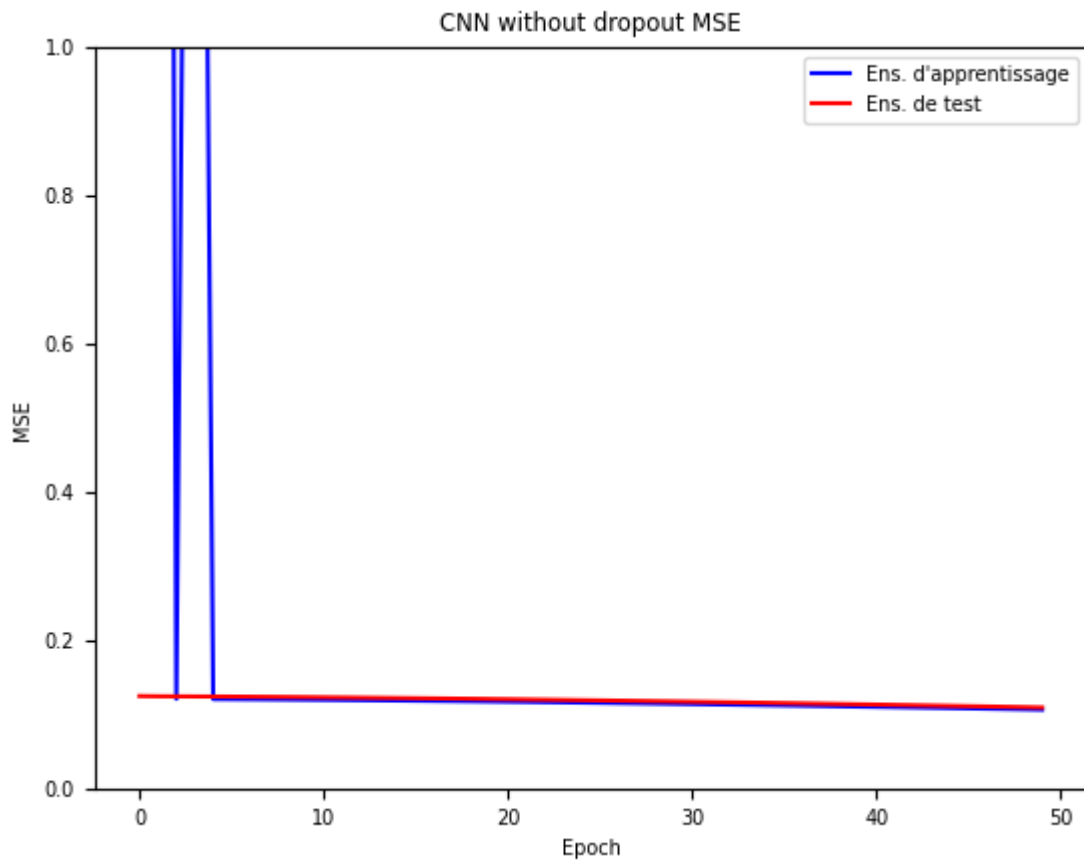
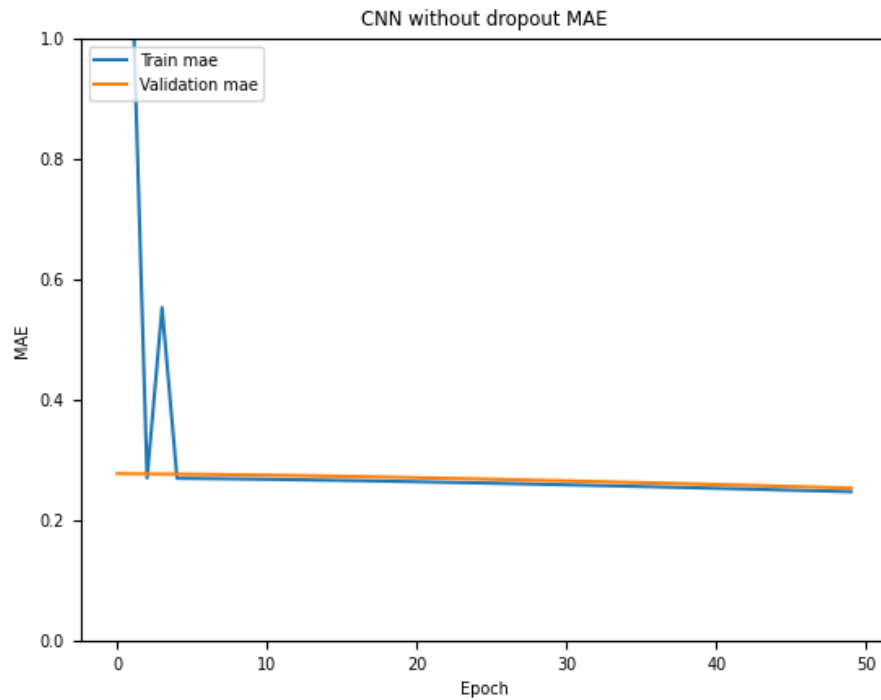


cnn without dropout

Layer (type)	Output Shape	Param #
conv2d (Conv2D)	(None, 222, 222, 16)	448
max_pooling2d (MaxPooling2D)	(None, 111, 111, 16)	0
conv2d_1 (Conv2D)	(None, 109, 109, 32)	4640
max_pooling2d_1 (MaxPooling2D)	(None, 54, 54, 32)	0
flatten (Flatten)	(None, 93312)	0
dense (Dense)	(None, 512)	47776256
dense_1 (Dense)	(None, 200)	102600
Total params: 47,883,944		
Trainable params: 47,883,944		
Non-trainable params: 0		

