trades	ROC AUC	Accuracy	Excess profit	Number of trades	ROC AUC	Accuracy	Excess profit	Number of trades	ROC AUC	Accuracy	Excess profit	Number of trades	ROC AUC	Accuracy
BTC																				
Price movement (regression)	25.58%	223.1	0.5229	0.5363	49.17%	77.4	0.5206	0.5403	57.29%	216.9	0.5235	0.5406	172.08%	142.3	0.5213	0.5379	87.10%	172.0	0.5242	0.5391
Price movement (classification)	183.08%	99.1	0.5354	0.5583	214.29%	92.3	0.5378	0.5620	167.89%	126.0	0.5335	0.5583	208.54%	90.6	0.5339	0.5565	169.03%	111.4	0.5328	0.5574
Extrema (min/max) +/- 7 days	135.93%	2.6	0.7409	0.9576	127.43%	2.0	0.7338	0.9574	140.25%	2.6	0.7414	0.9577	133.59%	2.3	0.7396	0.9576	169.12%	2.3	0.7334	0.9574
Extrema (min/max) +/- 14 days	52.34%	2.6	0.7616	0.9795	71.56%	2.3	0.7628	0.9794	13.58%	2.3	0.7746	0.9797	46.92%	2.6	0.7617	0.9795	123.68%	2.9	0.7581	0.9795
Extrema (min/max) +/- 21 days	11.07%	2.0	0.6966	0.9869	11.35%	2.3	0.7796	0.9873	47.08%	2.3	0.8207	0.9875	32.09%	2.3	0.8012	0.9875	36.24%	2.3	0.7944	0.9875
ETH																				
Price movement (regression)	210.75%	128.3	0.5445	0.5462	224.38%	109.4	0.5439	0.5495	206.17%	121.7	0.5466	0.5505	251.98%	127.4	0.5492	0.5529	230.31%	104.9	0.5445	0.5481
Price movement (classification)	234.54%	59.7	0.5631	0.5729	271.87%	89.1	0.5611	0.5743	354.81%	82.9	0.5630	0.5705	348.69%	85.7	0.5612	0.5695	316.07%	82.6	0.5660	0.5695
Extrema (min/max) +/- 7 days	49.41%	2.0	0.7270	0.9567	73.56%	2.0	0.7221	0.9567	49.65%	2.0	0.7128	0.9564	70.50%	2.0	0.7270	0.9569	68.14%	2.0	0.7230	0.9567
Extrema (min/max) +/- 14 days	69.31%	2.6	0.8085	0.9826	95.55%	4.6	0.8159	0.9821	101.97%	2.3	0.7957	0.9819	104.91%	2.9	0.8144	0.9819	102.19%	3.7	0.7998	0.9821
Extrema (min/max) +/- 21 days	50.79%	3.4	0.8133	0.9854	75.58%	3.1	0.8088	0.9855	55.70%	2.6	0.7927	0.9862	51.67%	2.3	0.8057	0.9862	49.35%	2.9	0.8035	0.9867

