**Success Measure:**

We will split our data into training set, validation set and test set. We would train our data on training set, choosing the optimal hyper parameter according to our algorithm prediction accuracy on validation set, and measure our success on the algorithm performance on test set.

Concretely, we would count the number of correct predictions on test set, and compute the probability of getting such number or more correct predictions as if we were pure guessing (which follows a binomial distribution with and . This probability would be used as a success measure. A smaller probability indicates a better algorithm performance.

**Development management:**

We will be using the tools below for code collaboration and development process management:

Development Language: Python, SQL  
Version Control: Git.

Deployment Tool: Teamcity

Server: Amazon AWS.

Database: MySQL.

Result Distribution: SendGrid

Our primary coding language will be python and SQL. The database is mainly used to store the keyword mapping and the market news everyday. Python is the functional language that is mainly used for generating the prediction from market news.

Each of our team member will be checking individual’s code into the git repository. Once user have specified the market time zone, before the trading starts every morning, Teamcity will auto deploy the latest code to AWS and generate the results from the market news. The results will be automatically distributed by SendGrid to the user’s emails. This is tentative plan, the final form of results distribution is not finalized because different users may prefer different ways of notifications.

**Competition Task and Metric:**

Our suggested competition task is to correctly predict the sign of return of a particular asset in a fixed period, to be positive or negative. There are a few metrics for this:

* the fraction of correct predictions over that period;
* the longest consecutive correct predictions over that period;
* the shortest consecutive incorrect predictions over that period.