Proceedings of CONF-MLA 2025 Symposium: Intelligent Systems and Automation: AI Models, IoT, and Robotic Algorithms
DOI: 10.54254/2755-2721/2025.LD29921

User Perception of iPhone 17 Weibo Comments Based on ROST-CM6

Yifan Zhang

College of Humanities, The Education University of Hong Kong, Hong Kong, China
zhangyifan6003@163.com

Abstract. The current smartphone market is highly competitive, and the new iPhone series has attracted much attention. After the iPhone 17 was launched, it triggered a lot of discussion on Weibo, and its user comments provided rich data for studying consumer perception. Traditional analysis methods struggle to process massive amounts of text, whereas the ROST-CM6 software is specifically designed for Chinese text and enables efficient mining. Current research lacks a targeted analysis of the iPhone 17. This study utilizes Octopus Crawler to collect Weibo comments, and after cleaning, employs ROST-CM6 to conduct high-frequency word, sentiment, and semantic network analysis, exploring user focus dimensions, emotional tendencies, and topic associations. The study not only enriches the research cases of digital product perception and verifies the applicability of the tool, but also provides a reference for Apple to optimize its strategy and for users to understand market sentiment, and has theoretical and practical value.

Keywords: rost-cm6, iPhone 17, text analysis

1. Research background and significance

The current smartphone market is highly competitive, with various brands constantly iterating their products to seize market share. As a leading brand in the industry, Apple's new product launches are always the focus of the market. Each generation of updates to Apple's product line carries consumers' expectations for performance, design, and innovative features. As a newly released product, the iPhone 17 has already begun to ferment related discussions on social platforms. Weibo, as a social platform with a large domestic user base and fast information dissemination, gathers many users' real opinions and emotional expressions on digital products. Weibo comments with iPhone 17 as the keyword cover users' discussions on multiple dimensions, such as product configuration, price expectations, appearance design, and ecological adaptation, providing rich text data for studying consumer perceptions.

This study, using the ROST-CM6 text mining tool, conducted quantitative and qualitative analysis of online reviews, accurately extracting user focus and sentiment, generating a semantic network diagram. From a theoretical perspective, this study enriches the case library for digital product user perception research, validates the applicability of ROST-CM6 for online text analysis in the consumer electronics sector, and provides a methodological reference for subsequent perception research on similar products. From a practical perspective, this study provides Apple with

© 2026 The Authors. This is an open access article distributed under the terms of the Creative Commons Attribution License 4.0 (https://creativecommons.org/licenses/by/4.0/).

DOI: 10.54254/2755-2721/2025.LD29921

insights into consumer demand for the iPhone 17, helping them optimize their product development and marketing strategies. It also provides objective references for digital enthusiasts and industry analysts regarding public opinion trends, helping ordinary consumers understand mainstream market sentiment.

2. Research status

Against the backdrop of increasingly fierce competition in the smartphone market, Apple's iPhone series has consistently been the focus of consumer and academic attention due to its long-term technological advancements and cultural significance.

In fact, as early as the mid-1990s, a device considered groundbreaking technology was released. It was originally called the "iPhone," representing the concept of "Internet phone." Under this technical development framework, researchers worked to create a device that could operate via the Internet, and this device was named "iPhone" at the time [1], thereby laying an early conceptual foundation for what the product line would later evolve into. When evaluating the iPhone's core value during its development, industry perspectives further highlighted its uniqueness. Later, when evaluating the iPhone, Gross thinks the iPhone has a refined appearance and delicate touch, it will drive upgrades for other phones, it is not essentially a phone, but a platform, and it is just the prototype of more future iPhone models [2]. To further emphasize the device's breakthrough innovative nature, this is a true handheld computer, the first of its kind to live up to that name [1]. This positioning, spanning from its early definition as an "Internet phone" to its recognition as a "genuine handheld computer", continues to this day. As a result, each generation of iPhone updates carries users' expectations for underlying technology iterations and practical function upgrades and also provides historical logic support for the main concerns of users in iPhone 17 research.

Beyond its technological and historical positioning, the iPhone's cultural significance is equally notable, particularly in how users interact with and perceive the device. "To start with, the mobile is an everyday device, object or thing." [3] The materiality of the mobile phone is essential to how it is understood and how it bears marks and is grasped by culture [4]. Users decorate their phones with their favorite souvenirs and change the appearance style and color of their phones. In addition, they also regularly change their ringtones, screensavers or desktop backgrounds [4]. Yet, beyond these functional and aesthetic adjustments, they attach great importance to mobile phones and regard them as a symbol of fashion taste and personal identity [4]. In fact, for the iPhone specifically, "subjective norms and social status are inherently part of iPhone user experience, with iPhone (much like the iPod) being seen as a status symbol" [5], which can be used to express their personal style. This deep bond between users and mobile phones is vividly demonstrated by the launch of the first iPhone version. According to reports, hundreds of people lined up outside Apple and AT&T stores when the iPhone launched. The phone was initially priced at $599, but two months later, Apple reduced it to $399. This price cut sparked discontent among early adopters, and to appease the public, Apple offered a $100 Apple Store credit to those who purchased the phone before the price cut. This incident reminded Apple of the importance of pricing: simplicity not only helps companies increase revenue but also maintains customer relationships and reflects consumer willingness to pay a specific price [6].

