

TEST THE MODEL :

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Team ID	PNT2022TMID41375
Project Name	AI-POWERED NUTRITION ANALYZER FOR FITNESS ENTHUSISASTS

- Evaluation is a process during the development of the model to check whether the model is the best fit for the given problem and corresponding data. Load the saved model using load_model .

Predicting our results

```
from tensorflow.keras.models import load_model
from keras.preprocessing import image
model = load_model("nutrition.h5") #Loading the model for testing
```

- Taking an image as input and checking the results

```
img = image.load_img(r"C:\Users\DELL\Desktop\Desk Files\Nutrition Analysis Using Image Classification\
Sample_Images\Test_Image5.jpg",
                    grayscale=False,target_size= (64,64))#Loading of the image
x = image.img_to_array(img)#image to array
x = np.expand_dims(x,axis = 0)#changing the shape
pred = model.predict_classes(x)#predicting the classes
pred
```

- By using the model we are predicting the output for the given input image

```
index=['APPLES', 'BANANA', 'ORANGE', 'PINEAPPLE', 'WATERMELON']  
result=str(index[pred[0]])  
result  
  
'PINEAPPLE'
```

The predicted class index name will be printed here.

- Analyses were based on 378 component foods of a food frequency instrument. The models tested were the French nutrient adequacy models NAS23 and NAS16 and nutrient density models NDS23 and NDS16; and a family of nutrient-rich models (NR(n), where n=5-7; 10-12, and 15). Also tested were LIM scores and a modified British Food Standards Agency model WXYfm. Profiles were calculated based on 100 g, 100 kcal and on Reference Amounts Customarily Consumed. Food rankings generated by different models were correlated with each other and with the foods' energy density and energy cost.
- **Results:** Nutrient profile models based on protein, fiber, vitamins and minerals showed an inverse correlation with energy density that diminished as more micronutrients were introduced into the model. Models based on fat, sugar and sodium were highly correlated with energy density. Foods classified as healthier were generally associated with higher energy costs.