

# EMERGING METHODS FOR EARLY DETECTION OF FOREST FIRES

## MODEL BUILDING

### PREDICTIONS

<b>Date</b>	04 November 2022
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<b>Project Name</b>	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 is expected to reduce the impact of forest fire in the future.
- Many fire detection algorithms are available with different approaches towards the detection of fire.
- In the existing work processes the fire affected region is predicted based on the satellite images.