first hit 1/-1 labelling method sampling -> create label -> z-score -> CNN

Set the alpha as 0.002 which roughly represent 50 points

Add first order derivatives after sampling

- Larger filter
- Extra layer

Add price*volume features

- Larger filter
- Extra layer

Remove class 0 records before normalization (sampling -> create label -> remove class 0 -> z-score -> CNN)

By using first hit labelling method, records at the end of the dataset will be classified into class 0 which will influence the overall accuracy

Add first order derivatives after sampling (without class 0)

- Larger filter
- Extra layer

Add price*volume features (without class 0)

- Larger filter
- Extra layer

calculate the simple moving average with a certain step size (calculate moving average -> create label -> remove class 0 -> z-score -> CNN)

calculate weighted moving average and assign weights according to order sizes (create label -> remove class 0 -> calculate weighted moving average -> z-score -> CNN)

apply simple exponential smoothing method (create label -> remove class 0 -> SES -> sampling -> z-score -> CNN)

select samples according to its time to 1/-1

There are noise and useless information in the dataset, we only want to learn the cases with larger price volatility
We create a variable time which represent the number of ticks it needs to 1/-1, and we rank all the data according to time. We only use top n percent of the data as our training dataset

Include more data: 6 days training dataset

the performance had no more improvement

Top n & sampling
In order to put more information and have a larger pic

With topn & sampling, set a threshold (prediction with confidence) in order to improve model performance

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