Autonomous Trading Agent Implementation Using Natural Language Processing Of News Headlines: An Introduction

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Abstract

Natural Language Processing techniques are used to examine financial news headlines and generate predictions of stock price movements.

1 Introduction

1.1 Motivation

This tool could be used as a component of an autonomous trading agent that will make BUY/SELL decisions for trading financial instruments.

1.2 Literature Review

2 Data

Google Finance provides access to historical stock quotes as well as links to financial news stories pertaining to specific stocks. This data provides the basis for this paper. Here is some more

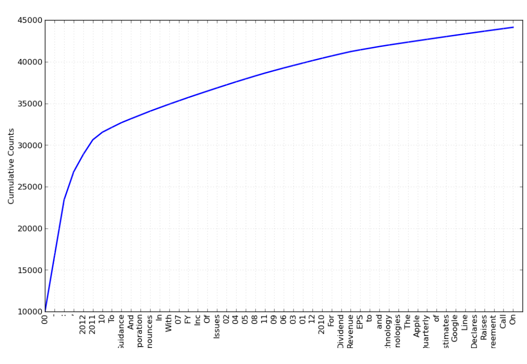

Figure 1: Cumulative frequency plot

text after the figure. The figure is somewhat floating i guess. There is even more text after the figure.

3 Methodology

3.1 Naive Bayes

3.2 Decision Tree

3.3 Maximum Entropy

4 Implementation

4.1 Dependencies

4.2 Data Collection & Munging

4.3 Training NLP Classifier

4.4 Backtesting

5 Evaluation

5.1 Accuracy

5.2 Most informative features

5.3 Precision

5.4 Recall

6 Trading Model

6.1 Trading Signals

7 Conclusions

7.1 Further research

8 References