EMOTION RECOGNITION AND EMOJI GENERATION

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CSE 344

Motivation

Emotions play a vital role in how we think & behave. They help determining the mental state of a person.

Problem Statement

Our aim is to detect the emotions from facial images of different people. We would then use the original image and the detected emotion to generate animated emojis.

Use Case Of Problem

Emotion Recognition is used in -

- ❖ Smile Capturing
- ❖ Market Research
- ❖ Digital Advertising

Emojis are used for -

- ❖ Facilitating easier communication

Literature Review

There are many existing Deep Learning approaches for emotion recognition. Further there are various ways of feature extraction and image segmentation used for the same.

Dataset Used

The dataset used can be accessed here.

Project Tasks

- Feature Extraction from facial images
- Emotion Recognition using :
  - Alexnet
  - SVM Classifier
  - Self implemented CNN
- Generate animated emoji from detected emotion
- **Bonus Component**
  - ❖ Generate augmented reality emojis from facial images
  - ❖ Expand classes of emotions by finely labelling data.

Timeline

By first week of March -

- Face Detection
- Emotion Recognition (AlexNet)

By third week of March -

- Animation of facial image
- Self implemented CNN
- SVM Classifier

By first week of April -

- Animations for specific emotions
- Linking & Testing

By second week of April -

- Analysis of results from implemented models
- Report and Bonus