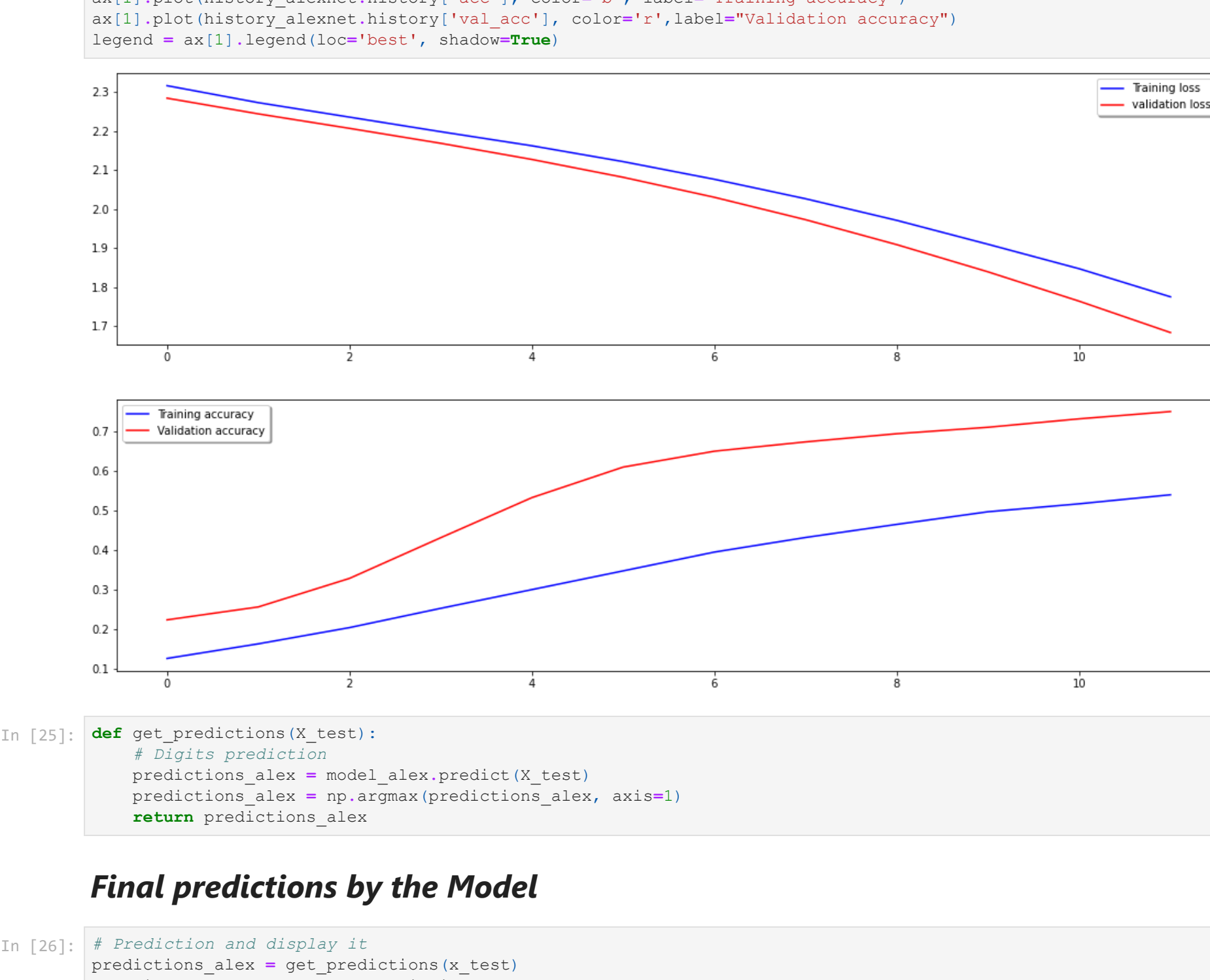


AlexNet (2012). It won the ImageNet computer vision.

