텍스트 마이닝 기반의
스마트폰 카메라 사진의 감성평가 연구

차민철, 임채린, 심재문, 김다영, 지용구

연세대학교 산업공학과

A Study on Sensibility Evaluation for Smartphone Camera Photography Based on Text Mining

Min Chul Cha[1], Cherin Lim[1], Jae Moon Sim[1], Da Yeong Kim[1], Yong Gu Ji[1]

[1]Department of Industrial Engineering, Yonsei University

ABSTRACT

Objective: The purpose of this study is to extract representative emotional vocabulary that can be used to evaluate the sensibility of photographs taken by a smartphone camera through text mining. **Background:** Recently, users have been actively socializing, cultivating, and expressing themselves in digital cities, such as a metaverse, where the reality is merged with virtual spaces. User sensibility in these digital cities is generated by the virtual image rendered through the user's smartphone camera, and users intend to express themselves through such an image. The sensibilities pursued by users in social media spaces such as Instagram are assumed to be analogous to those pursued in the digital world. Consequently, this study aims to evaluate the sensibility of images uploaded on SNS platforms, which are in essence, photographs produced by smartphone cameras. However, research regarding the sensibility pursued by users in relation to photographs taken by smartphone cameras is currently insufficient. Based on the fact that smartphone users actively share user experiences online, this study intends to obtain meaningful information in terms of emotion by applying text mining techniques to unstructured text data (comments, posts, etc.) posted by users regarding smartphone camera photography. **Method**: In order to examine the Voice of the Customer (VoC), a total of 7049 posts and comments uploaded online were collected through web crawling. Text mining was performed on the accumulated data to extract adjectives or adverbs that could be utilized as emotional vocabulary. By evaluating the aptness of each vocabulary, and grouping synonymous vocabulary, the research group selected major emotional words. Through factor analysis, the most representative emotional vocabulary were finally extracted. **Results:** A total of 321 adjectives and adverbs were extracted through text mining, which was then reduced to 14 words through the evaluation of adequacy proceeded by the researchers. In the final stage, the emotional vocabulary were classified into four representative sensibilities through factor analysis: 'strong', 'soft', 'vivid', and 'trendy'. **Conclusion:** By applying text mining techniques and factor analysis, the study derived the main sensibilities that users consider when taking and viewing smartphone camera photographs. **Application:** The emotional vocabulary extracted from this study is anticipated to be useful in evaluating the sensibility of photographs taken by smartphone cameras, and exploring the sensibility of photographs pursued by users.

Keywords: Text mining, Sensibility Evaluation, Emotional Words, Smartphone Camera Photography, Representative Emotion

Corresponding author: Yong Gu Ji (yongguji@yonsei.ac.kr)