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Automatic Emotion Generation and Summarization form Perceptual Text – A Survey

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Abstract: ***Mining social emotion from text deals with new aspect for categorizing the document based on the emotions such as victory, love, anger etc. In order to predict the emotion contained in content a joint emotion-topic model is proposed by enhancing Latent Dirichlet Allocation with an additional layer for emotion modeling. Using this it first generates a latent topic from emotions, followed by generating perceptual terms from each topic. First it generates an emotion from a document-specific emotional distribution, and then it generates a latent topic from a multinominal distribution conditioned on emotions. The model which we proposed will utilize the complementary advantages of both emotion-term model and topic model and also it include more websites for creating a large vocabulary. Emotion-topic model allows associating the terms i.e. words and emotions via topics which is more flexible. Also it has better modeling capability. For each emotion, it generates a meaningful latent topic and also based on emotions, songs recommendation will be available for user. So that user can upload and enjoy their own choice of song.***

Keywords: affective text mining, emotional-term model.

1. Introduction

Mining frequent patterns is perhaps one of the most important concepts in data mining. From this concept a lot of other data mining tasks and theories stem. It should be the beginning of any data mining technical training because, on one hand, it gives a very clear cut idea about what data mining is and, on the other, it is not extremely technical .Affective text based mining allows us to conclude a number of conditional probabilities for unseen documents, e.g., the probabilities of latent topics given an emotion, and that of terms given a topic. There are different methods used to deal with the affective text mining those are Emotion-Term model topic, based-SVM model, term- based SVM model, and LDA model and so on.LDA model can only discover the topics (words) from document but it cannot bridge the connection between social emotions and affective text. Previous work mainly focuses on titles information, so the efficiency of these models is varying [1]. Emotion-term model treats terms individually and cannot discover the contextual information within the document. Emotion-term model unable utilize the term co-occurrence information within document and cannot distinguish the general terms from the affective terms [5]. Traditional topic model can only discover the latest topics from the document set but it cannot able to bridge the connection between social emotions and affective texts.

2. Existing Approaches for Automatic Emotion Generation

Mainly the related work is focuses on affective text mining and topic modeling.

A. Affective Text Mining:

To explore the connection between affective terms and social emotions ,a task named SentiWordnet is considered. "A Publicly Available Lexical Resource for Opinion Mining" It involves Opinion about any product or political candidate from that social website user [3]. Mainly it collects information for Opinion from text and that will be based o n Text SO polarity i.e. subjective and Objective polarity and also Text PN polarity for positive and negative categorization of a opinion, basically from that Strength of PN polarity is used to calculate score assignment to each opinion with values 0.0 to 1.0, weight age for opinion is being calculated from that total average value [3]. Existing approaches will not consider relationship across word. In previous work the emotions and terms were not linked and there will be only minimum likelihood of estimation of emotions then with the help of proposed model, now we are able to visualize the emotion assignments at the term level.

B. Topic Based Analysis:

LDA has been enlarging to more advanced application domains with additional sampling steps. There will be several techniques available to predict topics but the main difference lies in different sampling distributions [4]. Their author variable is chosen uniformly from a set of authors while emotion variable is sampled from multinomial distributions by the emotions contributed by web users. LDA is extended with a different set of information, i.e. social emotions which are contributed by online users, in the latent topics modeling process [4]. So to achieve our aim, proposed system present two baseline models one is Emotion Term model while other is LDA topic model and we are going to use combination of both i.e nothing but Emotion-Topic model.

- Emotion-Term model uses naïve byes to model affective terms and social emotion via their co occurrences.
- LDA Topic model utilizes terms co occurrences information within a document and discover the fundamental topics within affective text.
- Emotion-Topic model can jointly estimate the latent document topics and emotion distribution in a unified probabilistic graphical model.

3. Application

- Emotion aware recommendation of advertisement and songs
- Interactive E-learning sessions with emotion regulation
- Predicting Personality factor with help of emotions
- Analysis of blogs, comments and tweets based on emotion present in it.

4. Conclusion

We present and examine a new problem called social affective text mining, which aims to discover and model the connection between online documents and user-generated social emotions. [5] We proposed to determine our model with a larger scale of online document collections, and apply the model to other applications such as emotion-aware recommendation of advertisement, songs and categorizing online document based on emotion preference.

References

[1] C.Yang, K.H.-Y. Lin, and H.-H. Chen, "Emotion Classification Using Web Blog Corpora," Proc. IEEE/WIC/ACM Int'l Conf. Web Intelligence (WI '07), pp. 275-278, 2007.
[2] R. Cai, C. Zhang, C. Wang, L. Zhang, and W.-Y. Ma., "Musicsense: Contextual Music Recommendation Using Emotional Allocation," Proc. 15th Int'l Conf. Multimedia, pp. 553-556, 2007
[3] C. Strapparava and R. Mihalcea, "Learning to Identify Emotions in Text," Proc. 23rd Ann. ACM Symp. Applied Computing (SAC '08), pp. 1556-1560, 2008
[4] D.M.Blei,A.Y.Ng,and M.I.Jorden, "Latent Dirichlet Allocation,"j.MachineLearning Research,Vol.3,pp.993-1022,2003
[5] Shenghua Bao,Shengliang Xu,Li Zhang, Rong Yan,Zhong Su, Dingyi Han, and Yong Yu "Mining Social Emotions from Affective Text" IEEE TRANSACTIONS ON KNOWLEDGE AND DATA ENGINEERING, VOL. 24, NO. 9, SEPTEMBER 2012