```
import os  import
   random  import
   string  from
   pathlib import
   Path  import
   numpy as np
   from
   tensorflow.keras
   .models import
   load_model  from
   PIL import
   Image, ImageOps
   def
   random_name_gene
   rator(n):
         return
   ''.join(random.choices(string.a
   scii_uppercase + string.digits,
   k=n))  def recognize(image):

     model=load_model(P
   ath("./model/model.h
   5"))       img =
   Image.open(image).co
   nvert("L")
     img_name =
```

```
random_name_generato
r(10) + '.jpg'

      if not os.path.exists(f"./static/data/"):

  os.mkdir(os.path.join(
'./static/', 'data'))
  img.save(Path(f"./stat
ic/data/{img_name}"))
  img =
ImageOps.grayscale(img)
  img =
ImageOps.invert(img)
  img = img.resize((28,
28))       img2arr =
np.array(img)
  img2arr = img2arr /
255.0      img2arr =
img2arr.reshape(1, 28,
28, 1)
     results     =
model.predict(img
2arr)      best  =
np.argmax(results
,axis = 1)[0]

      pred = list(map(lambda x: round(x*100, 2),
results[0]))
```

```
  values = [0, 1, 2, 3, 4, 5, 6, 7, 8, 9]    others = list(zip(values, pred))     best = others.pop(best)
return        best, others, img_name
```