For the two autoencoders created the dense autoencoder had far more parameters. The output of both models was quite similar (images attached below). For example, the 4th sample was a ‘3’ and both models incorrectly put a curl at the bottom of the 3. However, the convolutional autoencoder’s output tended to be blurrier than the dense autoencoder, which may be a result of having fewer parameters.

Dense autoencoder parameters:

Encoder – 233,856

Decoder – 234,512

Full Model – 468,368

Output from the dense autoencoder (row 1/3 original, row 2/4 prediction)

A picture containing shape

Description automatically generated

Convolutional autoencoder parameters:

Encoder – 1,320

Decoder – 1,241

Full Model – 2,561

Output from the convolutional autoencoder (row 1/3 original, row 2/4 prediction)

Shape

Description automatically generated with low confidence