ARTIFICIAL INTELLIGENCE AND OPINION MINING

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Abstract: Artificial intelligence for opinion mining is a fast growing topic with various world application. Social media content opportunities for understanding the opinion of the general public and consumers such as social events, political movements, company strategies, marketing compaines, and product preferences. Opinion its related concepts such as extract opinion, sentiment effect, emotion, and attitudes .opinion mining are central almost all human activities and key influences of our behaviors. People are intended to develop a system that can identify and classify opinion or sentiment as represented in an online consumers preferences.

Key words: opinion, machine learning, sentiment analysis.

1.Introduction

Opinion mining is a type of natural language processing for tracking the mood of public about a particular product. Sentiment classification deals with classifying entire documents according to the opinions towards certain objects. Opinion mining sub discipline within data mining refers to the computational techniques for extracting, classifying, understanding, and assessing the opinions expressed in various online news sources, social media comments, and user generated content. If we are really interested in opinion mining from social media platform such as facebook, and instagram, which are far more popular among everyday people. Artificial intelligence tools are strongly related with data mining and artificial intelligence is noe a days ranked with first among the top 10 technology. Among those data we see customers reviews,comments, and opinion about products, people, and events.

2. Methodology

A company plans to suggest a product to potential customers. A database of 10,000 customers exists; 2,000 purchases is the goal. Instead of contacting all the customers, only 1000 customers were contacted. The response is recorded. The subset is used to train a machine learning framework to tell which of the customers decide to buy the product. Then the remaining 9,000 customers are presented to the network which classifies 3,000 of them as potential buyers. The potential buyers are contacted and the goal is achieved.

3.Existing system

Machine learning deals with the systems study that learns from data, In existing they use explicit instruction for opinion mining instead of using explicitly programmed instructions. In proposed we use AI technique for wide range of computing tasks.

3.1Disadvantages

Storage is expansive, but access and retrieval may not lead to connections in memory as well as humans could.They can learn and get better with tasks if coded to, but it's questionable as to if this can ever become as good as humans can do such.They could never, or, at least, seemingly never with our technological perceptions, recieve creativity that humans have.

4.Proposed System

In this study, we have used Machine learning based technique to extract opinions of customers and use it for business. The approach is quite straightforward; record customer opinion, train and classify on selected key words. Similarly, opinion can be predicted by using a pre-populated list of positive and negative words. For example, in the contradicts polar nature of the word. Simple negative and positive word combination creates a negative expression.

4.1 Advantages

AI would have a low error rate compared to humans, if coded properly. They would have incredible precision, accuracy and speed. Robotic pets can interact with humans for opinion mining. Can help we depression and inactivity since can fulfill sexual pleasure.

5. Implementation

The object design consists of 3 modules

Modules

5.1Speech to text conversion

5.2 Pre-processing.

5.3 Machine Learning Training.

Modules Description

5.1. Speech To Text Conversion

The conversations of all the customers are recorded and first converted to equivalent text using the speech to text conversion application. This is fed into pre-processing phase as input.

5.2. Pre-processing

In this step, after speech to text conversion, all the key words are extracted for machine learning training phase. To increase the search performance, common words are removed from multiple word queries.

5.3. Machine Learning Training

Key words are used for machine learning training with proper selection of classification function. WEKA machine learning framework was used to build the model. Once the model is built, the opinions can be fed as inputs and the output of the classification gives potential customers.

6. System Requirements

6.1 Software Requirements

Database   : SqlServer2005/2008

Code Language :   C#.NET

Technology   :   ASP.NET

6.2 Hardware Requirements

Processor   :   Pentium iv 203 GHz

 Ram   :   1G

HardDisk: 160GB

7.Spam detection

This sub section describes some techniques that try to discover a typical behaviours of reviewers for spammer detection. The first technique which identified several unusual behavior models based on different review patterns that suggest spamming.

7.1 Targeting Products

In this review system, it is hypothesized that a spammer will direct most of his efforts on promoting a few target products.

7.2 Targeting Groups

This spam behaviour model defines the pattern of spammers manipulating ratings of a set of products sharimg some attributes.

7.3 General Rating Deviation

A genuine reviewer is expected to give ratings similar to other rates of the same product.

8. Application Framework

Some of the application of opinion mining includes online advertising, hotspot detection in forums etc. The performance of different methods used for opinion mining is evaluated by calculating various metrics like precision, recall, and F-measure.

In many application ,opinion mining target are described by entities and their different aspects. It is used to many researches due to their high yield and better accuracy of mined data. It is attempt is made to identify the most suitable classifiers out of a large pool of popular classifying techniques. To deal with these problems we need to apply natural language processing techniques in the opinion mining context, such as parsing, word sense, core reference resolution.

9. Experiment

The machine learning approach applicable to sentiment mostly belongs to supervised classification in general and text classification techniques in particular it is called as supervised learning. Machine learning techniques like Navie Bayes, maximum entropy, and support vector machine and machine learning two types of document such as training and a test set. A training set is used to validate the performance of the automatic classifier to learn the different characteristics of documents. And a test set is used to validate the performance of the automatic classifier.

10. My Perspective

The research community has studied almost all main aspects of this problem. The most well studied sub problem is opinion orientation classification that is at the document, sentence, and feature levels. The existing reported solutions are still far from perfect because current studies all coarse and not much has been done. Object extraction is probably the easiest because we can apply many existing information. In most application, high precision is critical but high recall might not be necessary as long as the system can extract enough opinions to be statistically significant. However is ensuring the correct proportions.

11. Future Enhancement

Building on what has been done so far, I believe that we just need to conduct more refined and in-depth investigations as well as build integrated systems that try to deal with all the problems together because their interactions can help solving each individual problem. I am optimistic that the problems will be solved for widespread application. For instance, based on our tests using 10 diverse data sets, the system that my group is building(called Opinion Parser) can achieve 80 to 90 percent of recall and precision on feature-based opinion orientation determination. It can also perform integration to a good extent based on several automated discovery.

For real life applications, a completely automated solution is on where in sight. However, it is possible to effective semi automated solutions. Sentiment analysis at the attribute level is aimed at extracting opinions on products specific attribute review.

12. Conclusion

Social media has not only become an integral part of our daily lives but also has become a valuable source of resource for businesses. With low costs, businesses are now able to gather actionable insights easily. From customer service to marketing can improve everything. In this area research data used for both training and testing are usually the user helpful of opinion mining

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