

IMAGE PREPROCESSING

Define The Parameters /Arguments For ImageDataGenerator Class

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Project Name	Emerging Method For Early Detection Of Forest Fires

The Imagedatagenerator Class Has Three Methods,

1. Flow (),
2. Flow_From_Directory ()
3. Flow_From_Dataframe () To Read The Images From A Big Numpy Array And Folders Containing Images.

Flow_From_Directory () Expects At Least One Directory Under The Given Directory Path.

Define The Parameters:

```
train_datagen=ImageDataGenerator(rescale=1./255,shear_range=0.2,rotation_range=180,zoom_range=0.2,horizontal_flip=True)
test_datagen=ImageDataGenerator(rescale=1./255)
```

The screenshot shows a Google Colab notebook with the following content:

- Cell [4]:** `batch_size = 32, class_mode = 'binary'`. The output shows: "Found 436 images belonging to 2 classes." and "Found 121 images belonging to 2 classes."
- Cell [5]:** `test_dataset.class_indices`. The output is: `{'forest': 0, 'with fire': 1}`.
- Section: Define the Parameters**
- Cell [21]:** `train_datagen=ImageDataGenerator(rescale=1./255,shear_range=0.2,rotation_range=180,zoom_range=0.2,horizontal_flip=True)` and `test_datagen=ImageDataGenerator(rescale=1./255)`.
- Section: Model Building**
- Cell [6]:** `model = keras.Sequential()`, `model.add(keras.layers.Conv2D(32,(3,3),activation='relu',input_shape=(150,150,3)))`, `model.add(keras.layers.MaxPool2D(2,2))`, `model.add(keras.layers.Conv2D(64,(3,3),activation='relu'))`, `model.add(keras.layers.MaxPool2D(2,2))`, `model.add(keras.layers.Conv2D(128,(3,3),activation='relu'))`, and `model.add(keras.layers.MaxPool2D(2,2))`.

The notebook interface includes a file explorer on the left, a top bar with "Creating_Models.ipynb", and a bottom status bar indicating "0s completed at 00:46".