

FACIAL FEATURE LOCALIZATION AND TRACKING FOR EXPRESSION RECOGNITION

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Introduction

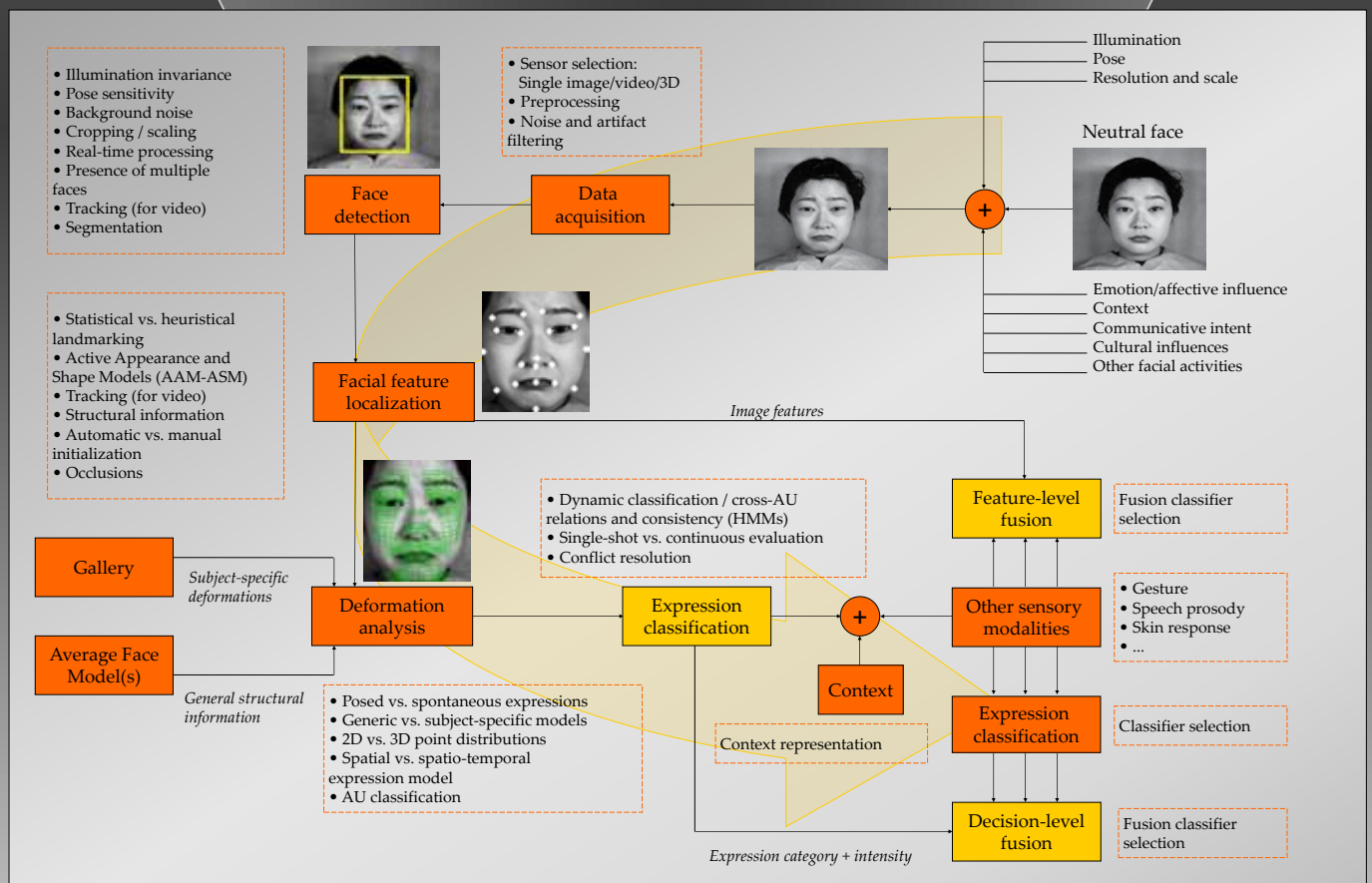
- ✓ Interest in Human Computer Interaction grows rapidly.
- ✓ Expression recognition is an important part of Human Computer Interaction.
- ✓ By using expression recognition, computers can react aptly to users response.
- ✓ Consequently, a more natural real-time interaction is made possible through improved contextual modeling.

Goal

- ✓ The primary aim of this research is to perform basic facial expression categorization in a robust way.
- ✓ Our existing solution (www.visual-recognition.nl / www.gladorsad.com) will be enhanced by enabling automatic facial landmarking.
- ✓ Statistical and rule-based algorithms for facial landmarking will be contrasted.
- ✓ Structural information of facial features in 2D/3D will be used for fine-tuning of landmarks and dealing with occlusions.
- ✓ By using facial feature points, facial pose estimation and correction will be enabled for improved facial expression recognition.

Expected Results

- ✓ By using precise facial feature points, we can estimate pose of face and correct it into frontal pose.
- ✓ Active Appearance and Shape Models based face tracking can be fine-tuned with the help of facial landmarks.
- ✓ Color features can provide robustness to facial landmarking and expression recognition.
- ✓ Powerful expression recognition can be achieved by less occlusion dependency (such as eye-glasses).



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