loss: 0.1060 - mae: 0.2470 - val_loss: 0.1089 - val_mae: 0.2530

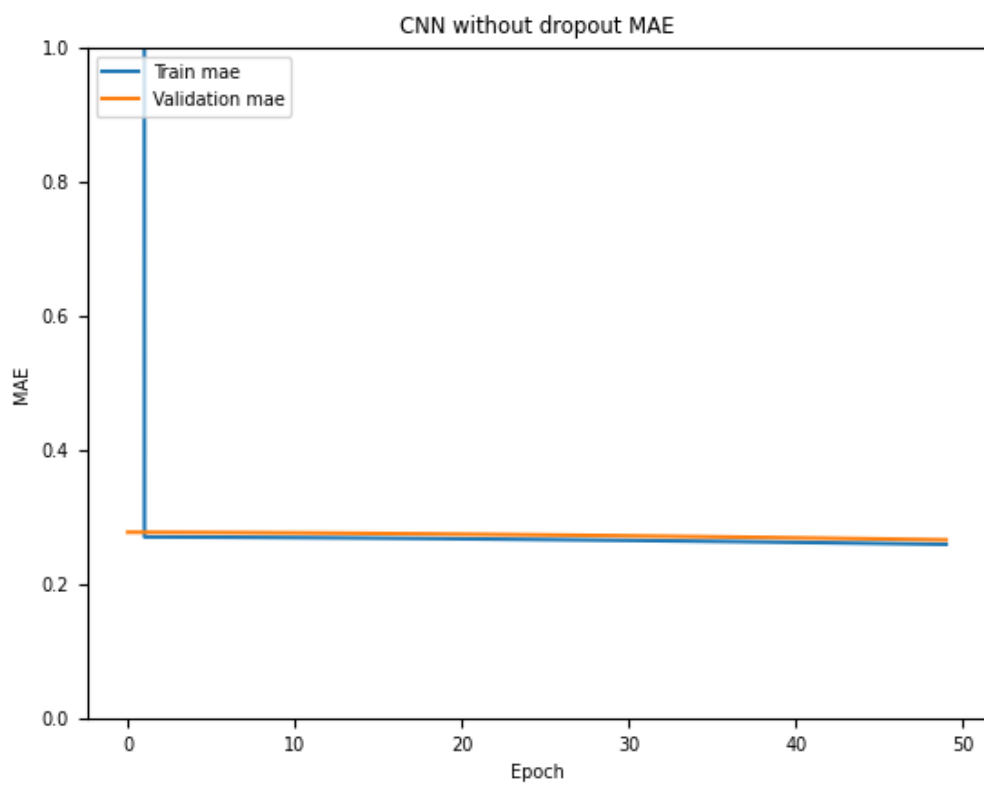
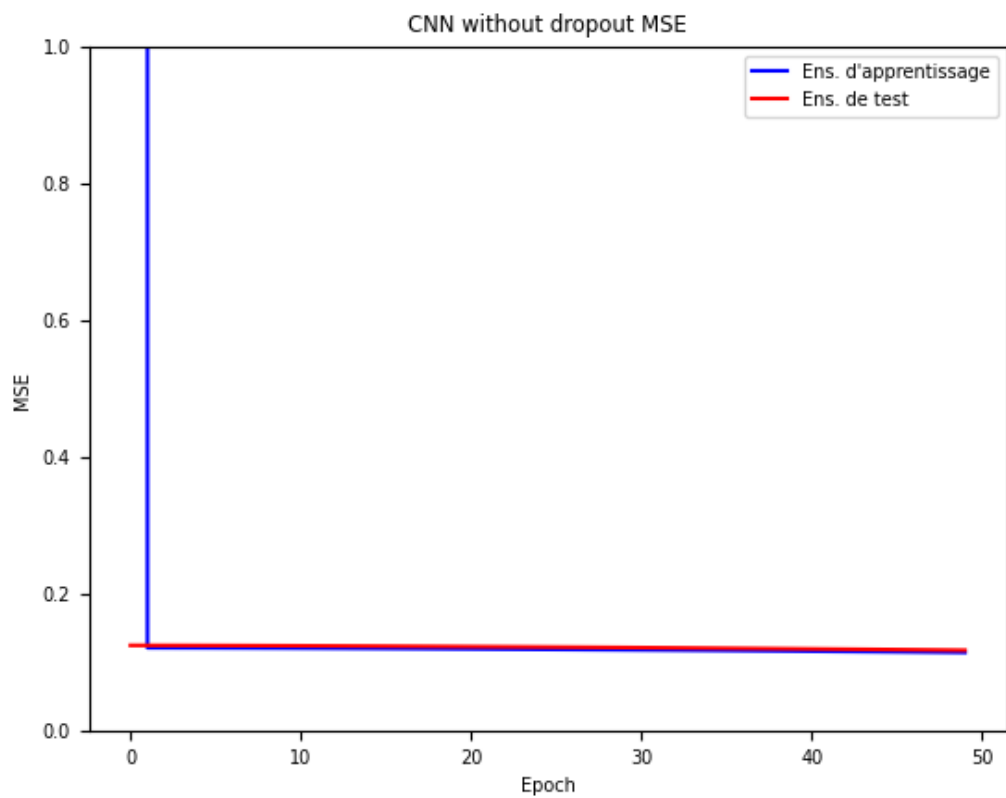




CNN with dropout

Layer (type)	Output Shape	Param #
conv2d_2 (Conv2D)	(None, 222, 222, 16)	448
max_pooling2d_2 (MaxPooling 2D)	(None, 111, 111, 16)	0
dropout (Dropout)	(None, 111, 111, 16)	0
conv2d_3 (Conv2D)	(None, 109, 109, 32)	4640
max_pooling2d_3 (MaxPooling 2D)	(None, 54, 54, 32)	0
dropout_1 (Dropout)	(None, 54, 54, 32)	0
flatten_1 (Flatten)	(None, 93312)	0
dense_2 (Dense)	(None, 512)	47776256
dense_3 (Dense)	(None, 200)	102600
=====		
Total params: 47,883,944		
Trainable params: 47,883,944		
Non-trainable params: 0		

