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

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November 1, 2012

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 tradin 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.

3 Models

3.1 Naive Bayes

3.2 Decision Tree

3.3 Maximum Entropy

4 Implementation

5 Evaluation

5.1 Accuracy

5.2 Most informative features

5.3 Precision

5.4 Recall

6 Conclusions

6.1 Further research

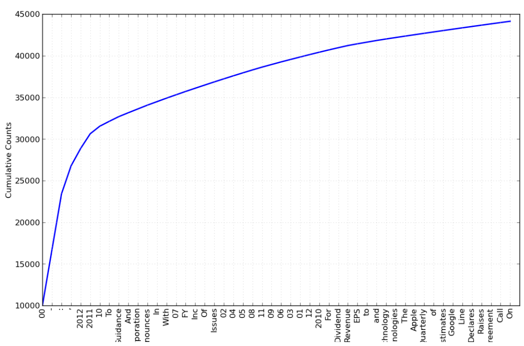

Figure 1: Cumulative frequency plot