

✓ **Congratulations! You passed!**
TO PASS 80% or higher

Keep Learning

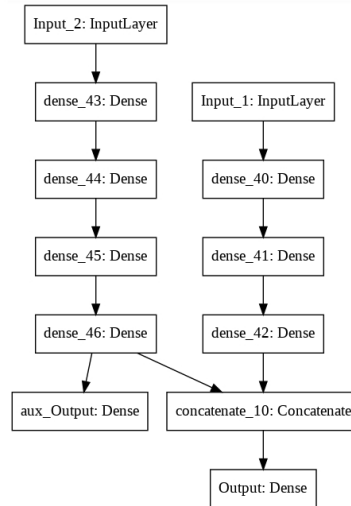
GRADE
100%

Custom Models

LATEST SUBMISSION GRADE
100%

1. Following is an example of a deep and wide network structure.

1 / 1 point



- ☒ False
☐ True

✓ **Correct**

Correct! This model structure does not have an input path that go through a shallow, or a wide layer.

2. Consider the following code and check all that are true:

1 / 1 point

```

class MyModel(Model):
    def __init__(self, units=30, activation='relu', **kwargs):
        super().__init__(**kwargs)
        self.hidden1 = Dense(units, activation=activation)
        self.hidden2 = Dense(units, activation=activation)
        self.main_output = Dense(1)
        self.aux_output = Dense(1)

    def call(self, inputs):
        input_A, input_B = inputs
        hidden1 = self.hidden1(input_B)
        hidden2 = self.hidden2(hidden1)
        concat = concatenate([input_A, hidden2])
        main_output = self.main_output(concat)
        aux_output = self.aux_output(hidden2)
        return main_output, aux_output
  
```

- ☐ The `concat` should be defined within the `__init__` function instead of the `call` function as it is also a hidden layer.
- ☐ The code is incomplete in the sense that you can only initialize and construct your model, you cannot perform training or inference.
- ☒ The `__init__` function initializes the `MyModel` Class objects, as well as the attributes that are inherited from the `Model` Class.

✓ **Correct**

Correct!

- ☒ The output layers cannot give more than 1 result each.

✓ **Correct**

Correct! They each hold only 1 unit.

3. You have learned that Sequential and Functional APIs have their limitations.

1 / 1 point

How can you build dynamic networks where the architecture changes on the fly, or networks where recursion is used? Check all that are true:

- ☒ Using model subclassing

✓ **Correct**

Correct! With model subclassing it is relatively easier to build these complex networks.

- ☒ Using Functional API

✓ **Correct**

Correct! With Functional APIs it is possible to build these networks, but it would require a lot of coding.

- ☐ Using Sequential API

4. Which one of the following is a false statement regarding model subclassing?

1 / 1 point

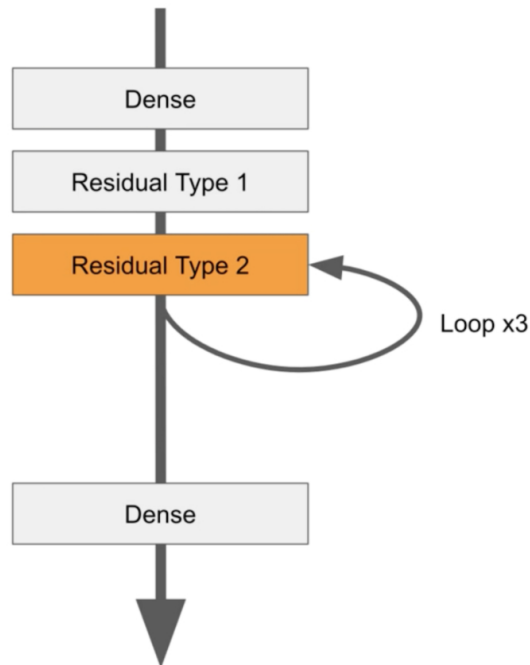
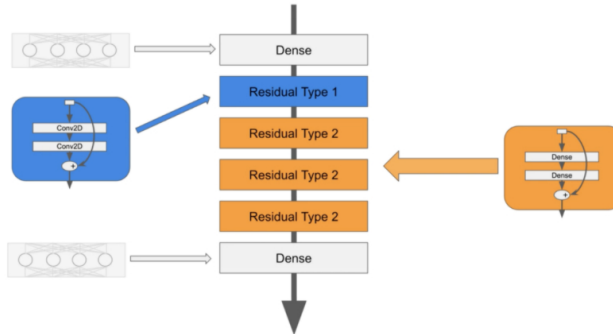
- ☐ You can have modular architectures
- ☐ Instead of tweaking the entire architecture, you can have different modules and make changes in them as required, as opposed to entirely rewriting the structure.
- ☒ You cannot introduce a branch structure in the architecture when doing model subclassing.
- ☐ You can make use of Functional and Sequential APIs when writing code for model subclassing.

✓ Correct

Correct! You can have branches within your network

5. Consider the following two images:

1 / 1 point



Check all that are true:

- ☒ Each Residual block has two hidden layers and one add layer in it.

✓ Correct

Correct!

- ☒ You make a loop of *Residual Type 2* blocks because you want to reduce the depth of the network (making it less complex of an architecture)

✓ Correct

Correct!

- ☐ You loop *Residual Type 2* (*Dense* layers) because you cannot make a loop of *Conv2D* layers (*Residual Type 1*)

- ☒ When you make a loop of *Residual Type 2* blocks, each block could have the same weights.

✓ Correct

Correct!