loss: 0.1139 - mae: 0.2591 - val_loss: 0.1171 - val_mae: 0.2658

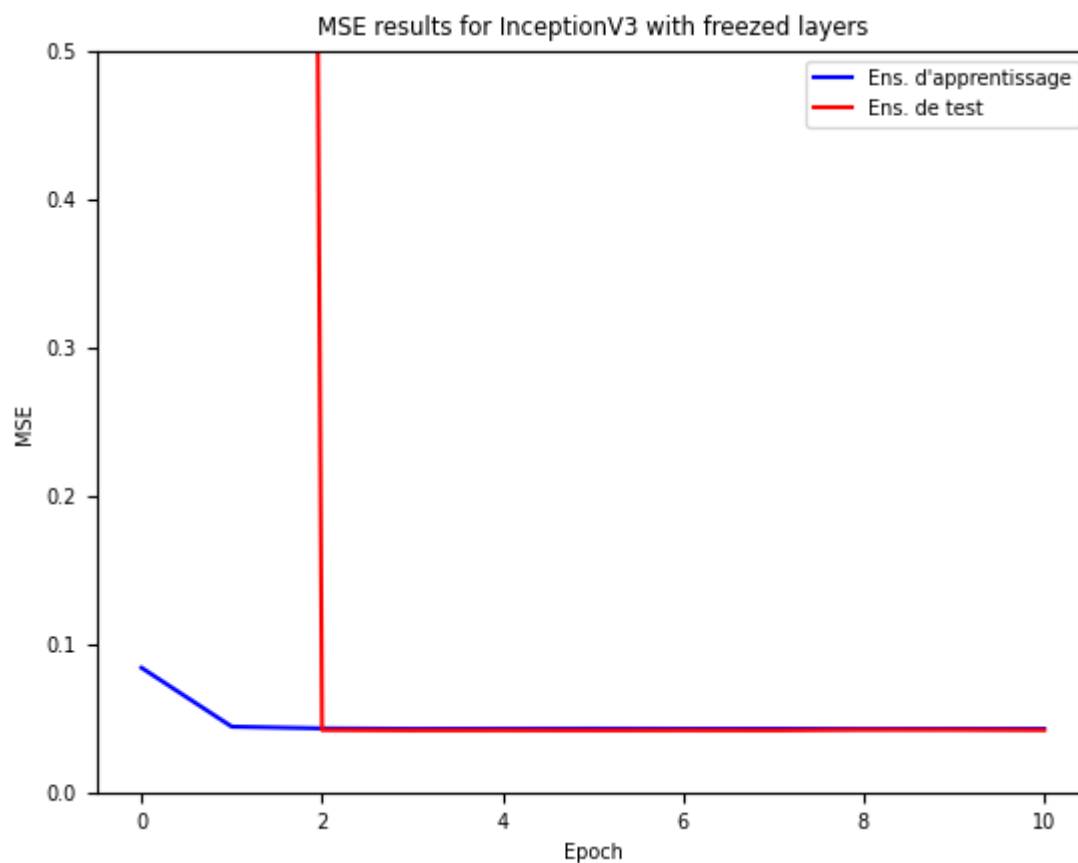


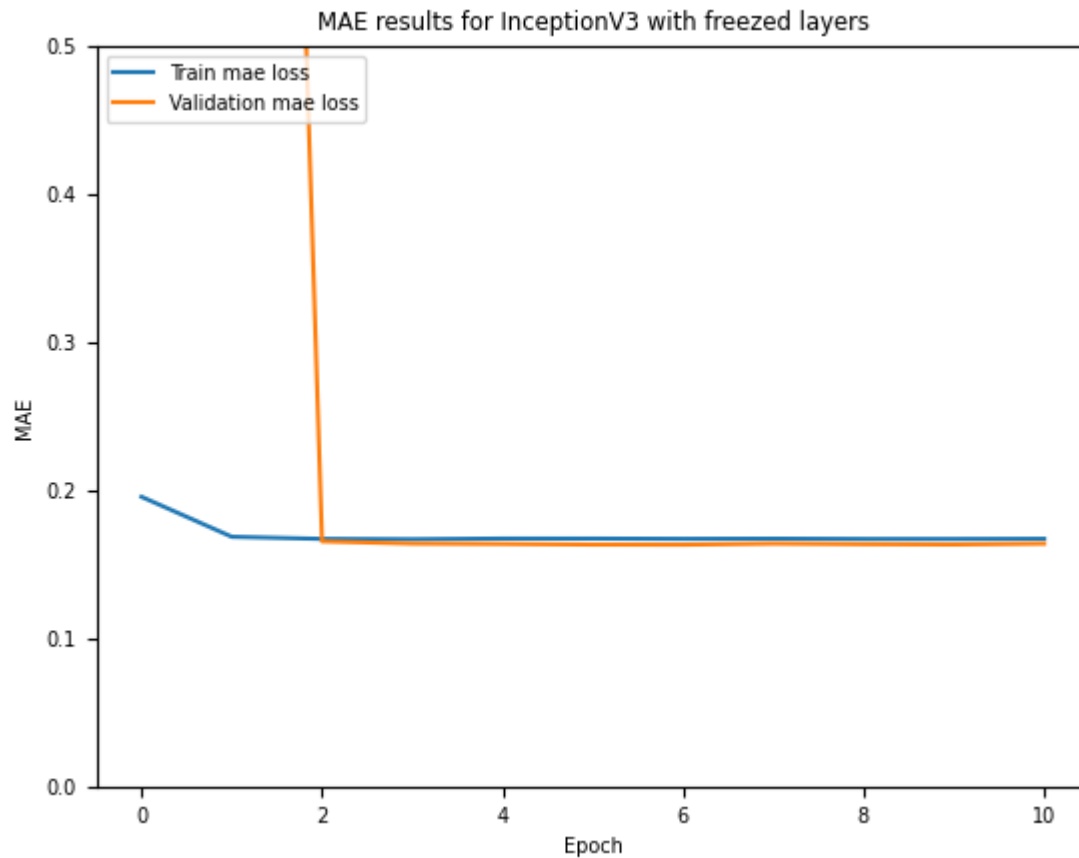
5

InceptionV3 with freezed layers

Layer (type)	Output Shape	Param #
inception_v3 (Functional)	(None, 5, 5, 2048)	21802784
global_average_pooling2d (GlobalAveragePooling2D)	(None, 2048)	0
dense_4 (Dense)	(None, 200)	409800
dense_5 (Dense)	(None, 200)	40200
Total params: 22,252,784		
Trainable params: 20,076,368		
Non-trainable params: 2,176,416		

loss: 0.0428 - mae: 0.1672 - val_loss: 0.0419 - val_mae: 0.1640

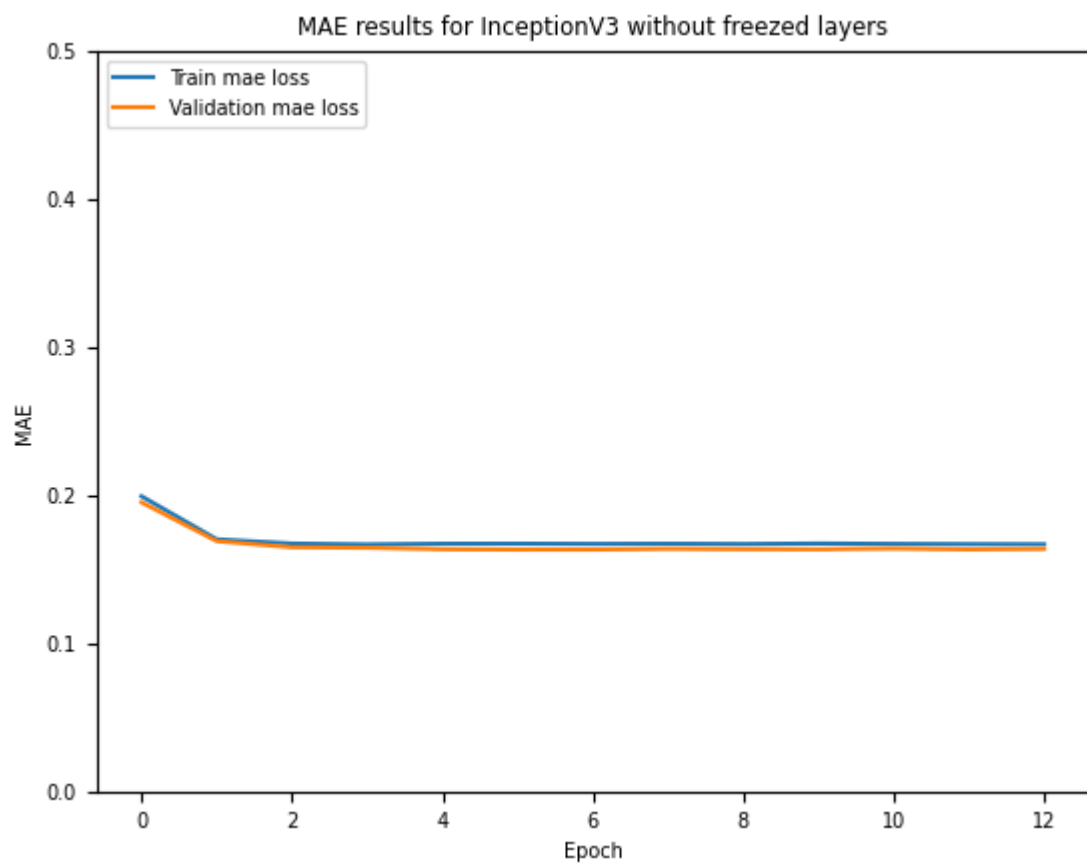
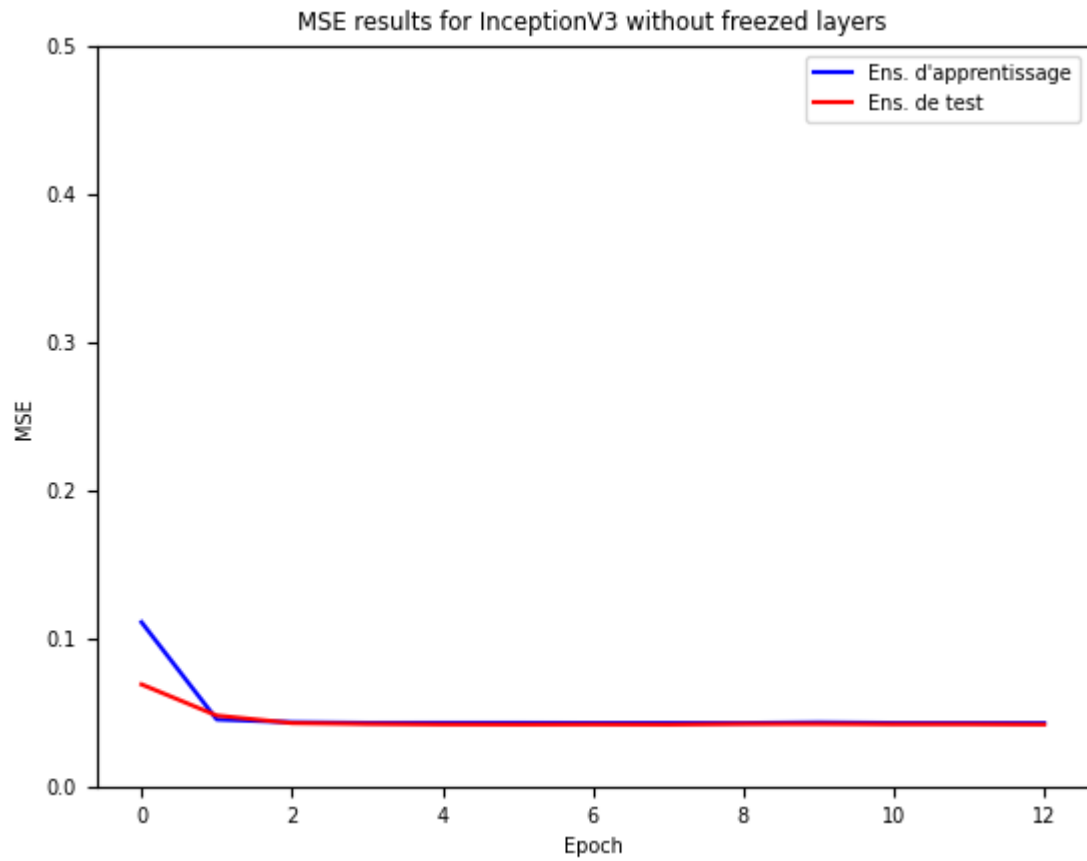




