EPITECH.
PARIS GRADUATE SCHOOL OF DIGITAL INNOVATION

Kickoff

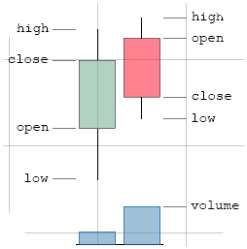
Trade

B4 - Computer Numerical Analysis – Trade

B-CNA-410

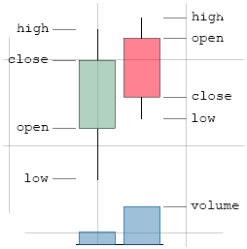
Candles in the Wind

Time series may be mere sequences of numbers, like the temperatures. But they can also be more complex objects.

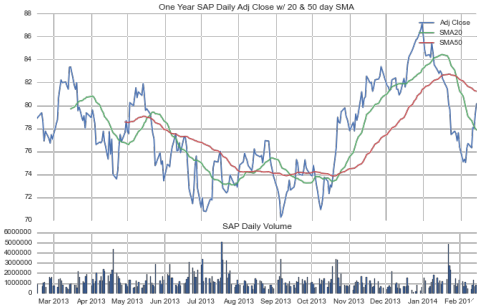


Candles in the Wind

Candles are pre-processed statistics upon a great deal of values. For every date, we get start, end, minimal and maximal value of an item along the day.



Cycles



Usually, prices cannot go up or down forever but oscillate around a reference value.

This prophecy is self-reinforced through the traders' own behaviors.

Like selling as soon as it gets above a certain value, for fear other would start to sell.

Cycles

These regularities make forecasting possible.

We can model a
price curve as a sum of quasi-periodic functions
and thus predict when a trend is about to switch.

Concretely

You will receive first a certain amount of data. You will have to **parse** and **store** it in a convenient structure, then build **indicators** and use them to make **predictions**, which leads to **behaviors** (sell/buy).

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Train these predictions on your data until it seems good and robust. When the final day comes, your algorithm will deal with a brand new dataset. The aim is to make as much as you can on *that* new dataset.

Tricky points

Be wary of overfitting: the best algorithm is not necessarily the one that gets best results on initial dataset. Instead, think adaptability.

Indicators you have built during the groundhog (moving average, standard deviation, Bollinger bands) might be a good start. However, research will lead you to limitless improvements.

Any questions

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