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| NUMBER | FINDINGS | BIBTEX |
| 8 | This paper focuses on product feature ranking. Linear regression on product features using ratings of opinion units and overall ratings. They employ gradient decent algorithm to get a local optimal solution for the regression. Their approach (DPLR-R) is a two-stage method. At the first stage, they extract product features using the state-of-the-art product feature extraction algorithm double propagation algorithm and two rules together. We also use our two rules to extract opinion units. At the second stage, we regress on the extracted product features and opinion units by exploiting overall ratings of reviews.   * OpenNLP * Formula for overall rating based on features | @article{li2012exploiting,  title={Exploiting consumer reviews for product feature ranking},  author={Li, Su-Ke and Guan, Zhi and Tang, Li-Yong and Chen, Zhong},  journal={Journal of Computer Science and Technology},  volume={27},  number={3},  pages={635--649},  year={2012},  publisher={Springer}  } |
| 25\*\*\* | Proposed a novel approach for mining and retrieving sentiment information from customer reviews. In the review sentences rank module, we compute two measures including temporal opinion quality (TOQ) and Lucene rank (LR). TOQ evaluates opinions’ authority according to temporal information and the number of people who find the review is helpful. LR is a relevant rank based on the vector space model, which evaluates the similarity between opinion sentence and query. The sentiment mining and retrieval system ranks the result sentences in response to a user request on the basis of these measurements. | @article{miao2009amazing,  title={AMAZING: A sentiment mining and retrieval system},  author={Miao, Qingliang and Li, Qiudan and Dai, Ruwei},  journal={Expert Systems with Applications},  volume={36},  number={3},  pages={7192--7198},  year={2009},  publisher={Elsevier}  } |
| 35\*\*\*\*\* | In this paper, we propose an innovative methodology for feature-based opinion mining that unites traditional natural language processing techniques with sentiment analysis processes and  Semantic Web technologies. The proposed approach is based on three different stages: (i) an ontology-based mechanism for feature identification; (ii) a technique to assign a polarity to each feature based on SentiWordNet and the relative position in each user’s opinion; and (iii) a new approach for opinion mining based on vector analysis. | @article{penalver2014feature,  title={Feature-based opinion mining through ontologies},  author={Pe{\~n}alver-Martinez, Isidro and Garcia-Sanchez, Francisco and Valencia-Garcia, Rafael and Rodr{\'\i}guez-Garc{\'\i}a, Miguel {\'A}ngel and Moreno, Valentin and Fraga, Anabel and S{\'a}nchez-Cervantes, Jose Luis},  journal={Expert Systems with Applications},  volume={41},  number={13},  pages={5995--6008},  year={2014},  publisher={Elsevier}  } |
| 41 |  | @article{li2013fuzzy,  title={A fuzzy conceptualization model for text mining with application in opinion polarity classification},  author={Li, Sheng-Tun and Tsai, Fu-Ching},  journal={Knowledge-Based Systems},  volume={39},  pages={23--33},  year={2013},  publisher={Elsevier}  } |
| 44 |  | @article{wang2011feature,  title={A feature selection method based on improved fisher’s discriminant ratio for text sentiment classification},  author={Wang, Suge and Li, Deyu and Song, Xiaolei and Wei, Yingjie and Li, Hongxia},  journal={Expert Systems with Applications},  volume={38},  number={7},  pages={8696--8702},  year={2011},  publisher={Elsevier}  } |
| 56 | ? | @article{zhai2012product,  title={Product feature grouping for opinion mining},  author={Zhai, Zhongwu and Liu, Bing and Wang, Jingyuan and Xu, Hua and Jia, Peifa},  journal={IEEE Intelligent Systems},  volume={27},  number={4},  pages={0037--44},  year={2012},  publisher={IEEE Computer Society}  } |
| 59 |  | @article{garcia2013retrieving,  title={Retrieving product features and opinions from customer reviews},  author={Garcia-Moya, Lisette and Anaya-Sanchez, Henry and Berlanga-Llavori, Rafael},  journal={IEEE Intelligent Systems},  number={3},  pages={19--27},  year={2013},  publisher={IEEE}  } |