In addition to its cultural and market-related impacts, the iPhone's technological breakthroughs also redefined the role of mobile components, such as the camera in daily life. When the first iPhone was released in 2007, its camera seemed uninspired: a mere 2 megapixels with no autofocus. The default app couldn't even zoom, making it no different from a typical phone camera. However, the iPhone, by integrating diverse technological, cultural, and institutional elements, established a new

DOI: 10.54254/2755-2721/2025.LD29921

ecosystem. It connected directly to the internet, rather than being confined to the closed ecosystem of telecom companies. As a portable device with a large touchscreen and internet access, it functioned as a platform, opening up new applications for cameras [4].

In summary, existing research has laid a foundation for studying iPhone 17 user perceptions from these dimensions like technology, culture, market and so on. However, two shortcomings remain. First, there is limited targeted analysis of the latest models, which fails to reflect the evolving needs of current users. Second, there is insufficient in-depth exploration of authentic user reviews on Chinese social media platforms such as Weibo. Therefore, this study, focusing on Weibo reviews of the iPhone 17, employs ROST-CM6 to conduct a multidimensional analysis. This study not only extends the existing theoretical framework but also fills a gap in research, possessing both theoretical and practical value.

3. Research methods and data processing

Text analysis can balance overly rigid and stereotyped social analysis and is a valuable method for studying social and cultural changes (Fairclough, 1999). For consumer perception studies of digital products like the iPhone 17, this approach effectively circumvents the limitations of traditional, rigid analysis and accurately captures dynamic user feedback. Text analysis tools generate new text from queries through computer-implemented processes. These new texts are composed of the original text broken down and reassembled, creating new hybrid works for interpretation [7]. This characteristic of text analysis tools provides a theoretical basis for this study's exploration of potential information from massive amounts of Weibo user comments.

With the help of Octopus crawler software, we select the chat template. After completing the account login in the software, we clearly use iPhone 17 as the core keyword. At this time, the system will automatically crawl the corresponding data in the related topics associated with the software. To ensure the timeliness and richness of the data, we further set the crawling range from the latest date to 100 pages. Finally, the obtained content will be exported to the system in Excel format to complete the basic usability. It can conduct objective, systematic and quantitative analysis of the text. Therefore, this study chooses this method as the core analysis framework. At the same time, relying on the ROST CM6 software developed by Professor Shenyang of Wuhan University, it can realize the function of converting text content into quantitative data, thereby achieving an organic combination of qualitative and quantitative analysis, and providing technical support for subsequent data processing and in-depth analysis.

After determining the methods and tools, this study carried out specific operations according to the following steps. First, the Excel-format text data previously obtained and exported through Octopus Fat was converted into a Text format compatible with the ROST-CM6 tool. After the format conversion was completed, the Text format data was preprocessed with the help of the ROST-CM6 tool to remove redundant information and interference content in the data. After the preprocessing was completed, the data was deduplicated to further filter out valid data, and finally, 626 valid comments were obtained. Subsequently, based on the valid comments after deduplication, the three core functions of the ROST-CM6 tool—high-frequency word analysis, sentiment analysis, and semantic network analysis—were used to conduct a multi-dimensional and specific study of the comment content to explore the potential information behind the data.

DOI: 10.54254/2755-2721/2025.LD29921

4. Analysis of results

4.1. High-frequency word analysis

In terms of performance and configuration, battery life and feature upgrades are top concerns for users regarding the iPhone 17. Among the top five most frequently mentioned terms, “charging” (93 times) and “battery” (42 times) are absolutely crucial, with mentions far exceeding any other term. This demonstrates that the iPhone 17’s battery life is a focal point of discussion and concern among users. Users are concerned about both charging speed, such as support for higher-power fast charging, and optimizations for wireless charging. Furthermore, actual feedback indicates that users who have received their devices are currently experiencing insufficient battery life. This feedback represents a significant disparity between previous expectations for the charging experience and further highlights users’ core concern regarding battery life. At the same time, words such as “function” (59 times), “technology” (41 times), “upgrade” (46 times), and “brand new” (39 times) also appear frequently, and are often associated with words such as “photographing” (33 times), “imaging” (27 times), “shooting” (20 times). This combination clearly shows that users are paying attention to the iteration of practical functions. They expect breakthrough upgrades in underlying technologies, such as chips and systems, and whether iOS will add new practical functions, and whether application compatibility will be improved. They also attach importance to the optimization of imaging capabilities, such as telephoto lenses and AI shooting algorithms.

