**Lungs Cancer Detection / Classification as Positive or Negative**

**Part1**

**Step1:** Load the data in google drive and mount the drive with google colab.

**Step2:** Use os library to create directory structure

**Step3**: Iterate the data using Keras data generators.

For training data and testing data

**Step4**: Construct a sequential model using CNN2d layers.

**Step5**: Fit the model using training data generator.

**Step6**: Evaluate the model using testing data generator

**Step7**: Get predictions from the model on testing data.

**Step8**: Get the classification report of the model

**Step9**: Get the confusion metrix of the model.

**Step10**: Get the f1 Score of the model.

**Part2**

Repeat **Step4** to onwards using the same model but by Functional API format.

Part3

Use any of the pre-trained model for image classification.

* Do feature Extraction and repeat all steps
* Do fine-tunning of the model and repeat the steps

Compare all the results and show your proposed architecture for good accuracy.

**LSTM using Image Classification:**

https://www.youtube.com/watch?v=CjfjcCytfss

After the model is ready for deployment with good accuracy and precsions

Save the model using pickle.

Import pickle

pickle.dump(model, open(‘model.pkl’, ‘wb’))