InceptionV3 without freezed layers

Layer (type)	Output Shape	Param #
inception_v3 (Functional)	(None, 5, 5, 2048)	21802784
global_average_pooling2d_1 (GlobalAveragePooling2D)	(None, 2048)	0
dense_6 (Dense)	(None, 200)	409800
dense_7 (Dense)	(None, 200)	40200
Total params: 22,252,784		
Trainable params: 22,218,352		
Non-trainable params: 34,432		

loss: 0.0427 - mae: 0.1669 - val_loss: 0.0418 - val_mae: 0.1638

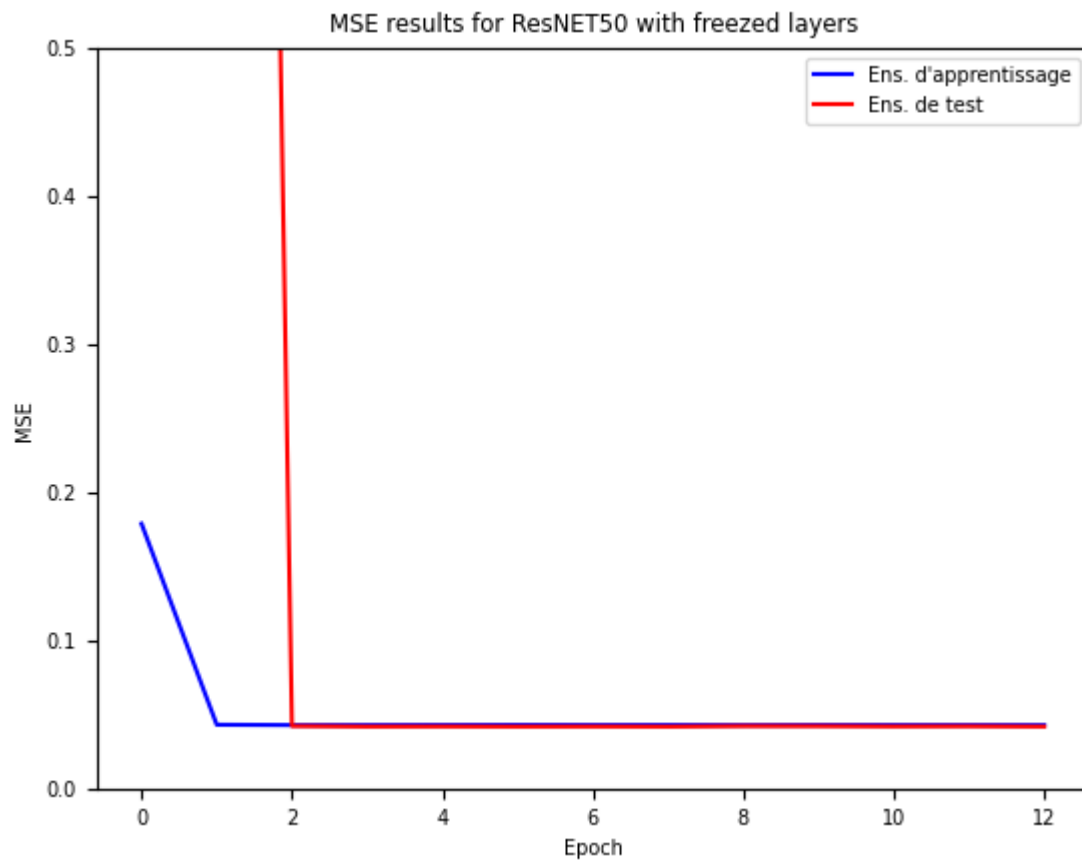


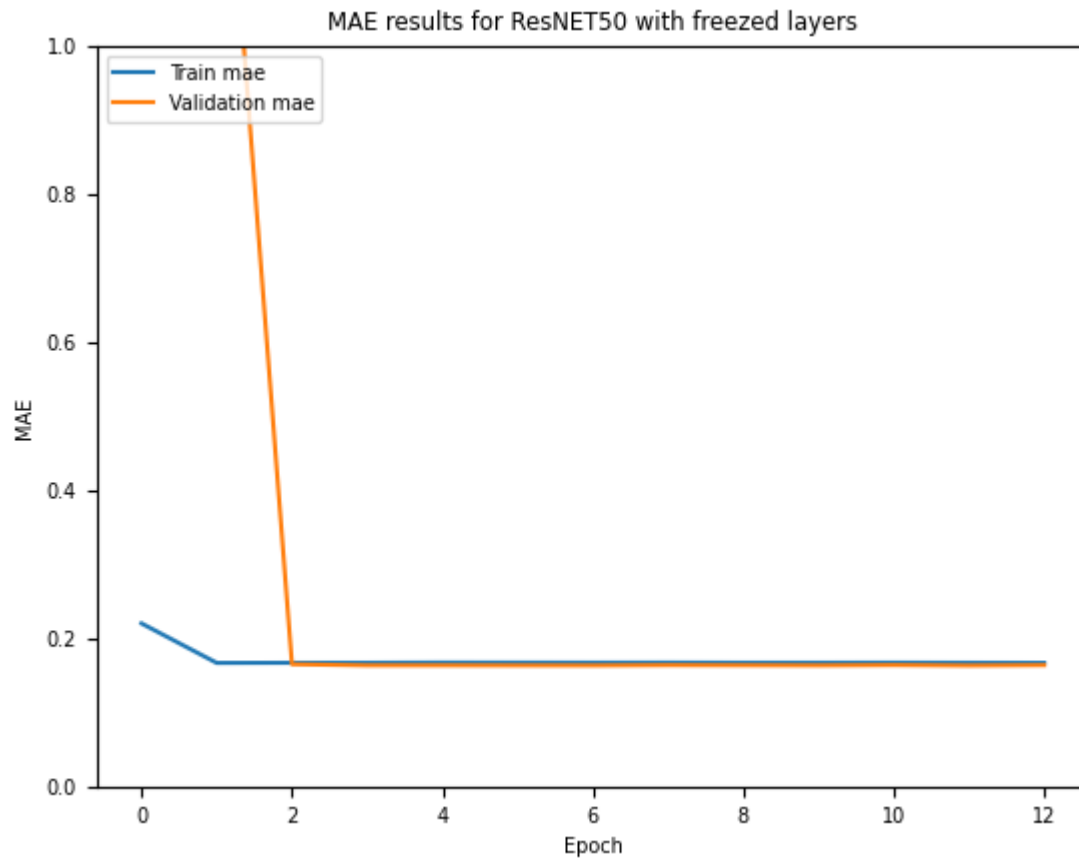
