```
import numpy as np
import tensorflow as tf
from tensorflow.keras.models import Sequential
from tensorflow.keras.layers import Dense, Conv2D, Flatten
```

```
height, width, channels = 100, 100, 3
```

```
num_samples = 1000
X_train = np.random.random((num_samples, height, width, channels))
y_train = np.random.random((num_samples, 1))
```



```
model = Sequential([
    Conv2D(24, (5, 5), strides=(2, 2), activation='relu', input_shape=(height, width, channel
    Conv2D(36, (5, 5), strides=(2, 2), activation='relu'),
    Conv2D(48, (5, 5), strides=(2, 2), activation='relu'),
    Flatten(),
    Dense(100, activation='relu'),
    Dense(50, activation='relu'),
    Dense(10, activation='relu'),
    Dense(1)
])
```

```
model.compile(optimizer='adam', loss='mse')
```

```
model.fit(X_train, y_train, epochs=10, validation_split=0.2)

model.save('self_driving_model.h5')
```

```
Epoch 1/10
25/25 [==============================] - 4s 131ms/step - loss: 0.1466 - val_loss: 0.0906
Epoch 2/10
```

```
25/25 [==============================] - 3s 122ms/step - loss: 0.0860 - val_loss: 0.0849
Epoch 3/10
25/25 [==============================] - 3s 136ms/step - loss: 0.0848 - val_loss: 0.0953
Epoch 4/10
25/25 [==============================] - 4s 166ms/step - loss: 0.0850 - val_loss: 0.0919
Epoch 5/10
25/25 [==============================] - 3s 120ms/step - loss: 0.0893 - val_loss: 0.1095
Epoch 6/10
25/25 [==============================] - 3s 121ms/step - loss: 0.0845 - val_loss: 0.0896
Epoch 7/10
25/25 [==============================] - 3s 133ms/step - loss: 0.0807 - val_loss: 0.0864
Epoch 8/10
25/25 [==============================] - 4s 173ms/step - loss: 0.0780 - val_loss: 0.0881
Epoch 9/10
25/25 [==============================] - 3s 120ms/step - loss: 0.0745 - val_loss: 0.0866
Epoch 10/10
25/25 [==============================] - 3s 121ms/step - loss: 0.0701 - val_loss: 0.0889
```

Double-click (or enter) to edit