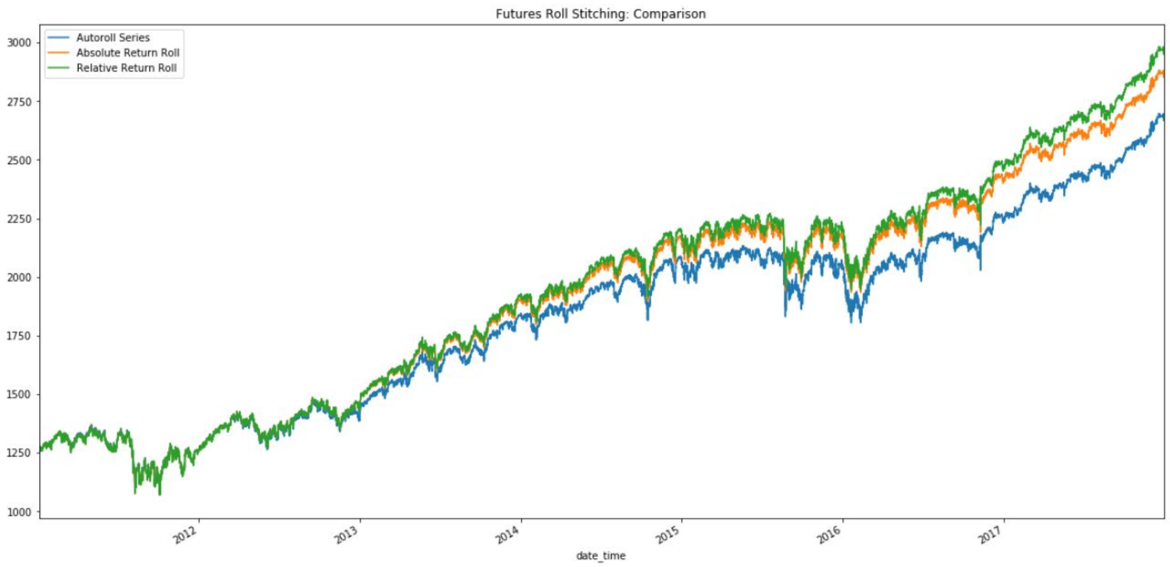
HUDSON AND THAMES

ML strategy development using mlfinlab

An open source way of work.

Part I. Bars generation

```
import mlfinlab as ml
ml.data_structures.get_volume_bars('file.csv', threshold=3000, to_csv=True, output_path = 'file_bars.csv')
```



Part II. Filtering and side detection

Z-score
filtering

Structural break
tests

CUSUM
filtering

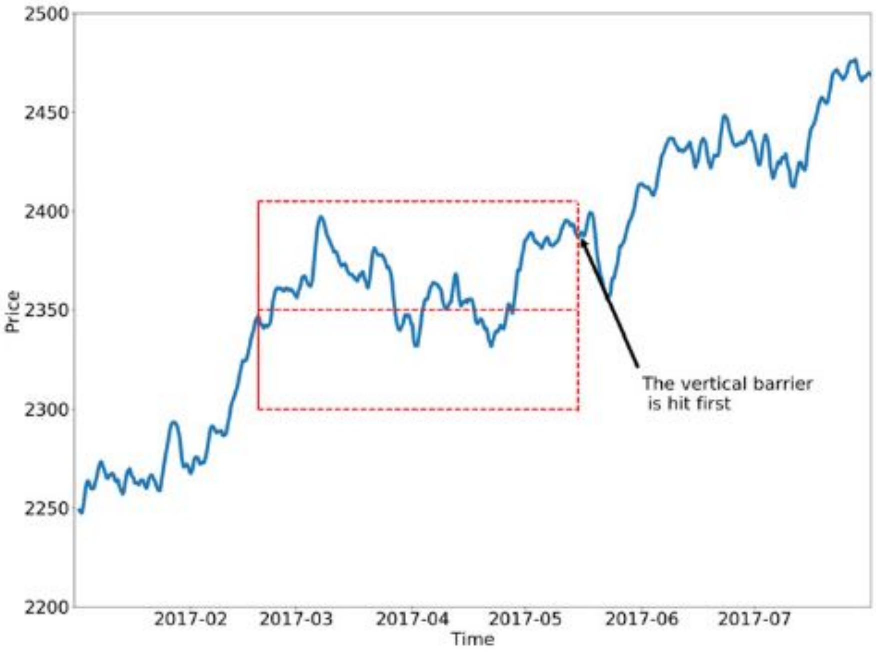
?

