

singh_2022_modeling_the_public_attitude_towards_organic_foods_a_big_data_and_text_mining_approach

Year

2022

Author(s)

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Title

Modeling the public attitude towards organic foods: a big data and text mining approach

Venue

Journal of Big Data

Topic labeling

Manual

Focus

Secondary

Type of contribution

Established approach

Underlying technique

Manual labeling

Topic labeling parameters

Nr of inspected terms: 12

Label generation

Topics are labeled based on the identification of a logical connection between most the frequent terms of the topic. Table 2 presents the topic labels with their key terms.

Table 2 Topics listing top 12 key terms extracted from LDA model

| Topic id | Terms | Label |
|----------|---|--|
| Topic 1 | food, organic, jail, judge, Capitol, horns, get, hunger, riot, ordered, fur, strike | US politics (Attack on Capitol Hill) |
| Topic 2 | organic, food, get, jail, man, white, prison, guy, judge, horns, privilege, vacation | US politics (Capitol attacker's demand for organic food) |
| Topic 3 | organic, food, people, consumption, health, vegan, grown, eating, fed, pesticides, chemicals | Authenticity |
| Topic 4 | food, organic, month, seasonal, three, spring, package, survival, vitality, bundle, chakra, better | Seasonality |
| Topic 5 | organic, food, plant-based, vegan, diet, ecological, refreshing, vegetables, health, future, good | Plant-based diet |
| Topic 6 | organic, food, plant, local, fresh, natural, farming, agriculture, save, planet, impact, world | Saving the planet |
| Topic 7 | farming, choose, harvest, latest, technology, crops, labels, standards, agriculture, supply-chain, organic, focus | Organic farming and standardization |
| Topic 8 | online, grocery, demand, local, store, orders, delivery, affordable, save, COVID19, planet, markets | Food delivery |

Motivation

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Topic modeling

LDA

Topic modeling parameters

Nr of topics: 1 to 15

Nr. of topics

8

Label

Manually assigned single or multi word labels

Label selection

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Label quality evaluation

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Assessors

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Domain

Paper:

Dataset: (organic) Food

Problem statement

This study aims to identify the topics that users post on Twitter about organic foods and to analyze the emotion-based sentiment of those tweets. The study addresses a call for an application of big data and text mining in different fields of research, as well as proposes more objective research methods in studies on food consumption. There is a growing interest in understanding consumer choices for foods which are caused by the predominant contribution of the food industry to climate change. So far, customer attitudes towards organic food have been studied mostly with self-reported methods, such as questionnaires and interviews, which have many limitations. Therefore, in the

present study, we used big data and text mining techniques as more objective methods to analyze the public attitude about organic foods.

Corpus

Origin: Social media (Twitter)

Nr. of documents: 41,009

Details:

- tweets posted between January 10, 2021 and March 7, 2021

Document

A single tweet's content

Pre-processing

- Duplicate removal

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