The high-frequency words in this dimension clearly reflect users’ purchasing decisions regarding the iPhone 17. The core of the “get one free” offer revolves around brand selection and purchase risk. The word “domestic” ranked fifth among all words, appearing 57 times. It frequently appears alongside words like “comparison” (34 times), “competition” (5 times), and “leading” (5 times). This lexical combination clearly demonstrates the heated discussion surrounding the simultaneous launch of Xiaomi and the iPhone 17. When evaluating the iPhone 17, users don’t view it in isolation; instead, they frequently compare it to domestic brands like Xiaomi. Furthermore, the high frequency of the word “consumption” (29 times) and the discussion of price/performance ratio—although “price/performance ratio” doesn’t appear directly among the high-frequency words, users’ concerns about price are indirectly reflected through words like “list price” (5 times) and “cost” (5 times), further demonstrating users’ high price sensitivity for the iPhone 17. Some even joke that the economic downturn has not deterred other users from purchasing. In addition to considering brand and price, users also prioritize purchasing risk when making purchase decisions. The high-frequency usage of the words “rush to buy” (8 times), “shipping” (9 times), and “planning” (11 times) directly reflects users’ concerns about purchasing difficulties. While there are concerns that the iPhone 17 will be out of stock and difficult to purchase after its release due to market hype, many people are still taking a wait-and-see approach.

4.2. Sentiment analysis

The collected information (Figure 1) regarding user emotions, attitudes, and opinions was analyzed. The emotional spectrum reflects user satisfaction with the iPhone 17. Using the “sentiment analysis function” of the ROST-CM6 software, we assigned a sentiment score to each review. A positive score indicates a positive evaluation and sentiment, a negative score indicates a negative evaluation and sentiment, and 0 indicates neutral sentiment. Through this sentiment analysis, the valid sentiment data for online review texts was obtained.

DOI: 10.54254/2755-2721/2025.LD29921

Judging from the emotional statistics, the vast majority of users have a positive attitude towards iPhone 17, with positive emotions accounting for 68.85% (431 comments), of which 144 are highly positive (above 20 points), accounting for 23.00%, 112 are moderately positive (10-20 points), accounting for 17.89%, and 175 are generally positive (0-10), accounting for 27.96%. This shows that most users have a positive attitude towards the iPhone 17 series. The core driving forces include basic configuration upgrades (such as 256GB starting storage, high refresh rate for the entire series), improved imaging capabilities (8x optical heating, front ultra-wide angle) and iOS system stability.

Negative sentiment accounted for 20.29% (127 comments), with 175 comments being generally negative (-10 to 0 points, 14.38%), 23 comments being moderately negative (-20 to 10 points, 3.67%), and only 8 comments being highly negative (-20 points or less, 1.28%), which represents a very low percentage, reflecting that negative reviews are primarily focused on acceptable minor issues and lack of large-scale and serious quality disputes. In addition, key concerns mainly focused on material durability, functional innovation, and after-sales costs. (Figure 1)

Neutral emotions account for 10.86% (68 comments), most of which are objective descriptions. It was mainly divided into three categories involving 'information statement', 'function and parameter comparison', and 'buy and wait and see', which is an important reference for market decision-making, with no obvious emotional tendency, such as "iPhone 17 Air body thickness is 4mm", "iOS 26.1 supports Traditional Chinese".

Table 1. Table of quantity and proportion of various emotions

emotion category	level	Amounts	proportion
positive emotion	—	431	68.85%
positive emotion	average (0-10)	175	27.96%
positive emotion	moderate (10-20)	112	17.89%
positive emotion	high (20 and above)	144	23.00%
neutral emotion	—	68	10.86%
negative emotion	—	127	20.29%
negative emotion	average (0-10)	90	14.38%
negative emotions	moderate (10-20)	23	3.67%
negative emotions	high (20 and above)	8	1.28%

