General Online Research 2012

March 5-7 2012, Baden-Wuerttemberg Cooperative State University Mannheim

GOR 12   **DGOF**

Conference Time: 01/Mar/2012 4:06:17 pm CET

Conference Agenda

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Session Overview

Session

C5: Information resource social media: datamining and other methods
Time: **Wednesday, 07/Mar/2012: 10:15am - 11:15am**
Session Chair: **Gerhard Keim**, GIM, Gesellschaft für Innovative Marktforschung mbH

Presentations

Searching Twitter on http://tweetminer.eu/ : Data mining as a resource for researchers.

Dr. Ulf-Dietrich Reips[1,2], **Pablo Garaizar**[1]

[1]University of Deusto, Spain; [2]IKERBASQUE, Basque Foundation for Science, Spain

Relevance & Research Question:

Over the last few years, microblogging has gained prominence as a form of personal broadcasting media where information, opinion, and experience reports are intermingled, often in response to current personal or societal events. Location awareness and promptness provide researchers using the Internet with the opportunity to create "psychological landscapes" from the microblogged messages — that is, to detect differences and changes in voiced (twittered) emotions, cognitions, and behaviors.

Methods & Data:

We present iScience Maps, a free Web service for researchers, available from http://tweetminer.eu/. Technologically, the service is based on Twitter's streaming and search Application Programming Interfaces (APIs), accessed through several PHP libraries, and a JavaScript frontend. This service allows researchers to assess via Twitter the effect of specific events in different places as they are happening and to make comparisons between cities, regions, or countries regarding tweeted expressions and their evolution in the course of an event. Compared to other Twitter search services iScience Maps provides Boolean search, comparative search, and independence from most API restrictions implemented by Twitter.

Results:

In a step-by-step example, it is shown how to replicate and expand on a study on affective and personality characteristics inferred from first names (Mehrabian & Piercy (1993), Personality and Social Psychology Bulletin, 19, 755–758) by mining Twitter data with iScience Maps. Results from the original study were replicated in both world regions we tested (the western U.S. and the U.K./Ireland); we also discovered base rate of names to be a confound in the original study that needs to be controlled for in future research.

Added Value:

The present social media research has just appeared in the peer-reviewed journal Behavior Research Methods and we would like to make this service known to the GOR community. Anyone can easily use the service to conduct studies.

Multimodal Analysis of Online Discourses

Vivien Sommer
Chemnitz University of Technology, Germany

Relevance & Research Question: Online discourses as well as discourses in general can be described through the analysis of patterns of interpretation (Keller 2005). However, online discourses are a special form of discourses, which is characterized by highly multimodal communication. Multimodality is understood to be the interplay of different signs or sign systems which through their interplay generate meaning (Kress/Van Leeuwen 2010). Through the digitalization of media visual signs can be designed, arranged, and represented easier and more freely. Therefore the communicative relevance of images and other ways of visual expression has grown. That is why patterns of interpretation of an online discourse are not only verbalized through mostly written text but are also materialized in weblogs, videos, audio files and the like. So the question is, what is a useful methodical instrument to analyses the multimodal online communication?

Methods & Data: In my thesis I developed a mixed method approach: the rules for collecting and analyzing data of the Grounded Theory (Glaser/Strauss 2008; Strauss/Corbin 2008) are combined with the social semiotic visual grammar of Kress and Van Leeuwen (2010). Based on a case study about the online discourse on the trial of John Demjanjuk, who is accused of Holocaust-related war crimes, I developed a multimodal coding system. This controversial topic initiated an extensive online debate and represents an interesting example of a multimodal discourse. The corpus consists of 40 networks of documents,

including blogs, political forums, social networks and video platforms.

Results: In order to reconstruct multimodal patterns of interpretation of the online discourse on the Demjanjuk trial, it was necessary to combine the level of the content with the level of the design of the semiotic modes. Hence I triangulated the rules of Theoretical Sampling and the coding-process of the Grounded Theory with the social semiotic approach of visual design and developed a methodical instrument for multimodal online discourse analysis.

Added Value: With this methodical instrument it is possible to analyses online communication without prioritizing a semiotic mode. Instead of, the instrument enables the research of multimodal sign systems and their generated meaning in an online discourse.

A Rich Source of Information: Extracting the market structure and product quality from customer reviews

Wolfgang Körbitz
WU Wien, Austria

Relevance & Research Question:

Due to web 2.0 services like forums, blogs or user comments customers can nowadays easily share their product experience with a wider audience (Riegner 2007). On the one hand product reviews influence buying decisions of prospective customers (Breazeale 2009). On the other hand these user comments are valuable information for companies as they show how customers perceive their products (Rosa, Spanjol et al. 2004). By comparing reviews of competing products the following study shows how customer reviews can be analyzed to reveal the market structure. In spite of the product development it is further interesting to know important product attributes which lead to a positive quality assessment from customers (Urban and Hauser 2004).

Methods & Data:

A set of 1.230 product reviews of 10 different heart rate monitors are retrieved from the Amazon website for the analysis. Meaningful words are extracted from the reviews by comparing the frequency distribution of a term in the target corpus (the reviews of one specific product) to the whole sample (reviews from other products). In a following step a sentiment analysis identifies whether the term stands in a positive or negative context. The sentiment analysis counts the number of co-occurrences of a target term with a pre-defined list of positive and negative sentiment words.

Results:

To reveal the market structure a simple correspondence analysis is performed. It uncovers the relationship between the extracted keywords and the different product models. To determine influential product attributes on the quality judgment of customers a logistic regression is employed. It estimates the influence of the extracted terms on the overall product rating of the customers.

Added Value:

This study demonstrates the applicability of text mining in combination with sentiment detection in the field of market research. In detail it shows how to identify relevant product associations from customers and shed light on the quality assessment from a customer perspective.

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