Papers

- Price Movement Prediction of Cryptocurrencies Using Sentiment Analysis and Machine Learning (link)
    - Use from vader sentiment for twitter data labeling
    - Test svm, random forest and mlp models and results say that mlp is better.they test models in three way,first just with twitter data,second just with market data and third is both twitter and market.
    - Define a specific vector that combine twitter data and price data together

- Building a Twitter Sentiment Analysis System with Recurrent Neural Networks (link)
    - This article train on universal twitter dataset and it is not related to cryptos but finally using in crypto related cases but there isn't dataset of that
    - Use from rnn(lstm,gru,attention)
    - Test and compare various architectures for example: test different hidden layer performances or different unit numbers.result say that 2 layer lstm is better,128 unit size is better,attention and bidirectional don't have improvement.

- Bitcoin price change and trend prediction through twitter sentiment and data volume (link) *
    - Try to predict price change direction and magnitude of increase/decrease
    - Dataset is from kaggle without label and then manually labeled with VADER method and there are neg,pos,neu and compound fields. This article say that other related works use VADER too.
    - Show related works for price prediction (link)
    - Use from lag technique (every tweet effect on price later, should find better lag time)
    - Test 2 layer BiLstm, Lstm and Conv1D model for change price direction prediction
    - There is code and dataset in github and there is good comparison for related works

- Social Media Sentiment Analysis for Cryptocurrency Market Prediction (link)
    - It have 4 independent sentiment metrics (sentiment(pos+neg), pos, neg, contradictive(pos*abs(neg))
    - 490 manually labeled pos and neg by 2 reviewers.
    - Test 22 different models and compare correlation of them for example:textblob, vader,afinn,googlenlp,aws,bert based models and aigents .top models are aigents+(modified of aigents),aigents, finbert,afinn,pysentimento,aws and ensemble(top 3) and other models.
    - Aigents is a interpretable model base on n-grams and have a good accuracy for this case and this dataset.

- Sentiment Analysis Based Direction Prediction in Bitcoin using Deep Learning Algorithms and Word Embedding Models (link)
    - Use 17K tweets and label neg,pos or neu with textblob(textblob use naive bayes method)
    - He say direction prediction but don't use from market data and is simple classification and sentiment analysis
    - Test different models: fasttext,lstm,cnn,glove,word2vec
    - Best models in order of accuracy are:FastText, LSTM, CNN, …
    - Test various preprocessing methods.result: tweet clean(hashtag,punc,url) > word tokenize > stop word eliminate are better preprocessing. Stemming,spell correction,and all of methods together is not good.

- Recurrent Neural Network Based Bitcoin Price Prediction by Twitter Sentiment Analysis (link)
    - Dataset: **4200 manually labeled** tweet from some specific twitter accounts
    - Test bag-of-words and word2vec methods for embeddings(bow is better)
    - Use 5 method for training(naive bayes,multinomial NB,bernoulli NB,linear SVM,random forest) and use from voting classifier for choose final sentiment prediction
    - He say sentiment analyser has 81% accuracy
    - There is another part for price prediction.implement with 1 layer RNN(lstm or gru)and 1 Dense layer.with cross correlation find that lag be 1 day.use from pearson correlation coefficient for evaluate metric between sentiment score of tweet and corresponding price of next day.and accuracy of price prediction of rnn is 77% (but i don't know what is metric)

- Forecasting Price of Cryptocurrencies Using Tweets Sentiment Analysis (link)
    - Dataset: twitter data label with textblob. Price from coindesk. Work on both bitcoin and litecoin.
    - Use from multi linear regression and use from neg,pos,neu tweets count and average price in model
    - Select 2 hour time frame.
    - Achieve 44% f2-score accuracy on bitcoin and 59% on litecoin.

- The predictive power of public Twitter sentiment for forecasting cryptocurrency prices (link)
    - Dataset: collect with scraper, labeling with VADER and use Loughran & McDonald financial corpus for more related tokens about cryptos. choose time frame and get average of polarity scores.
    - It have Granger-causality testing
    - I don't understand this article.i think use from just VADER and then compare with price and work on various coins

- Stanford-cs229-machine learning course student project(twitter sentiment analysis for bitcoin price prediction (link))
    - Dataset: unlabeled dataset.dataset chopped to 1 minute frame and tweets aggregated in every frame.label of each frame is according to price change in 24hr ahead.
    - This article test and compare svm and naive bayes and bert models and say **svm is better**

- Sentiment Analysis and Emotion Detection on Cryptocurrency Related Tweets Using Ensemble LSTM-GRU Model (link)
    - Dataset: 40K twitter scraper - Both emotion detection(labeling with text2emotion) and sentiment analysis(labeling with textblob)
    - Have regular information about related works and state of the art models
    - Compare Bow, tf-idf and word2vec -> tf-idf is better
    - Compare machine learning methods(SVM, Linear regression, gnb,etc,decision tree, knn) with proposed deep learning method
    - Proposed deep learning method: Lstm,Dropout,GRU,Dropout,Dense

- LSTM Based Sentiment Analysis for Cryptocurrency Prediction (link)
    - Work on Chinese data and Chinese social media (sina-weibo,...)
    - Compare auto-regression and lstm methods with each other-> lstm is better