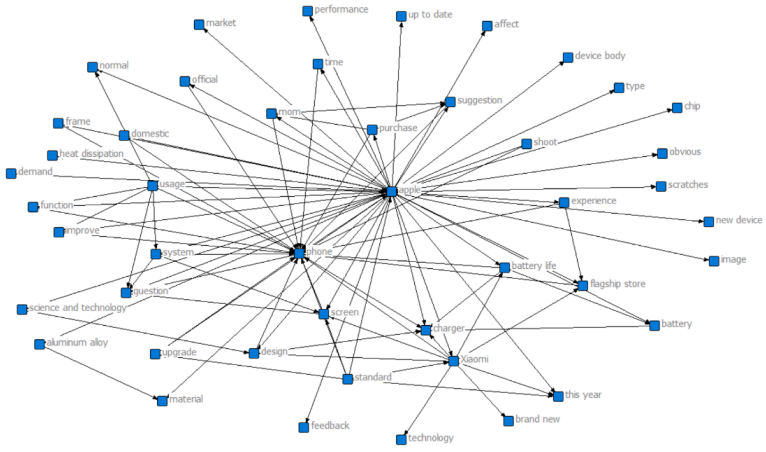

Figure 1. Semantic network diagram of microblog comment text

DOI: 10.54254/2755-2721/2025.LD29921

4.3. Semantic network diagram analysis

Based on the co-word matrix, in order to construct the semantic network diagram of microblog comment text, with the help of ROST-CM6 software (Figure 2). In the semantic network diagram of the text, the density of the lines pointing between the perceived objects indicates the co-occurrence frequency between the two words. The denser the lines pointing, the higher the co-occurrence frequency and the stronger the correlation between them.

As can be seen in Figure 3, the semantic network radiates from the center, with the arrows connecting high-frequency words indicating their semantic connections. The network centers around the words “apple” and “iPhone,” with comments also expanding from this central point. It displays various words related to Apple phones and their relationships. These include product performance and configuration, with terms like “battery life,” “chip,” “screen,” and “performance” reflecting users’ interest in Apple product performance and hardware configuration. Additionally, words like “image,” “shoot,” and those reflect discussions about the image capture capabilities of Apple phones and the relationship between brand and market. The emergence of “Xiaomi” reflects discussions about brand comparisons and market competition between Apple and domestic mobile phone brands. “Market” also involves market-related topics. In terms of design and technology, words like “frame”, “aluminum alloy”, “device body”, “type”, “design”, “science and technology”, and those reflect a focus on the appearance, design, and technology of Apple products. Words related to purchases, such as “purchase” and “flagship store”, are related to user purchasing behavior and purchasing channels. These words are connected by lines, which show the relationship between words and help us intuitively understand the core topics discussed around Apple products and the logical connections between the topics.

5. Conclusion

First, from the analysis of high-frequency words, users’ attention to iPhone 17 is highly focused on battery life and function upgrades. The number of times “charging” and “battery” are mentioned far exceeds other words, reflecting that battery life is the primary concern of users, and there is a gap between actual experience and expectations; at the same time, the high frequency of words such as “photography”, “imaging” and “chip” shows that users attach equal importance to imaging capabilities and underlying technology iterations.

Second, sentiment analysis shows that 68.85% of users have a positive attitude towards the iPhone 17, with the core drivers being upgraded basic configurations, improved imaging capabilities, and iOS system stability. Only 20.29% of users expressed negative emotions, mostly focusing on issues such as material durability and lack of functional innovation. There were no large-scale, serious quality disputes. Another 10.86% expressed neutral emotions, mainly based on objective information statements and a wait-and-see attitude towards purchasing.

Third, semantic network analysis shows that users do not view the iPhone 17 in isolation when discussing it, but often compare it with domestic brands Xiaomi, which was introduced at the same time, reflecting the context of fierce brand competition. At the same time, users are price-sensitive and have concerns about stock-outs and difficulty in purchasing. These factors jointly influence user purchasing decisions.

References

[1] Căpătînă, G., & Drăghescu, F. (2015). Success factors of new product launch: The case of iPhone launch. International Journal of Economics and Finance, 7(5), 61-70.

DOI: 10.54254/2755-2721/2025.LD29921

[2] Chesher, C. (2012). Between image and information: The iPhone camera in the history of photography. In Studying mobile media (pp. 98-117). Routledge.
[3] Fairclough, N. (1999). Linguistic and intertextual analysis within discourse analysis. In A. Jaworski & N. Coupland (Eds.), The discourse reader (pp. 146–157). London: Routledge.
[4] Grossman, L. (2007). Invention of the Year: The iPhone. Time (Chicago, Ill.), 170(20), 60.
[5] Goggin, G. (2009). Adapting the mobile phone: The iPhone and its consumption. Continuum, 23(2), 231–244. https: //doi.org/10.1080/10304310802710546
[6] Laugesen, J., & Yuan, Y. (2010, June). What factors contributed to the success of Apple's iPhone?. In 2010 Ninth International Conference on Mobile Business and 2010 Ninth Global Mobility Roundtable (ICMB-GMR) (pp. 91-99). IEEE.
[7] Rockwell, G. (2003). What is text analysis, really?. Literary and linguistic computing, 18(2), 209-219.