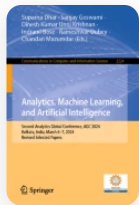


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Analyzing Post-Shopping Facial Expressions: Unraveling Emotions for Enhanced Consumer Insights


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Analytics, Machine Learning, and Artificial Intelligence

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Abstract

This study examines how people use emotion to communicate, emphasizing what happens after a mall shopping trip. Body language, subtle vocalizations, and facial expressions are all part of emotional communication; facial expressions are a common, natural, and dominant means of conveying emotional states. The difficulty, however, comes from the common patterns in human

facial expressions, which make it hard to pick out subtleties with the unaided eye. The similarities between the looks of dread and astonishment demonstrate this. In response, this study aims to create an emotion identification model that can classify emotions based on facial expressions and recognize them instantaneously. CNNs, or convolutional neural networks, are used in the approach. CNN training incorporates dropout and batch normalization approaches to improve model generalization and reduce overfitting. They are considering the challenge's multiclass classification structure. Ultimately, this research sheds insight into the complexities of human sentiments after a mall shopping experience and advances the construction of a robust emotion detection model.

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22. Walecki, R., Rudovic, O.: Deep structured learning for facial expression intensity estimation. *Image Vis. Comput.* **59**, 143–154 (2017). <https://doi.org/10.1016/j.imavis.2016.10.004>

23. Wöllmer, M., Metallinou, A., Eyben, F., et al.: Context-sensitive multimodal emotion recognition from speech and facial expression using bidirectional LSTM modeling. In: *Proceedings of the 11th Annual Conference of the International Speech Communication Association, INTERSPEECH 2010*, pp. 2362–2365 (2010). <https://doi.org/10.21437/Interspeech.2010-646>

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