

## Chapter 98

# Multimodal Sentiment Analysis: A Survey and Comparison

**Ramandeep Kaur**

 <https://orcid.org/0000-0003-4732-5710>

*Guru Kashi University, Talwandi Sabo, India*

**Sandeep Kautish**

*Guru Kashi University, Talwandi Sabo, India*

### ABSTRACT

*Multimodal sentiments have become the challenge for the researchers and are equally sophisticated for an appliance to understand. One of the studies that support MS problems is a MSA, which is the training of emotions, attitude, and opinion from the audiovisual format. This survey article covers the comprehensive overview of the last update in this field. Many recently proposed algorithms and various MSA applications are presented briefly in this survey. The article is categorized according to their contributions in the various MSA techniques. The main purpose of this survey is to provide a full image of the MSA opportunities and difficulties and related field with brief details. The main contribution of this article includes the sophisticated categorizations of a large number of recent articles and the illustration of the recent trend of research in the MSA and its related areas.*

### INTRODUCTION

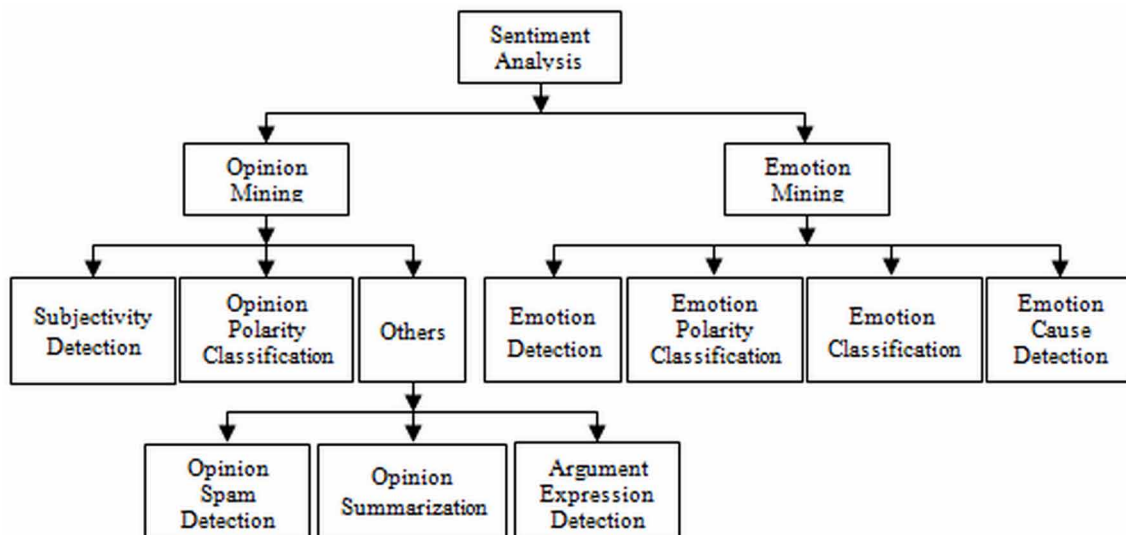
“Sentiment analysis,” productions a substantial protagonist in fields in “affective computing,” refers to all the parts of detecting, analyzing and evaluating humans’ frame of cognizance towards different events, issues, services, or any other interest. More precisely, this field aims to mine sentiments, interpretations, and sensations based on observations of people’s actions can be captured using their writings, facial expressions, speech, music, movements etc. Below is the Exploration of sentiments from each one of these media is a specific field (Yang & Chen, 2012; Ayadi, Kamel & Karray, 2011).

