Far Transfer from Facial Recognition to Dog v Cat

The image scaled poorly, but the blue line is with transfer, and the red line is without transfer. This is using the dataset of dogs v cats.

**With transfer**: loss: 1.4417 - accuracy: 0.6181
**Without transfer**: loss: 1.5752 - accuracy: 0.5176

We trained our model using facial recognition for emotions, specifically for happy, neutral, and surprised. Here are some example images for those emotions.
**Happy**



**Neutral**



**Surprised**



For the above graph, we tested using images of dogs and cats:
**Dog**



**Cat**

**With transfer:**

| Layer (type) | Output Shape | Param # |
|---|---|---|
| model (Functional) | (None, 128) | 1994176 |
| flatten (Flatten) | (None, 128) | 0 |
| dense (Dense) | (None, 256) | 33024 |
| dense_1 (Dense) | (None, 2) | 514 |

Total params: 2,027,714
Trainable params: 33,538
Non-trainable params: 1,994,176

**Without Transfer:**

| Layer (type) | Output Shape | Param # |
|---|---|---|
| rescaling (Rescaling) | (None, 150, 150, 3) | 0 |
| flatten_1 (Flatten) | (None, 67500) | 0 |
| dense_2 (Dense) | (None, 256) | 17280256 |
| dense_3 (Dense) | (None, 2) | 514 |

Total params: 17,280,770
Trainable params: 17,280,770
Non-trainable params: 0