

Model Creation

```
model.fit(train_generator,steps_per_epoch=14,  
          epochs=10,validation_data=val_generator  
          ,validation_steps=4)  
model.save("forestfire.h5")
```

Video Analysis:

```
from keras.models import load_model  
from keras.preprocessing import image  
import numpy as np  
import cv2  
from PIL import Image, ImageOps  
model=load_model("forest1.h5")  
data=np.ndarray(shape=(1,150,150,3),dtype=np.float32)  
class_name=['Fire','No_Fire']  
img=image.load_img('train_set/forest/NoFire (1).bmp',target_size=(64,64))  
img_array = image.img_to_array(img)  
img_batch = np.expand_dims(img_array, axis=0)  
# x=np.expand_dims(x,axis=0)  
pred=model.predict(img_batch)  
index=np.argmax(pred)  
class_name[index]
```

Output:

```
loss: 0.3438 - accuracy: 0.8483 - val_loss: 0.2485 - val_accuracy: 0.958
```

```
loss: 0.3816 - accuracy: 0.8483 - val_loss: 0.2569 - val_accuracy: 0.958
```

```
loss: 0.4068 - accuracy: 0.8391 - val_loss: 0.2547 - val_accuracy: 0.958
```

```
loss: 0.3312 - accuracy: 0.8437 - val_loss: 0.2601 - val_accuracy: 0.950
```

```
loss: 0.5621 - accuracy: 0.8368 - val_loss: 0.2679 - val_accuracy: 0.958
```

'Fire'
