Model 1#

```
 Train the model with the new callback
model.fit(train_images,
          train_labels,
          epochs=10,
          validation_data=(test_images, test_labels),
          callbacks=[cp_callback])  # Pass callback to training

# This may generate warnings related to saving the state of the optimizer.
# These warnings (and similar warnings throughout this notebook)
# are in place to discourage outdated usage, and can be ignored.
```

```
Epoch 1/10
22/32 [===================>.....] - ETA: 0s - loss: 1.3705 - sparse_categorical_accuracy: 0.5980
Epoch 1: saving model to training_1/cp.ckpt
32/32 [==============================] - 1s 11ms/step - loss: 1.1842 -
sparse_categorical_accuracy: 0.6610 - val_loss: 0.7596 - val_sparse_categorical_accuracy: 0.7640
Epoch 2/10
23/32 [====================>.....] - ETA: 0s - loss: 0.4627 - sparse_categorical_accuracy: 0.8573
Epoch 2: saving model to training_1/cp.ckpt
32/32 [==============================] - 0s 6ms/step - loss: 0.4399 -
sparse_categorical_accuracy: 0.8630 - val_loss: 0.5400 - val_sparse_categorical_accuracy: 0.8370
Epoch 3/10
23/32 [====================>.....] - ETA: 0s - loss: 0.2854 - sparse_categorical_accuracy: 0.9266
Epoch 3: saving model to training_1/cp.ckpt
32/32 [==============================] - 0s 5ms/step - loss: 0.2921 -
sparse_categorical_accuracy: 0.9250 - val_loss: 0.4533 - val_sparse_categorical_accuracy: 0.8550
Epoch 4/10
23/32 [====================>.....] - ETA: 0s - loss: 0.2148 -
```

Model 2

```
# Train the model with the new callback
model.fit(train_images,
          train_labels,
          epochs=50,
          batch_size=batch_size,
          callbacks=[cp_callback],
          validation_data=(test_images, test_labels),
          verbose=0)
```

```
Epoch 5: saving model to training_2/cp-0005.ckpt
```

```
Epoch 10: saving model to training_2/cp-0010.ckpt

Epoch 15: saving model to training_2/cp-0015.ckpt

Epoch 20: saving model to training_2/cp-0020.ckpt

Epoch 25: saving model to training_2/cp-0025.ckpt

Epoch 30: saving model to training_2/cp-0030.ckpt

Epoch 35: saving model to training_2/cp-0035.ckpt
```