Model										L	TM									
Training data	Causal stationary	data			Causal stationary	data + Twitter Rober	ta		Causal stationary	iata + BART MNLI			Causal stationary	data + Full Pretraine	d NLP		Causal stationary	data + Finetuned NL	P	
	Excess profit	Number of trades	ROC AUC	Accuracy	Excess profit	Number of trades	ROC AUC	Accuracy	Excess profit	Number of trades	ROC AUC	Accuracy	Excess profit	Number of trades	ROC AUC	Accuracy	Excess profit	Number of trades	ROC AUC	Accuracy
BTC																				
Price movement (regression)	61.72%	14.9	0.5180	0.5330	126.24%	61.1	0.5267	0.5375	25.63%	30.3	0.5212	0.5351	107.76%	12.6	0.5213	0.5403	159.98%	22.9	0.5202	0.5400
Price movement (classification)	165.84%	46.9	0.5405	0.5617	234.35%	13.7	0.5253	0.5525	142.65%	52.3	0.5388	0.5592	137.08%	13.1	0.5289	0.5531	193.66%	17.1	0.5277	0.5519
Extrema (min/max) +/- 7 days	126.26%	2.0	0.6917	0.9570	126.26%	2.0	0.6774	0.9586	126.26%	2.0	0.6851	0.9570	129.85%	2.3	0.6923	0.9570	6.55%	2.0	0.6746	0.9568
Extrema (min/max) +/- 14 days	4.21%	2.0	0.7180	0.9789	12.05%	2.3	0.7421	0.9788	14.02%	2.3	0.7244	0.9791	12.33%	2.0	0.7135	0.9791	12.99%	2.0	0.7326	0.9789
Extrema (min/max) +/- 21 days	7.54%	2.0	0.7700	0.9870	9.34%	2.0	0.7611	0.9870	12.57%	2.3	0.7742	0.9869	81.72%	4.0	0.7565	0.9872	9.34%	2.0	0.7624	0.9870
ETH								Ī												
Price movement (regression)	71.53%	5.7	0.5258	0.5300	114.05%	30.3	0.5232	0.5257	78.29%	8.6	0.5216	0.5333	54.50%	24.0	0.5222	0.5267	66.77%	12.0	0.5287	0.5281
Price movement (classification)	193.21%	56.3	0.5543	0.5619	152.76%	54.0	0.5510	0.5610	190.01%	26.9	0.5459	0.5600	219.39%	47.1	0.5568	0.5614	139.87%	64.6	0.5511	0.5624
Extrema (min/max) +/- 7 days	74.77%	2.0	0.6814	0.9564	68.14%	2.0	0.6779	0.9562	82.67%	2.6	0.6890	0.9562	73.52%	2.0	0.6900	0.9564	67.31%	2.6	0.6737	0.9564
Extrema (min/max) +/- 14 days	15.68%	2.0	0.7521	0.9812	95.87%	2.3	0.7527	0.9814	105.21%	2.3	0.7735	0.9810	17.50%	2.0	0.7552	0.9810	32.90%	2.0	0.7263	0.9810
Extrema (min/max) +/- 21 days	68.51%	2.0	0.8123	0.9862	121.54%	2.3	0.8260	0.9857	78.61%	2.0	0.7971	0.9862	79.57%	2.0	0.8014	0.9860	75.02%	2.0	0.8162	0.9862

Model										1	FT									
Training data	Causal stationary of	iata			Causal stationary	data + Twitter Rober	ta		Causal stationary	iata + BART MNLI			Causal stationary of	lata + Full Pretraine	INLP		Causal stationary	data + Finetuned NL	P	
	Excess profit	Number of trades	ROC AUC	Accuracy	Excess profit	Number of trades	ROC AUC	Accuracy	Excess profit	Number of trades	ROC AUC	Accuracy	Excess profit	Number of trades	ROC AUC	Accuracy	Excess profit	Number of trades	ROC AUC	Accuracy
BTC																				
Price movement (regression)	11.03%	4.3	0.5109	0.5381	19.48%	3.4	0.5117	0.5418	11.35%	3.7	0.5116	0.5409	25.52%	3.1	0.5126	0.5418	23.66%	3.3	0.5122	0.5430
Price movement (classification)	7.07%	2.0	0.5018	0.5354	8.62%	2.0	0.5001	0.5351	7.08%	2.1	0.5009	0.5350	7.64%	2.0	0.5000	0.5330	7.46%	2.0	0.4977	0.5321
Extrema (min/max) +/- 7 days	5.59%	2.0	0.5768	0.9558	5.39%	2.0	0.5739	0.9567	6.38%	2.0	0.5769	0.9567	6.70%	2.0	0.5788	0.9563	4.84%	2.0	0.5728	0.9555
Extrema (min/max) +/- 14 days	0.00%	2.0	0.5836	0.9779	0.00%	2.0	0.5908	0.9784	0.00%	2.0	0.5874	0.9790	0.00%	2.0	0.5847	0.9786	0.00%	2.0	0.5874	0.9777
Extrema (min/max) +/- 21 days	1.51%	2.0	0.6346	0.9858	1.98%	2.0	0.6491	0.9865	3.73%	2.0	0.6616	0.9868	6.93%	2.0	0.6508	0.9867	3.66%	2.0	0.6506	0.9858
ЕТН								Ī												
Price movement (regression)	29.43%	19.9	0.5213	0.5252	33.65%	21.6	0.5206	0.5245	30.17%	20.5	0.5212	0.5266	33.84%	22.6	0.5236	0.5271	31.06%	19.0	0.5201	0.5222
Price movement (classification)	11.90%	2.0	0.5007	0.5276	11.91%	2.1	0.5003	0.5288	13.00%	2.0	0.4989	0.5266	13.62%	2.0	0.5000	0.5267	13.16%	2.0	0.4993	0.5268
Extrema (min/max) +/- 7 days	0.00%	2.0	0.5555	0.9538	0.00%	2.0	0.5550	0.9533	0.00%	2.0	0.5541	0.9532	0.00%	2.0	0.5607	0.9552	0.00%	2.0	0.5551	0.9519
Extrema (min/max) +/- 14 days	11.96%	2.0	0.6530	0.9795	20.06%	2.3	0.6510	0.9789	19.41%	2.0	0.6581	0.9787	14.31%	2.0	0.6592	0.9805	13.01%	2.1	0.6421	0.9772
Extrema (min/max) +/- 21 days	2.60%	2.2	0.5852	0.9840	3.63%	2.2	0.5891	0.9832	2.53%	2.1	0.5809	0.9833	2.71%	2.0	0.5821	0.9852	2.42%	2.1	0.5894	0.9821

