

[DOI: 10.20472/IAC.2015.018.024](https://doi.org/10.20472/IAC.2015.018.024)

JIEH-REN CHANG

Department of Electronics Engineering, National Ilan University , Taiwan, R.O.C.

HUNG-CHI JUANG

Department of Electronics Engineering, National Ilan University , Taiwan, R.O.C.

AN ENHANCED APPROACH FOR IMPLEMENTING UNSUPERVISED LABEL REFINEMENT IN AUTOMATIC FACE ANNOTATION

Abstract:

Unsupervised Label Refinement (ULR) is an effective method that can fix the error annotation in weakly labeled facial images database which is collected from the internet. All weakly labeled facial images are freely available on the World Wide Web (WWW). One challenging problem is how to effectively correcting the weak labels that are often noisy and incomplete.

In this study, an enhanced approach is proposed to implementing Unsupervised Label Refinement. The concept of that the same label of facial images have the same face feature center is used. It can make better for fixing weakly labeled facial images data.

An experimental database is queried from IMDb website which collected the actors who were bored in 1950 to 1990. The initial weakly labeled data is provided for experiment with respectively error annotation rate 25% and 15%. The results show that the Enhanced Unsupervised Label Refinement in Automatic Face Annotation have the better performance which is compared with other traditional URL methods.

Keywords:

web facial images, auto face annotation, unsupervised learning.

JEL Classification: C63