Proprietary
filters

Imbalance
filtering

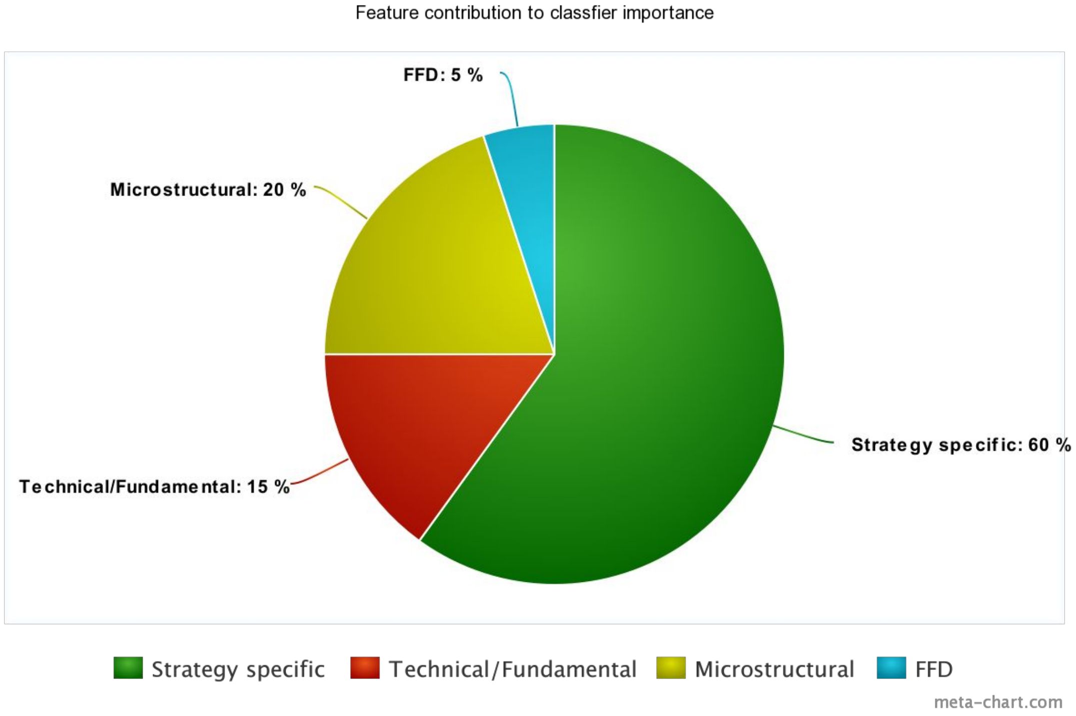
Technical
indicators

Part III. Labeling



(b)

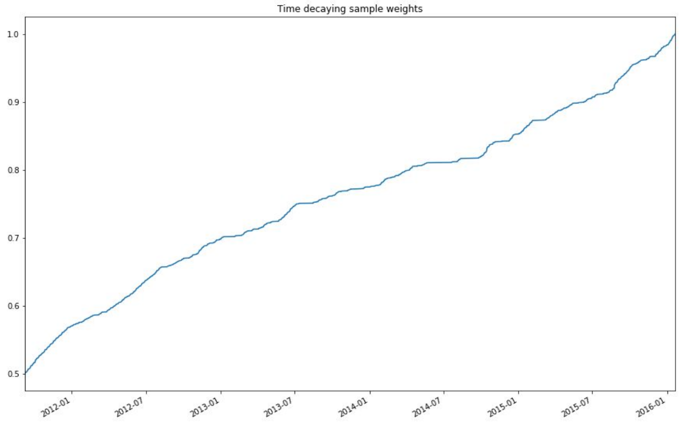
Part IV. Feature generation



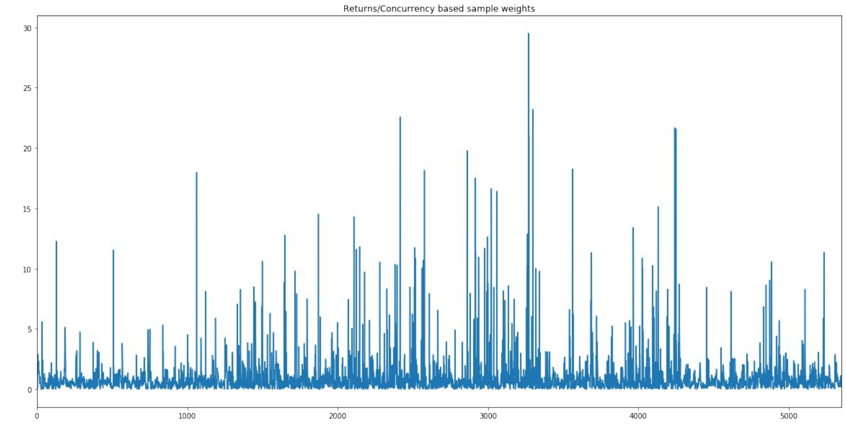
Part V. Cross-validation. Sample weights

Trading signals have different P&L impact. We would like to give more weight to either the most recent observations or observations with highest absolute returns.

