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TOPICS IN QUANTITATIVE FINANCE PROJECT PROPOSAL

What is the project about?

This project touches on a unique stock market phenomena in Chinese stock market called High Bonus Shares.
High Bonus Shares is quite related to the net asset per share, reserved per share and undistributed profits per share.
It turns out that the companies that send high bonus shares to investors in Chinese A-stock market tend to have abnormal return in the future.
Then the goal of the project is to train the computer to select the companies in A-stock market that are very likely to send high bonus shares.

Where the data is from?

In this project, I will pick some accounting data the financial statement of the listed companies and use the financial ratios and other indicators to train the computer.

I use the TuShare to obtain the data. The data is mainly from the sina finance. Tushare is a utility for crawling historical and Real-time Quotes data of China stocks, it is easy to use since most of the data returned are pandas DataFrame objects and it is available https://pypi.python.org/pypi/tushare/

How to use machine learning to do the project?

Methods

Try SVC/decision tree/bagging classifier/AdaBoost classifier/Random Forest classifier/Voting classifier and use GridSearchCV/PCA to improve the results.

The project process

1. Do the preprocessing of the data.

2. Use the traditional financial ratios as the inputs.

3. Add some other indicators as the inputs.

4. Try lots of the methods and vary parameters to improve the model.

5. Do some visualization.