```
import tensorflow as tf

from tensorflow import keras import numpy as np

fashion mnist-keras.datasets.fashion mnist

(train_images, train_labels), (test images, test labels)-fashion_mnist. load_data() train_

test images test_images/255.0

train images[0].shape

(28, 28).

train_images train_images.reshape(len(train_images),28,28,1) test images test images.resha

def build model (hp):

model keras.Sequential([

keras.layers.Conv2D(

filters-hp. Int('conv_1_filter, min value-32, max_value-128, step-16), kernel_size=hp.Ch

activation='relu',

input shapes (28,28,1)

), keras.layers.Conv2D(

filters-hp.Int(conv_2_filter, min value-32, max value-64, step-16),

kernel_size=hp.Choice( conv_2 kernel, values = [3,5]),

activation='relu'

keras.layers.Flatten(),

keras.layers.Dense(

units-hp. Int('dense 1 units, min_value-32, max value-128, step-16),

activation='relu' () keras.layers.Dense(10, activation='softmax) foutput layer

model.compile(optimizer-keras.optimizers.Adam(hp.Choice('learning rate, values-[le-2,

loss sparse categorical_crossentropy metrics=['accuracy'])

return model

from kerastuner import Random Search

from kerastuner.engine.hyperparameters import
tuner_search-RandomSearch(build model,

File
```

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+ Code
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HyperParameters

objective val_accuracy,

max_trials-5, directory output project_name"Mnist Fashion")

INFO: tensorflow: Reloading Oracle from existing project output/Mnist Fashion/oracle.jse t

INFO: tensorflow:Oracle triggered exit

model-tuner search.get best models (num_models=1)[0] model.summary()