RN50 with freezed layers

Layer (type)	Output Shape	Param #
resnet50 (Functional)	(None, 7, 7, 2048)	23587712
global_average_pooling2d_2 (GlobalAveragePooling2D)	(None, 2048)	0
dense_8 (Dense)	(None, 200)	409800
dense_9 (Dense)	(None, 200)	40200

Total params: 24,037,712
Trainable params: 19,902,928
Non-trainable params: 4,134,784

loss: 0.0427 - mae: 0.1669 - val_loss: 0.0418 - val_mae: 0.1638

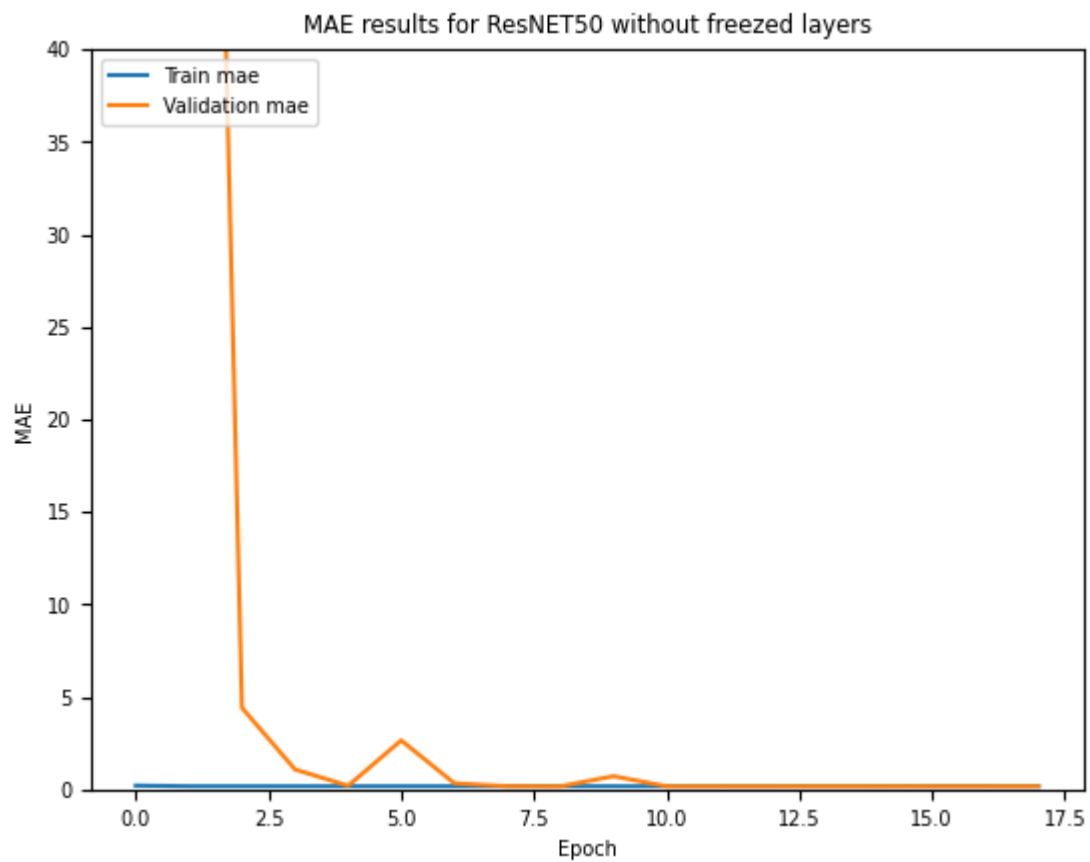
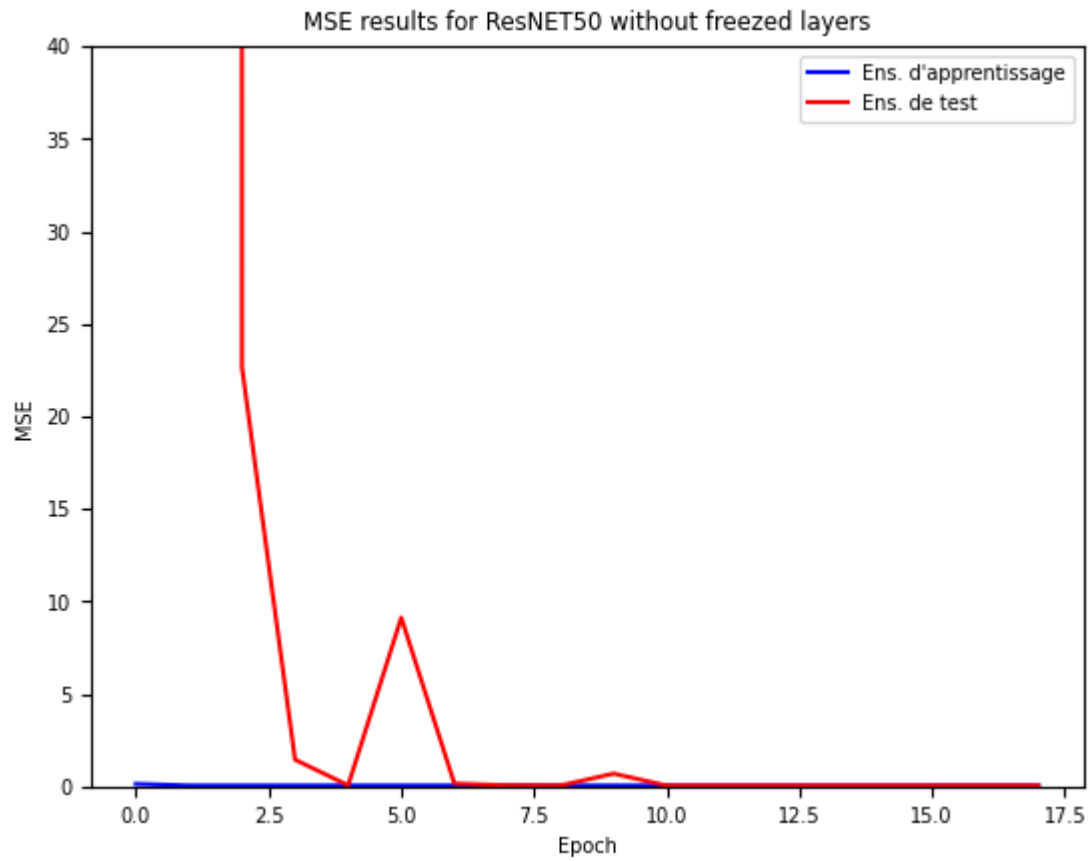




