

## A Supervised Face Parts Labeling Framework

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**Abstract :** Face parts labeling is the process of assigning class labels to each face part. A face parts labeling method (FPL) which divides a given image into its constitutes parts is proposed in this paper. A database FaceD consisting of 564 images is labeled with hand and make publically available. A supervised learning model is built through extraction of features from the training data. The testing phase is performed with two semantic segmentation methods, i.e., pixel and super-pixel based segmentation. In pixel-based segmentation class label is provided to each pixel individually. In super-pixel based method class label is assigned to super-pixel only - as a result, the same class label is given to all pixels inside a super-pixel. Pixel labeling accuracy reported with pixel and super-pixel based methods is 97.68 % and 93.45% respectively.

**Keywords :** face labeling, semantic segmentation, classification, face segmentation

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