| 62 | Ontology is generally considered as a formal specification of conceptualization which consists of concepts and their relationships [12]. Domain ontology is one kind of ontology which is used to represent the knowledge for a particular type of application domain (e.g. a consumer product domain). We propose a tree-like fuzzy. Fuzzy Domain Sentiment Ontology Tree can be automatically constructed to facilitate opinion mining, including the extraction of product features and sentiment words, extraction of feature-relation.  Our method can accurately predict the polarities of sentiments.  Double Propagation algorithm [13] is applied to extract product features and sentiment words. The extraction rules are designed based on relations described in dependency trees.  There are four extraction tasks during the propagation: 1) extract features using sentiment words; 2) extract sentiment words using features; 3) extract features using features and 4) extract sentiment using sentiment | @inproceedings{liu2012toward,  title={Toward a fuzzy domain sentiment ontology tree for sentiment analysis},  author={Liu, Lizhen and Nie, Xinhui and Wang, Hanshi},  booktitle={Image and Signal Processing (CISP), 2012 5th International Congress on},  pages={1620--1624},  year={2012},  organization={IEEE}  } |
| 63 |  | @article{zhu2011aspect,  title={Aspect-based opinion polling from customer reviews},  author={Zhu, Jingbo and Wang, Huizhen and Zhu, Muhua and Tsou, Benjamin K and Ma, Matthew},  journal={Affective Computing, IEEE Transactions on},  volume={2},  number={1},  pages={37--49},  year={2011},  publisher={IEEE}  } |
| 67-- |  |  |
| 68 |  | @article{cruz2013long,  title={‘Long autonomy or long delay?’The importance of domain in opinion mining},  author={Cruz, Ferm{\'\i}n L and Troyano, Jos{\'e} A and Enr{\'\i}quez, Fernando and Ortega, F Javier and Vallejo, Carlos G},  journal={Expert Systems with Applications},  volume={40},  number={8},  pages={3174--3184},  year={2013},  publisher={Elsevier}  } |
| 76 |  | @article{liu2013identifying,  title={Identifying helpful online reviews: a product designer’s perspective},  author={Liu, Ying and Jin, Jian and Ji, Ping and Harding, Jenny A and Fung, Richard YK},  journal={Computer-Aided Design},  volume={45},  number={2},  pages={180--194},  year={2013},  publisher={Elsevier}  } |
| 93 |  | @article{xu2011mining,  title={Mining comparative opinions from customer reviews for Competitive Intelligence},  author={Xu, Kaiquan and Liao, Stephen Shaoyi and Li, Jiexun and Song, Yuxia},  journal={Decision support systems},  volume={50},  number={4},  pages={743--754},  year={2011},  publisher={Elsevier}  } |
| 107 |  | @article{xueke2013aspect,  title={Aspect-level opinion mining of online customer reviews},  author={Xueke, Xu and Xueqi, Cheng and Songbo, Tan and Yue, Liu and Huawei, Shen},  journal={Communications, China},  volume={10},  number={3},  pages={25--41},  year={2013},  publisher={IEEE}  } |
| 126 |  | @article{mostafa2013more,  title={More than words: Social networks’ text mining for consumer brand sentiments},  author={Mostafa, Mohamed M},  journal={Expert Systems with Applications},  volume={40},  number={10},  pages={4241--4251},  year={2013},  publisher={Elsevier}  } |
| 154 | We present an opinion search engine system that incorporates two novel opinion mining algorithms. The opinions are based on features and the orientation of these opinions is also largely based on the features rather than a product as a whole. People seem to like/dislike a specific product because of some feature associated with the product. The proposed framework not only classifies a review as positive or negative, but also extracts the most representative features of each reviewed item, and assigns opinion scores on them. | @article{eirinaki2012feature,  title={Feature-based opinion mining and ranking},  author={Eirinaki, Magdalini and Pisal, Shamita and Singh, Japinder},  journal={Journal of Computer and System Sciences},  volume={78},  number={4},  pages={1175--1184},  year={2012},  publisher={Elsevier}  } |