										Model	Average									
Training data	Causal stationary	data			Causal stationary	data + Twitter Rober	ta		Causal stationary	data + BART MNLI			Causal stationary	data + Full Pretraine	d NLP		Causal stationary	data + Finetuned NL	P	
	Excess profit	Number of trades	ROC AUC	Accuracy	Excess profit	Number of trades	ROC AUC	Accuracy	Excess profit	Number of trades	ROC AUC	Accuracy	Excess profit	Number of trades	ROC AUC	Accuracy	Excess profit	Number of trades	ROC AUC	Accuracy
BTC																				
Price movement (regression)	68.41%	209.2	0.5243	0.5339	115.15%	146.6	0.5225	0.5372	83.06%	173.0	0.5242	0.5368	170.05%	148.5	0.5255	0.5363	137.66%	153.3	0.5254	0.538
Price movement (classification)	155.45%	89.2	0.5366	0.5597	178.65%	115.8	0.5392	0.5624	163.38%	115.5	0.5359	0.5599	182.00%	121.1	0.5379	0.5592	157.77%	117.6	0.5349	0.558
Extrema (min/max) +/- 7 days	52.49%	2.3	0.7477	0.9567	49.13%	2.1	0.7475	0.9573	65.98%	2.3	0.7501	0.9579	70.13%	2.5	0.7509	0.9573	79.77%	2.3	0.7466	0.956
Extrema (min/max) +/- 14 days	28.32%	2.4	0.7740	0.9785	36.74%	2.3	0.7784	0.9793	17.42%	2.3	0.7784	0.9800	24.50%	2.6	0.7774	0.9795	51.63%	2.5	0.7757	0.978
Extrema (min/max) +/- 21 days	7.76%	2.1	0.7834	0.9863	10.36%	2.2	0.8103	0.9873	21.19%	2.2	0.8263	0.9877	19.87%	2.2	0.8145	0.9874	21.78%	2.2	0.8122	0.986
ETH								Î					1		Î					
Price movement (regression)	170.14%	109.2	0.5385	0.5413	183.79%	110.9	0.5383	0.5417	172.77%	111.7	0.5397	0.5421	204.86%	118.5	0.5428	0.5449	182.45%	102.2	0.5358	0.537
Price movement (classification)	273.76%	82.3	0.5624	0.5718	287.63%	93.3	0.5628	0.5738	306.23%	87.3	0.5625	0.5710	314.06%	88.1	0.5605	0.5706	327.57%	81.7	0.5614	0.570
Extrema (min/max) +/- 7 days	38.87%	2.0	0.7301	0.9552	46.00%	2.2	0.7305	0.9546	37.30%	2.1	0.7251	0.9544	43.99%	2.1	0.7362	0.9570	49.44%	2.2	0.7320	0.952
Extrema (min/max) +/- 14 days	49.39%	2.4	0.8092	0.9806	59.65%	3.2	0.8057	0.9797	53.57%	2.5	0.8104	0.9795	59.50%	2.7	0.8182	0.9820	48.44%	2.9	0.8001	0.977
Extrema (min/max) +/- 21 days	38.35%	2.7	0.8128	0.9846	44.98%	2.6	0.8155	0.9836	33.26%	2.4	0.8100	0.9837	37.27%	2.3	0.8107	0.9862	31.93%	2.5	0.8194	0.980

