

# Detecting Indications for recovery from coma System with OpenCV and Keras

## Abstract:

A coma is a condition in which the patient is unable to interact with the surrounding environment, because he is unconscious and his brain activity is low. However, there are indications of recovery from coma that must be taken into account, including:

- 1- The patient can speak some words, move the eye and open the eye when hearing the noise.
- 2- The patient shows a response to pain, such as opening the eye when feeling pain.

Hence, with this Python project, we will be making a model detection system. helps to detect if patient opening eyes, where the doctors give a warning that the patient has opened his eyes So, to detect this case we will build a system using Python, OpenCV, and Keras which will alert the doctor when patient he opened his eyes.

## Design:

In this project, we aim to build a model that gives an alert when a coma patient begins to open his eye for 20 seconds so that the medical staff can monitor the response that may occur when no one is with him .

## Dataset:

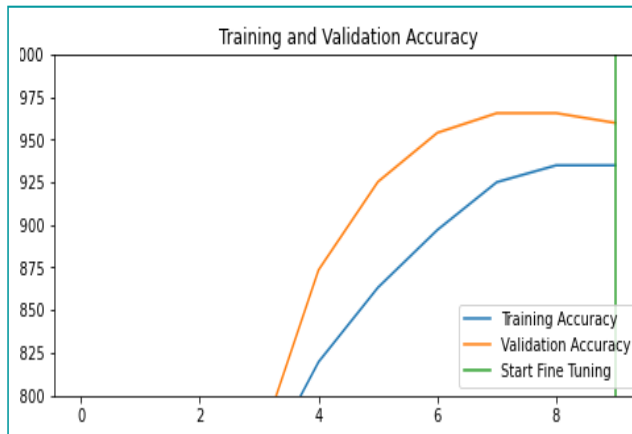
The used dataset in this project from a public source, Kaggle.

## Tools:

Technologies	Libraries
Python program language	OpenCV – (face and eye detection),TensorFlow –(keras uses ,TensorFlow as backend),Keras – (to build our classification model),Pygame – (to play alarm sound
Jupyter Notebook, Microsoft Office	NumPy,seaborn,sklean MatPlotLib , wordcloud

## Communication:

Chart:



Presentation snips:

You can see [here](#)

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