

EMERGING METHODS FOR EARLY DETECTION OF FOREST FIRES

MODEL BUILDING PREDICTIONS

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Project Name	Emerging Methods for Early Detection of Forest Fires

The last and final step is to make use of our saved model to do predictions. For that we have a class in keras called load_model. Load_model is used to load our saved model h5 file (alert.h5).

Predictions

```
#import load_model from keras.model from  
keras.models import load_model  
#import image class from keras  
from tensorflow.keras.preprocessing import image #import numpy  
import numpy as np  
#import cv2 import  
cv2  
  
#load the saved model model = load_model("forest1.h5")  
img=image.load_img(r'/content/drive/MyDrive/Dataset/test_set/forest/
```

```
0.48007200_1530881924_final_forest.jpg')
```

```
x=image.img_to_array(img)
```

```
res = cv2.resize(x, dsize=(128, 128), interpolation=cv2.INTER_CUBIC)
```

```
#expand the image shape
```

```
x=np.expand_dims(res,axis=0) pred=
```

```
model.predict(x)
```

```
1/1 [=====] - 0s 149ms/step pred
```

```
array([[0.5]], dtype=float32)
```

- A prediction is a guess about what might happen in the future, based on observations that you make.
- Predicting is closely related to other process skills such as observing, inferring, and classifying.
- Prediction of forest fire id expected to reduce the impact of forest fire in the future.
- Many fire detection algorithms are available with different approach towards the detection of fire.
- In the existing work processes the fire affected region is predicted based on the satellite images.