Robust Automatic Facial Landmarking
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Background
- Facial landmarking enables pose estimation, 3D model generation, face recognition and expression analysis
- Our method automatically fits outlines of the eyes, eyebrows, nose, lips and face

Method
Training Stage
- Landmarking scheme
- Images from training set
- Facial shape model
- Statistical model of pixel variation around each landmark
- 79 landmark points manually marked on training set to build models of shape and local texture

Testing Stage
- Detect face in test image
- Align facial shape model over it
- Move landmarks using models of pixel variations until convergence

Results
- 5 models trained on images with pose variation between -30° and +30°
- Promising results on unseen frontal and non-frontal images

Future work
- Refitting of poorly fitted points using a goodness of fit criteria
- Better methods of modeling shape and texture
- Use of landmarking for facial recognition and expressional analysis