										Coin	Average									
Training data	Causal stationary	data			Causal stationary	data + Twitter Robert	ta		Causal stationary	data + BART MNLI			Causal stationary	data + Full Pretraines	INLP		Causal stationary	data + Finetuned NL	P	
	Excess profit	Number of trades	ROC AUC	Accuracy	Excess profit	Number of trades	ROC AUC	Accuracy	Excess profit	Number of trades	ROC AUC	Accuracy	Excess profit	Number of trades	ROC AUC	Accuracy	Excess profit	Number of trades	ROC AUC	Accuracy
Price movement (regression)	119.28%	159.2	0.5314	0.5376	149.47%	128.8	0.5304	0.5395	127.92%	142.4	0.5320	0.5395	187.46%	133.5	0.5342	0.5406	160.06%	127.8	0.5306	0.5379
Price movement (classification)	214.61%	85.8	0.5495	0.5658	233.14%	104.6	0.5510	0.5681	234.80%	101.4	0.5492	0.5655	248.03%	104.6	0.5492	0.5649	242.67%	99.7	0.5482	0.5644
Extrema (min/max) +/- 7 days	45.68%	2.1	0.7389	0.9559	47.57%	2.1	0.7390	0.9560	51.64%	2.2	0.7376	0.9562	57.06%	2.3	0.7436	0.9572	64.61%	2.2	0.7393	0.9544
Extrema (min/max) +/- 14 days	38.86%	2.4	0.7916	0.9796	48.20%	2.7	0.7920	0.9795	35.49%	2.4	0.7944	0.9797	42.00%	2.6	0.7978	0.9807	50.04%	2.7	0.7879	0.9780
Extrema (min/max) +/- 21 days	23.06%	2.4	0.7981	0.9854	27.67%	2.4	0.8129	0.9854	27.23%	2.3	0.8182	0.9857	28.57%	22	0.8126	0.9868	26.85%	2.3	0.8158	0.9842
Average	88.30%	50.4	0.6819	0.8048	101.21%	48.1	0.6851	0.8057	95.41%	50.1	0.6863	0.8053	112.62%	49.1	0.6875	0.8061	108.84%	46.9	0.6843	0.8038

	Model F	Performance (Aggreg	ated)	
Model	Excess profit	Number of trades	AUC ROC	Accuracy
Ridge OLS / Logit	67.48%	52.7	0.6782	0.802
XGBoost	126.12%	44.0	0.6998	0.805
MLP (FNN)	138.61%	47.4	0.6797	0.806
LSTM	83.88%	12.0	0.6526	0.802
				0

	Model Per	formance (Daily Mov	rement)	
Model	Excess profit	Number of trades	AUC ROC	Accuracy
Ridge OLS / Logit	142.34%	128.2	0.5393	0.5502
XGBoost	263.34%	106.3	0.5407	0.5519
MLP (FNN)	222.97%	114.6	0.5416	0.5539
LSTM	134.88%	26.7	0.5321	0.5455
TFT	20.16%	7.4	0.5091	0.5322

	Model Pe	erformance (Local Ex	trema)	
Model	Excess profit	Number of trades	AUC ROC	Accuracy
Ridge OLS / Logit	16.60%	2.2	0.7702	0.9710
XGBoost	32.29%	2.3	0.8047	0.9751
MLP (FNN)	74.02%	2.5	0.7690	0.9749
LSTM	58.27%	2.2	0.7367	0.9745
		b	····	\$