

## Momentum strategy for stocks

### Goal

Prepare a model which, based on historical returns for last 10, 50, 100 trading days, try to predict if it is worth to buy particular stock. As a “buy” indicator assume 25 trading days return equal or greater than 10%. Smaller returns classify as “sell”.

### Data

Daily quotes available here <https://info.bossa.pl/notowania/metastock/> or any other open source of stocks prices. You may also use build in libraries solutions for stocks quoted outside Poland. Please use closing prices for at least 200 companies. Exclude companies quoted less than 200 days.

### Elements:

1. Provide inputs such as returns period.
2. Download and preprocess data.
3. Calculate necessary returns.
4. Label the data to create a classification problem as described above.
5. Perform whole process of model fitting (please use one of popular algorithms e.g. random forest from e.g. scikit-learn library).
6. Present results with popular statistics and write a short comment about results and your conclusion.

### Technology

Python or R but feel free to use what you want. Please provide us with GitHub repository link.

### Contact

Please send solution to [Collin.Jartue-Gilpin@GAINCapital.com](mailto:Collin.Jartue-Gilpin@GAINCapital.com)