# Facial Expression Recognition using DL 

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#### Abstract

In In this project, we develop a system to predict emotions from facial expressions images. Human emotion detection is implemented in many areas requiring additional security or information about the person. It can be seen as a second step to face detection where we may be required to set up a second layer of security, where along with the face, the emotion is also detected. This can be useful to verify that the person standing in front of the camera. Human emotions can be classified as: anger, fear, disgust, happy, sad and surprise. We use convolution neural network for classification of emotions.


Keywords: Machine Learning algorithms, Libraries, User Interface, Jupyter Notebook

## REFERENCES

[1]. https://www.w3schools.com/python/numpy/numpy_intro.asp
[2]. https://www.tutorialspoint.com/python-pickling
[3]. https://www.analyticsvidhya.com/blog/2015/01/scikit-learn-python-machine learning-tool/
[4]. https://www.w3schools.com/python/python_ml_logistic_regression.asp
[5]. https://pypi.org/project/opencv-python/
[6]. https://www.simplilearn.com/tutorials/deep-learning-tutorial/what-is-keras
[7]. https://www.w3schools.com/python/matplotlib_pyplot.asp
[8]. https://www.w3schools.blog/python-opencv
[9]. https://machinelearningmastery.com/introduction-python-deep-learning-library-tensorflow/
[10]. https://adam.readthedocs.io/en/latest/api/python/