DOI: 10.4018/978-1-6684-6303-1.ch098

## Multimodal Sentiment Analysis

Manuscript sentiment exploration has been an attractive topic of study since the mid-1990s; however, there barely exists a systematic organization of tasks under this area and people use different terms to mention to different tasks. For example, sentiment analysis, opinion mining, and polarity classification, which are define below, are rummage-sale to discourse the same concept. Sentiment is a thought, attitude or judgment provoked by a feeling. However, sentiment is a view colored by an emotion. It is not grim to confuse opinion and emotion; subsequently they have a well-built correlation. For instance, in many situations emotion stimulates a person to judge an entity and build opinions about it. Additionally, opinion of a soul can cause emotions in others. Based on the aforementioned reasons, the categorization of sentiment exploration is done into two chunks: Opinion mining, distributed with the manifestation of opinions, and Emotion mining, distributed with the articulation of emotions. Figure 1 that shows the categorization of sentiment exploration to these 2 tasks and the subtasks of each.

Figure 1. Taxonomy of sentiment exploration tasks (Source: Yadollahi, Shahraki & Zaiane, 2017)



## Opinion Mining

Estimation excavating is more anxious with the clue of opinions uttered in texts which can be positive, negative, or neutral and various Opinion-mining tasks are:

- **Subjectivity Detection:** The mission of detecting if a text is unprejudiced or idiosyncratic. Objective texts carry some factual information, while subjective texts express somebody's personal views or opinions, for example, (Liu, 2011);
- **Opinion Polarity Classification:** The chore of determining whether the typescript expresses either affirmative or deleterious (or sometimes neutral) opinion;

23 more pages are available in the full version of this document, which may be purchased using the "Add to Cart" button on the publisher's webpage:

[www.igi-global.com/chapter/multimodal-sentiment-analysis/308579](http://www.igi-global.com/chapter/multimodal-sentiment-analysis/308579)

## Related Content

---

### Ontology-Based Construction of Grid Data Mining Workflows

Peter Brezany, Ivan Janciak and A Min Tjoa (2008). *Data Mining with Ontologies: Implementations, Findings, and Frameworks* (pp. 182-210).

[www.irma-international.org/chapter/ontology-based-construction-grid-data/7578](http://www.irma-international.org/chapter/ontology-based-construction-grid-data/7578)

### Thesaurus-Based Automatic Indexing

Luis M. de Campos (2009). *Handbook of Research on Text and Web Mining Technologies* (pp. 331-345).

[www.irma-international.org/chapter/thesaurus-based-automatic-indexing/21733](http://www.irma-international.org/chapter/thesaurus-based-automatic-indexing/21733)

### Coronavirus Pandemic (COVID-19): Emotional Toll Analysis on Twitter

Jalal S. Alowibdi, Abdulrahman A. Alshdadi, Ali Daud, Mohamed M. Dessouky and Essa Ali Alhazmi (2022). *Research Anthology on Implementing Sentiment Analysis Across Multiple Disciplines* (pp. 1761-1782).

[www.irma-international.org/chapter/coronavirus-pandemic-covid-19/308574](http://www.irma-international.org/chapter/coronavirus-pandemic-covid-19/308574)

### Dynamic Itemset Hiding Algorithm for Multiple Sensitive Support Thresholds

Ahmet Cumhur Öztürk and Belgin Ergenç (2018). *International Journal of Data Warehousing and Mining* (pp. 37-59).

[www.irma-international.org/article/dynamic-itemset-hiding-algorithm-for-multiple-sensitive-support-thresholds/202997](http://www.irma-international.org/article/dynamic-itemset-hiding-algorithm-for-multiple-sensitive-support-thresholds/202997)

### An Approach for Retrieving Faster Query Results From Data Warehouse Using Synonymous Materialized Queries

Sonali Ashish Chakraborty and Jyotika Doshi (2021). *International Journal of Data Warehousing and Mining* (pp. 85-105).

[www.irma-international.org/article/an-approach-for-retrieving-faster-query-results-from-data-warehouse-using-synonymous-materialized-queries/276766](http://www.irma-international.org/article/an-approach-for-retrieving-faster-query-results-from-data-warehouse-using-synonymous-materialized-queries/276766)