Data Collection and Preprocessing Phase

Date	16 March 2024
Team ID	SWTID1720165000
Project Title	CovidVision: Advanced COVID-19 Detection From Lung X-Rays With Deep Learning
Maximum Marks	6 Marks

Preprocessing Template

The images will be preprocessed by resizing, normalizing, augmenting, denoising, adjusting contrast, detecting edges, converting color space, cropping, batch normalizing, and whitening data. These steps will enhance data quality, promote model generalization, and improve convergence during neural network training, ensuring robust and efficient performance across various computer vision tasks.

Section	**Description**
Data Overview	The Data contains lung x-rays images and its masks .The dataset has a total of 40,000 images.
Resizing	224 x 224
Normalization	0-1
Data Augmentation	Shearing, rescale, zooming, horizontal_flip.
Denoising	Nil
Edge Detection	Nil

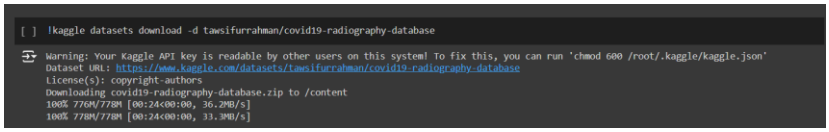
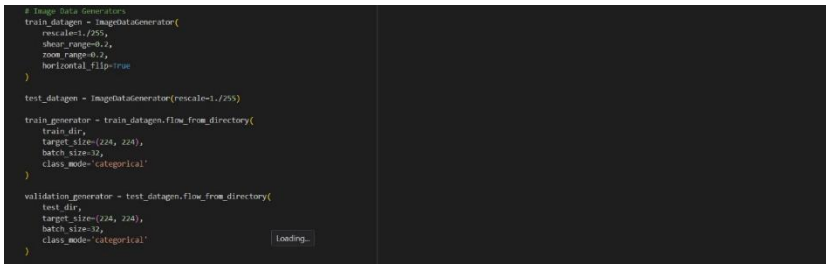
Color Space Conversion	Nil
Image Cropping	224 x 224
Batch Normalization	32
Data Preprocessing Code Screenshots	
Loading Data	
Resizing	
Normalization	Nil
Data Augmentation	Nil
Denoising	Nil
Edge Detection	Nil
Color Space Conversion	Nil

Image Cropping	`train_generator = train_datagen.flow_from_directory(`
	`  train_dir,`
	`  target_size=(224, 224),`
	`  batch_size=32,`
	`  class_mode='categorical'`
	`)`

Batch Normalization	`train_generator = train_datagen.flow_from_directory(`
	`  train_dir,`
	`  target_size=(224, 224),`
	`  batch_size=32,`
	`  class_mode='categorical'`
	`)`