

Facial Expression Recognition using Compact Embeddings

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1 Abstract

Automatic facial expression recognition is a computer vision activity where we classify a photo into discrete expressions or emotions. However expressions do not always classify into a specific class, for example there could be shy smile to laughter. So, we try to classify the image into a range of expressions using embeddings.

Embeddings in Machine Learning: An embedding is a low dimensional capture of high dimensional data. We use embedding techniques like Fourier descriptors to capture face structure and classify them. We plan to capture enough information about the picture to solve the problem at hand.

2 Stages of project:

1. Understanding Problem Statement
2. Defining the problem and scope of problem
3. Collecting data
4. Label and Organise data
5. Pre-Process data

6. Select model
7. Train model
8. Calculate error
9. Take the best model