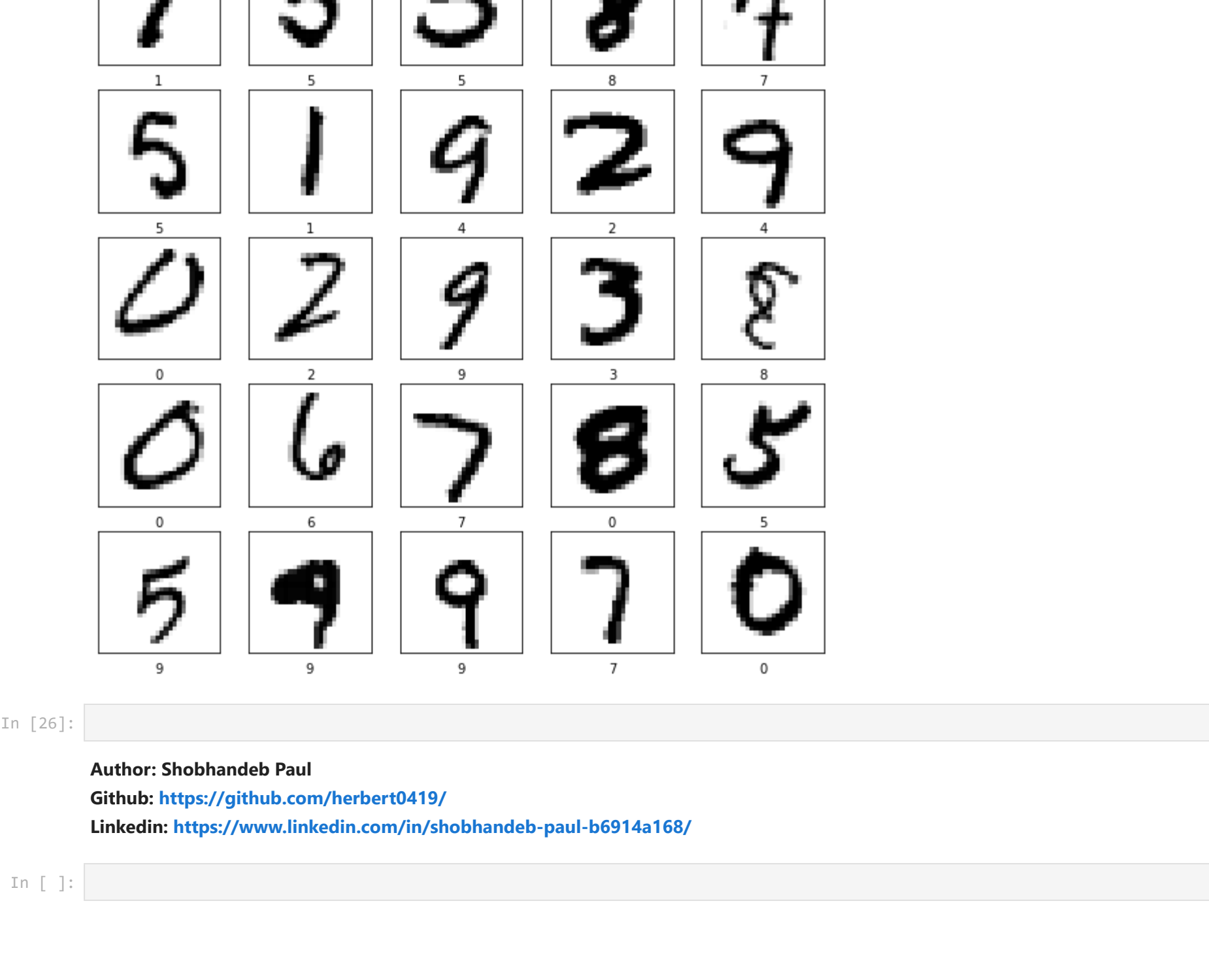
Train on 60000 samples, validate on 10000 samples

Epoch 0/12	60000/60000	=====	-	3s	46us/sample	-	loss: 2.3166	-	acc: 0.1258	-	val_loss: 2.2846	-	val_acc: 0.2235
Epoch 1/12	60000/60000	=====	-	2s	36us/sample	-	loss: 2.2731	-	acc: 0.1628	-	val_loss: 2.2443	-	val_acc: 0.2562
Epoch 2/12	60000/60000	=====	-	2s	38us/sample	-	loss: 2.2360	-	acc: 0.2039	-	val_loss: 2.2072	-	val_acc: 0.3285
Epoch 3/12	60000/60000	=====	-	3s	53us/sample	-	loss: 2.1986	-	acc: 0.2527	-	val_loss: 2.1689	-	val_acc: 0.4315
Epoch 4/12	60000/60000	=====	-	2s	41us/sample	-	loss: 2.1625	-	acc: 0.3001	-	val_loss: 2.1275	-	val_acc: 0.5330
Epoch 5/12	60000/60000	=====	-	3s	55us/sample	-	loss: 2.1219	-	acc: 0.3475	-	val_loss: 2.0818	-	val_acc: 0.6103
Epoch 6/12	60000/60000	=====	-	4s	60us/sample	-	loss: 2.0767	-	acc: 0.3951	-	val_loss: 2.0305	-	val_acc: 0.6505
Epoch 7/12	60000/60000	=====	-	5s	90us/sample	-	loss: 2.0268	-	acc: 0.4321	-	val_loss: 1.9731	-	val_acc: 0.6741
Epoch 8/12	60000/60000	=====	-	4s	73us/sample	-	loss: 1.9714	-	acc: 0.4653	-	val_loss: 1.9091	-	val_acc: 0.6948
Epoch 9/12	60000/60000	=====	-	5s	81us/sample	-	loss: 1.9101	-	acc: 0.4972	-	val_loss: 1.8394	-	val_acc: 0.7111
Epoch 10/12	60000/60000	=====	-	5s	86us/sample	-	loss: 1.8474	-	acc: 0.5173	-	val_loss: 1.7642	-	val_acc: 0.7325
Epoch 11/12	60000/60000	=====	-	4s	73us/sample	-	loss: 1.7755	-	acc: 0.5402	-	val_loss: 1.6838	-	val_acc: 0.7509

Model Loss



Model Accuracy



```
In [25]: def get_predictions(X_test):
# Digits prediction
predictions_alex = model_alex.predict(X_test)
predictions_alex = np.argmax(predictions_alex, axis=-1)
return predictions_alex
```

Final predictions by the Model

```
In [26]: # Prediction and display it
predictions_alex = get_predictions(x_test)
plot_images_sample(x_test, predictions_alex)
```

/usr/local/lib/python3.8/dist-packages/keras/engine/training_v1.py:2357: UserWarning: 'Model.state_updates' will be removed in a future version. This property should not be used in TensorFlow 2.0, as 'updates' are applied automatically.
updates=self.state_updates,



Author: Shobhandeb Paul
Github: <https://github.com/herbert0419/>
Linkedin: <https://www.linkedin.com/in/shobhandeb-paul-b6914a168/>

In [] :