| 185 | The main goal of all of the proposed methods is extracting aspects and/or estimating aspect ratings. State-of-the-art LDA models for aspect-based opinion mining are trained at the item level and therefore perform poorly for cold start items due to the lack of sufficient training data. In this paper, we propose a probabilistic graphical model based on LDA, called Factorized LDA (FLDA), to address the cold start problem. The underlying assumption of FLDA is that aspects and ratings of a review are influenced not only by the item but also by the reviewer. | @inproceedings{moghaddam2013flda,  title={The flda model for aspect-based opinion mining: Addressing the cold start problem},  author={Moghaddam, Samaneh and Ester, Martin},  booktitle={Proceedings of the 22nd international conference on World Wide Web},  pages={909--918},  year={2013},  organization={International World Wide Web Conferences Steering Committee}  } |
| 189 | We presented a Bayesian nonparametric model to discover an aspect-sentiment hierarchy from an unlabeled review corpus. Using a novel design in which each aspect-sentiment node is itself a tree, we built a new model based on rCRP for discovering aspect-sentiment topics over multiple granularities.  From the viewpoint of consumers, different users need different information and hence are interested in different granularities of aspects and sentiments. (CIT) | @inproceedings{kim2013hierarchical,  title={A Hierarchical Aspect-Sentiment Model for Online Reviews.},  author={Kim, Suin and Zhang, Jianwen and Chen, Zheng and Oh, Alice H and Liu, Shixia},  booktitle={AAAI},  year={2013}  } |
| 193 |  | @article{hai2014identifying,  title={Identifying features in opinion mining via intrinsic and extrinsic domain relevance},  author={Hai, Zhen and Chang, Kuiyu and Kim, Jung-Jae and Yang, Christopher C},  journal={Knowledge and Data Engineering, IEEE Transactions on},  volume={26},  number={3},  pages={623--634},  year={2014},  publisher={IEEE}  } |
| 218 | In this paper we propose a generalized version of FLR method [15] to rank the extracted multi-word aspects and select the importance ones. FLR is a word scoring method that uses internal structures and frequencies of candidates (FLR: Frequencies and Left and Right of the current word). | @article{bagheri2013care,  title={Care more about customers: unsupervised domain-independent aspect detection for sentiment analysis of customer reviews},  author={Bagheri, Ayoub and Saraee, Mohamad and De Jong, Franciska},  journal={Knowledge-Based Systems},  volume={52},  pages={201--213},  year={2013},  publisher={Elsevier}  } |
| 240 |  | @article{xu2015implicit,  title={Implicit feature identification in Chinese reviews using explicit topic mining model},  author={Xu, Hua and Zhang, Fan and Wang, Wei},  journal={Knowledge-Based Systems},  volume={76},  pages={166--175},  year={2015},  publisher={Elsevier}  } |
| 241 | This paper proposes a novel integrative approach by combining an extended PageRank algorithm that leverages relationships between product features and sentiment terms, feature expansion by adding relevant synonyms, and implicit feature inference. Specifically, the proposed method pre-processes online consumer reviews using a lexical analysis tool, then constructs a network based on term pairs of candidate product features and sentiment words. Next, an extended PageRank algorithm called NodeRank will be applied to rank all term pairs and derive a candidate feature set, which will be expanded by using a synonym lexicon and implicit feature inference to generate a final product feature set. | @article{yan2015exprs,  title={EXPRS: An extended pagerank method for product feature extraction from online consumer reviews},  author={Yan, Zhijun and Xing, Meiming and Zhang, Dongsong and Ma, Baizhang},  journal={Information \& Management},  volume={52},  number={7},  pages={850--858},  year={2015},  publisher={Elsevier}  } |
| 243 |  | @article{li2015improving,  title={Improving aspect extraction by augmenting a frequency-based method with web-based similarity measures},  author={Li, Shi and Zhou, Lina and Li, Yijun},  journal={Information Processing \& Management},  volume={51},  number={1},  pages={58--67},  year={2015},  publisher={Elsevier}  } |
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