RN50 without freezed layers

Layer (type)	Output Shape	Param #
resnet50 (Functional)	(None, 7, 7, 2048)	23587712
global_average_pooling2d_3 (GlobalAveragePooling2D)	(None, 2048)	0
dense_10 (Dense)	(None, 200)	409800
dense_11 (Dense)	(None, 200)	40200
Total params: 24,037,712		
Trainable params: 23,984,592		
Non-trainable params: 53,120		

loss: 0.0430 - mae: 0.1673 - val_loss: 0.0421 - val_mae: 0.1651

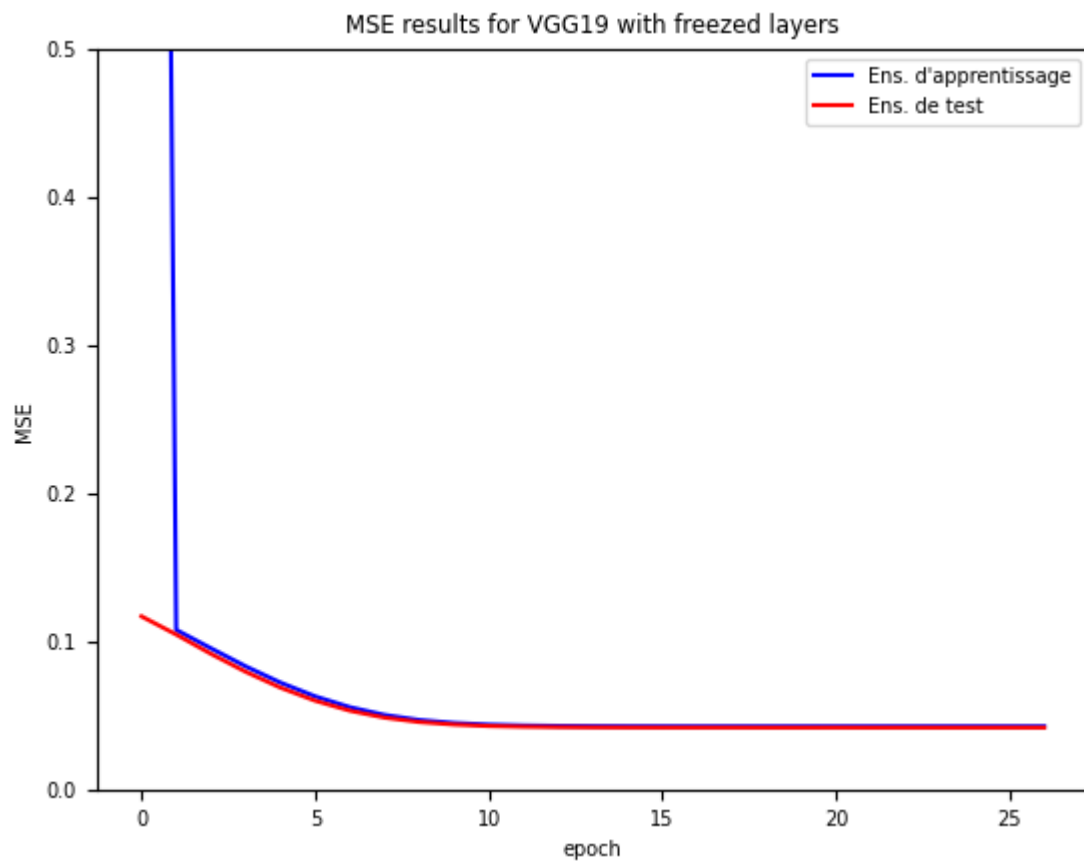


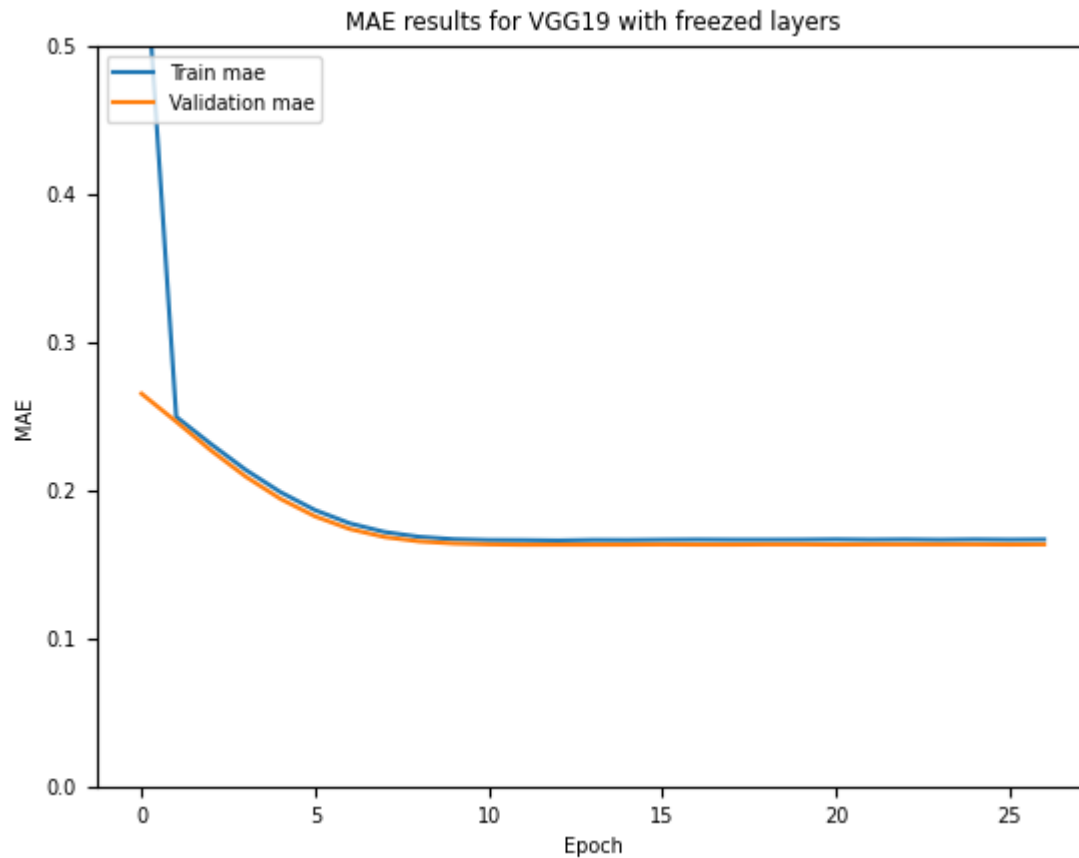
VGG19 with freezed layers :