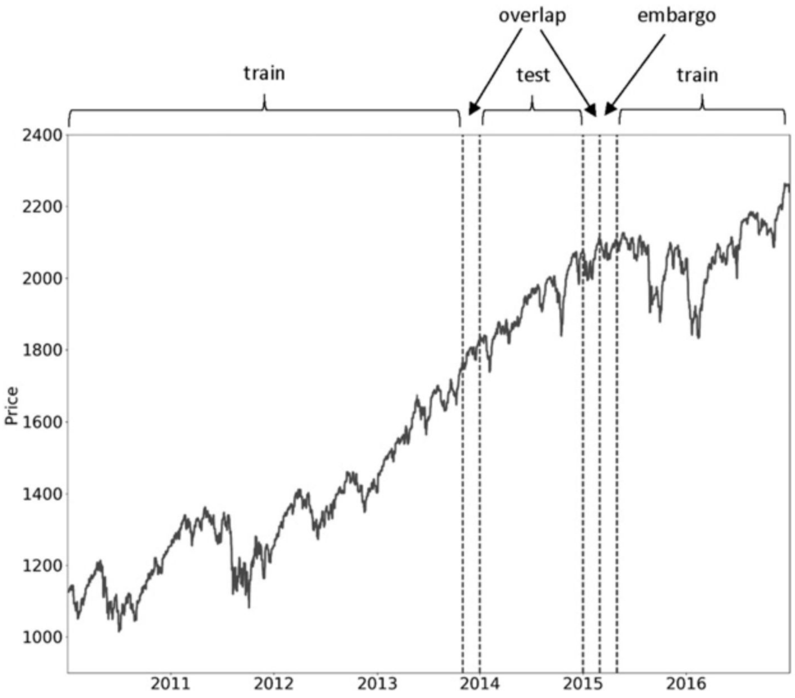
Time decaying sample-weights



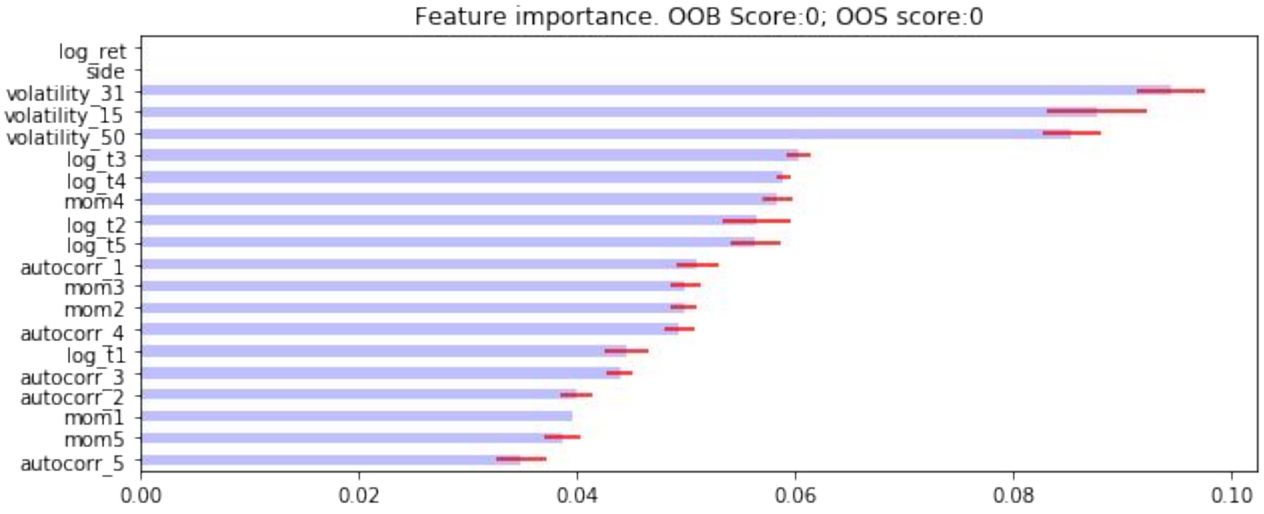
Returns-based sample weights



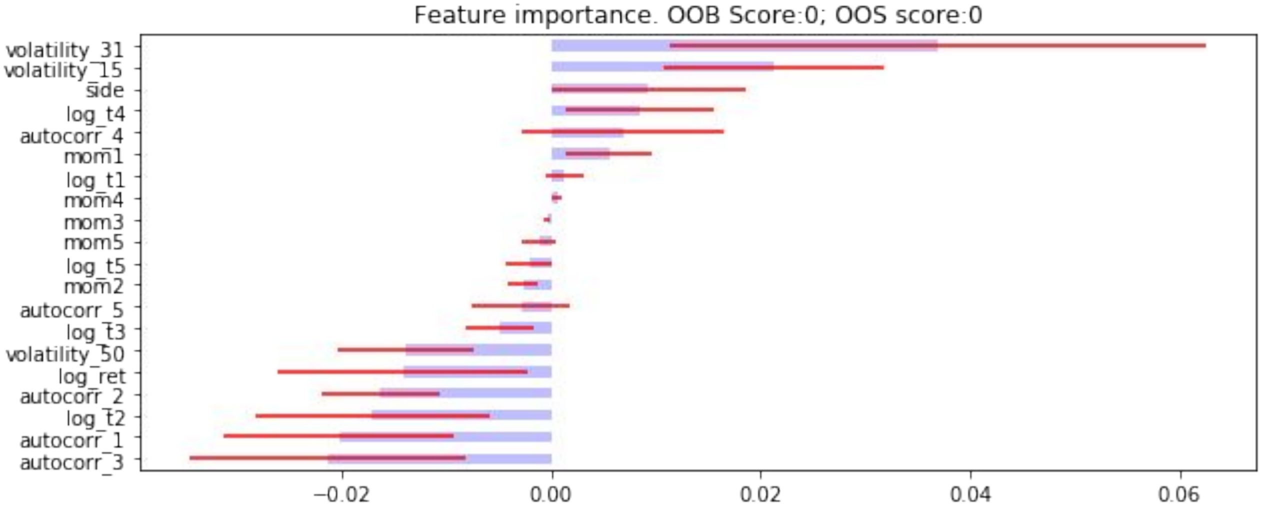
Part V. Cross-validation



