Congratulations! You passed!
TO PASS 80% or higher

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Practice Quiz: Test your Project Understanding

LATEST SUBMISSION GRADE
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1. **What does the following code return?** — 1 / 1 point

```
df.isnull()
```

- (•) Boolean values
- ( ) Int values
- ( ) Float values
- ( ) String values

Correct
Great job! It returns True or False (i.e.: boolean values).

2. **What does the following code do?** — 1 / 1 point

```
df.dropna()
```

- (•) Removes the row containing null values
- ( ) Removes the column containing null values

Correct
Great job! This command remove the entire row, if it contains null values.

3. **While training your CNN model, you found that the training accuracy is 98% and the validation accuracy is 80%. What could be the reason for this?** — 1 / 1 point

- ( ) Model generalized well because of underfitting
- ( ) Model generalized well because of overfitting
- ( ) Model generalized poorly because of underfitting
- (•) Model generalized poorly because of overfitting

Correct
Great job! Since the training accuracy is very high and the validation score is low, it means that the model has overfitted the training data and it did not generalize well.

4. **Which of the following code will flip the image vertically?** — 1 / 1 point

( )

```
np.flip(image, axis = 2)
```

( )

```
np.flip(image, axis = 1)
```

```
np.flip(image, axis = 0)
```

```
np.flip(image, axis = 3)
```

Correct

Great job! In-order to flip the image vertically, we have to flip along x-axis. In this code, axis = 0 represents x-axis

5. **If your image is of shape (96,96). What does the following code return ?** 1 / 1 point

```
np.expand_dims(image, axis = 1)
```

- (1,96,96)
- (96,1,96)
- (96,96,1)

Correct

Great job! Since 'axis = 1', it would insert a new axis along the mentioned axis position.

6. **Why Convolutional Neural Networks are preferred for computer vision applications?** 1 / 1 point

- CNNs has a built-in generalization capability
- CNNs are able to update their weights much better compared to other networks
- CNNs are able to remember the relationship between various input images
- CNNs are able to extract high level features

Correct

Excellent job! the main advantage of CNNs is that they are able to automatically extract high level features from images.

7. **Does this code shuffle and split the data?** 1 / 1 point

```
X_train, X_test, y_train, y_test = train_test_split(X,y, test_size = 0.1)
```

- Yes
- No, it does not.

Correct

Great job! By default, train_test_split shuffles the data while splitting.

8. **What happens when you remove MaxPool2D layer from the res_block function?** 1 / 1 point

- [x] Training time increases.

✓ **Correct**

Great job! When you remove maxpooling layers, you increase the number of features that are passed to the next layers, which in-turn increases the training time.

- [x] Total number of trainable parameter increases.

✓ **Correct**

Great job! When you remove maxpooling layers, you increase the number of features that are passed to the next layers, which in-turn increases the number of trainable parameters.

- [ ] Training time decreases.
- [ ] Total number of trainable parameters decreases.

9. **After training the model, you note that the model is over-fitting. What changes can be made to the model architecture to avoid over-fitting** — 1 / 1 point

- ( ) Use more dataset
- ( ) Use early stopping
- ( ) Add an additional dense layer
- (•) Add dropout

✓ **Correct**

Excellent job! Since the question is about making changes to the network architecture to improve the model generalization, adding dropout layer is the correct option. Dropout layer switches off random neurons while training, therefore enabling the model to generalize well.