UC Merced

Proceedings of the Annual Meeting of the Cognitive Science Society

Title

Understanding shopper's true intention from conversational dialogue between salesperson and shopper

Permalink

https://escholarship.org/uc/item/39q3r4ck

Journal

Proceedings of the Annual Meeting of the Cognitive Science Society, 36(36)

ISSN

1069-7977

Authors

Lee, Soo-Young
Kim, Bokyeong

Publication Date

2014

Peer reviewed

Understanding shopper's true intention from conversational dialogue between salesperson and shopper

Soo-Young Lee
KAIST

Bokyeong Kim
KAIST

Abstract: The true intention, i.e. positive and negative, of shoppers was identified from conversational dialogue speech between shoppers and salesperson. Since the speech characteristics have subtle difference only, it is important to learn discriminant features from speech signals. Starting from statistical features of speech pitch, amplitude envelop, and their temporal changes, the discriminant Non-negative Matrix Factorization (dNMF) algorithm successfully extracted the discriminant features. Then, a support vector machine (SVM) classifier was trained to result in above 80% classification accuracy for the test data. The careful analysis of the discriminant features showed that the temporal changes of the pitch and amplitude envelop are closely related to the hidden shoppers' intention.