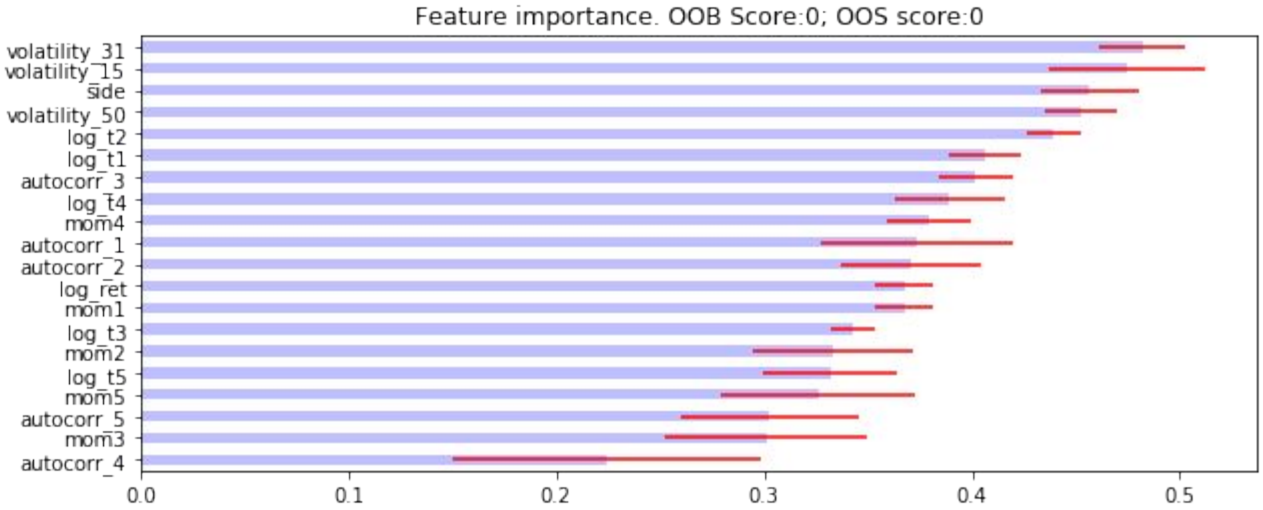
Part VI. Feature Importance (MDI)



Part VI. Feature Importance (MDA)



Part VI. Feature Importance (SFI)

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Thank You