Layer (type)	Output Shape	Param #
vgg19 (Functional)	(None, 7, 7, 512)	20024384
flatten_2 (Flatten)	(None, 25088)	0
dense_12 (Dense)	(None, 200)	5017800
dense_13 (Dense)	(None, 200)	40200

Total params: 25,082,384
Trainable params: 16,857,040
Non-trainable params: 8,225,344

loss: 0.0426 - mae: 0.1668 - val_loss: 0.0417 - val_mae: 0.1635

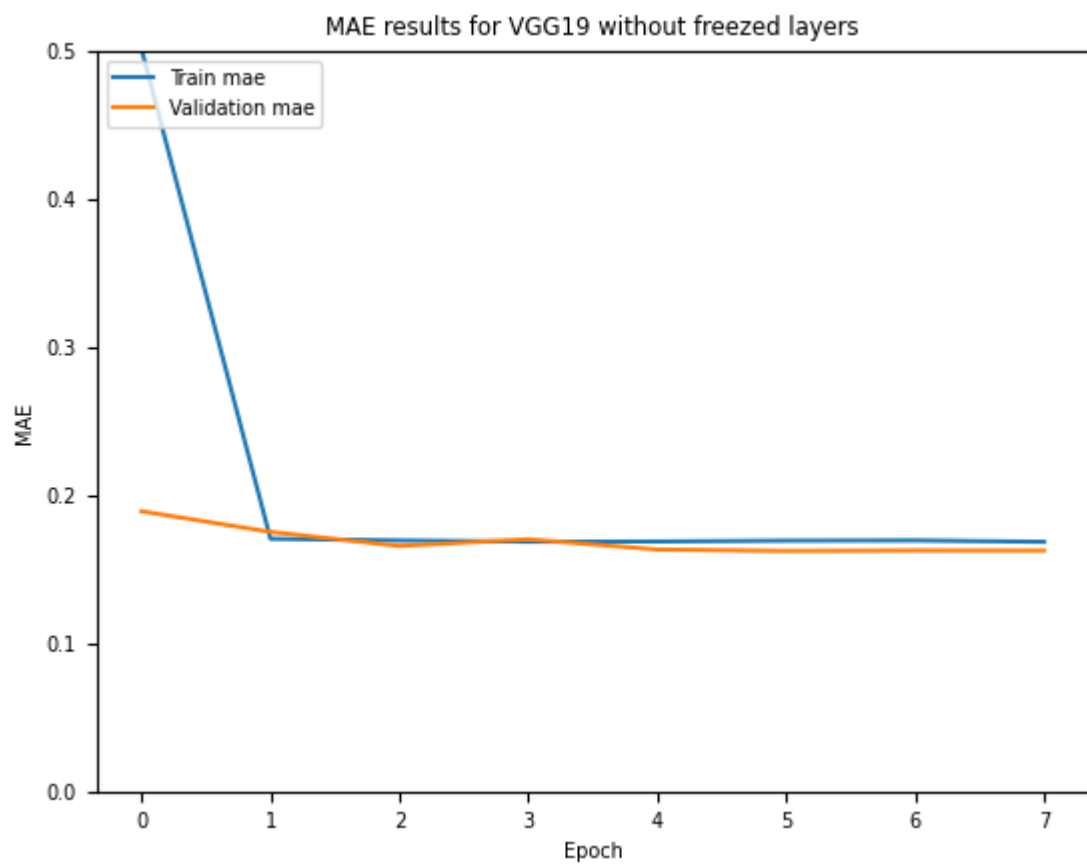
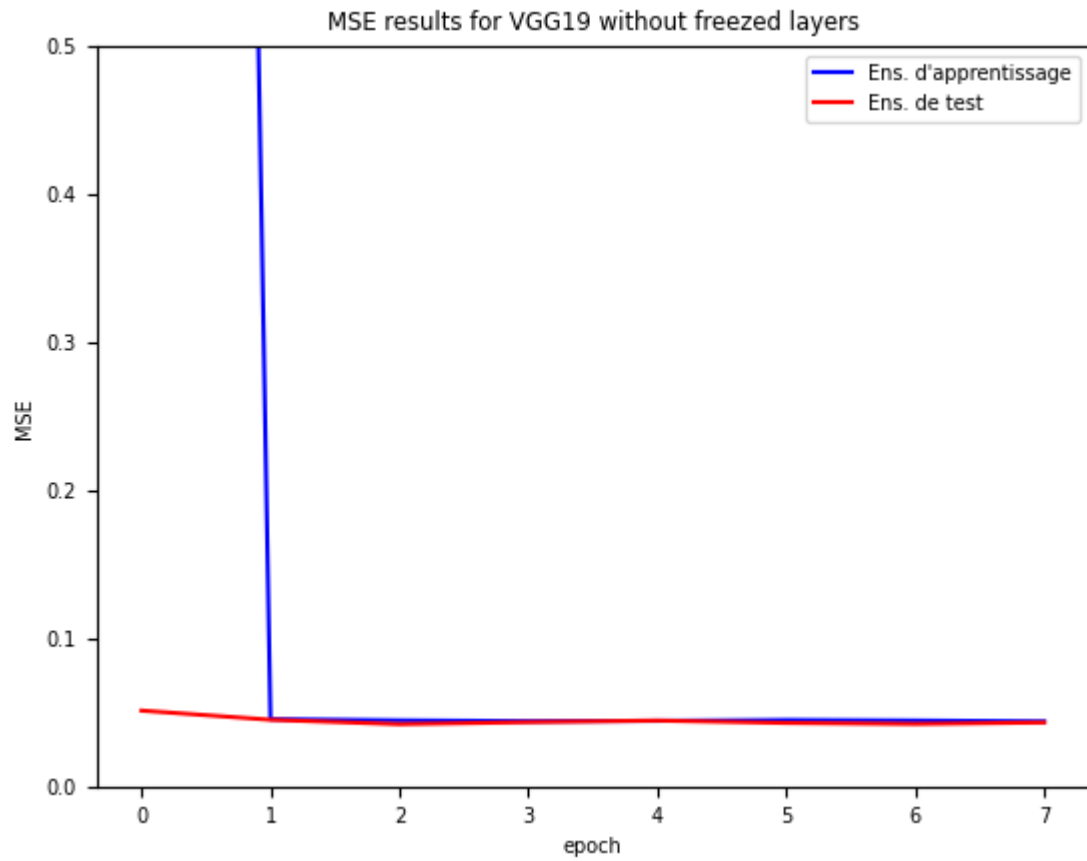




VGG19 without freezed layers

Layer (type)	Output Shape	Param #
vgg19 (Functional)	(None, 7, 7, 512)	20024384
flatten_3 (Flatten)	(None, 25088)	0
dense_14 (Dense)	(None, 200)	5017800
dense_15 (Dense)	(None, 200)	40200
Total params: 25,082,384		
Trainable params: 25,082,384		
Non-trainable params: 0		

loss: 0.0439 - mae: 0.1686 - val_loss: 0.0432 - val_mae: 0.1627

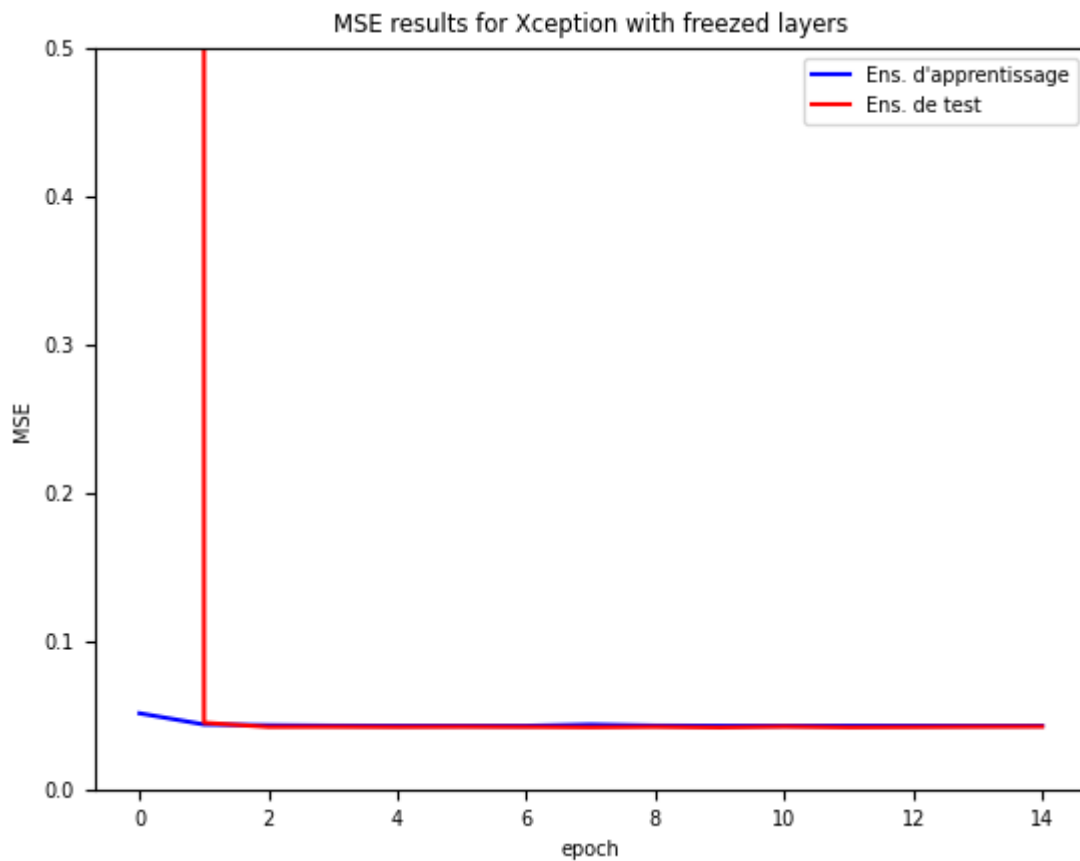


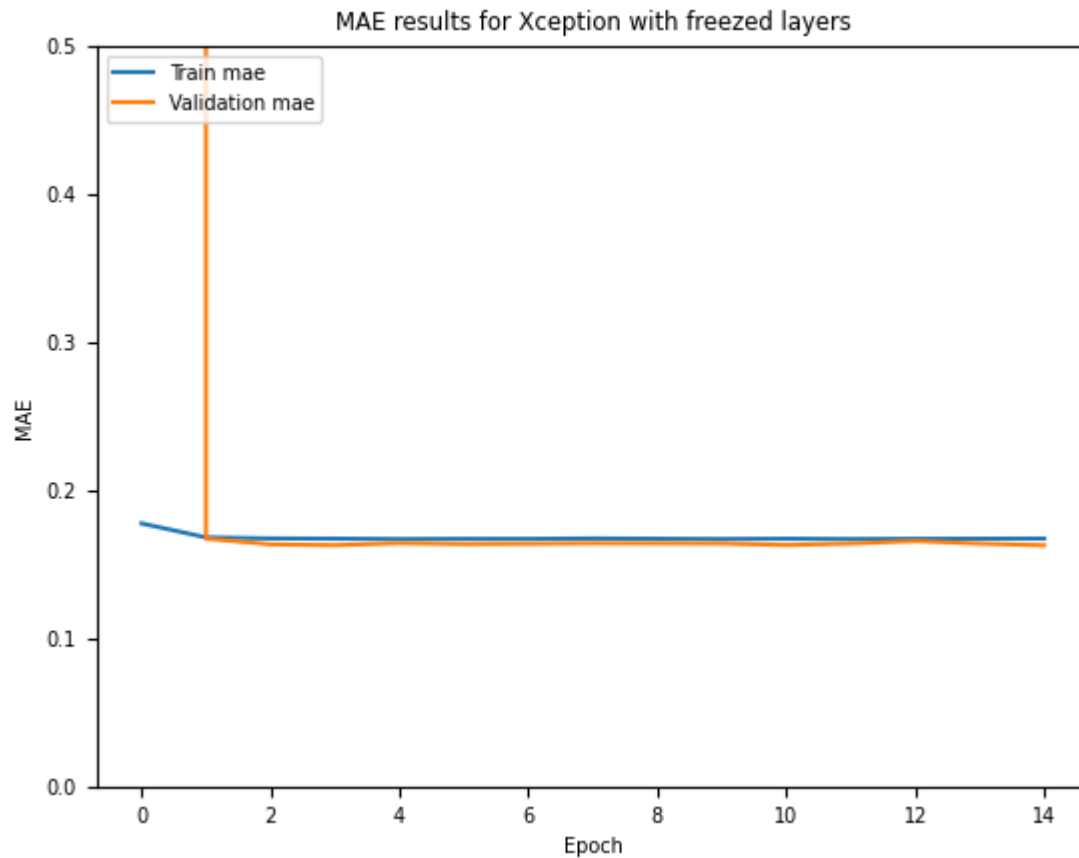
Xception with freezed layers

Layer (type)	Output Shape	Param #
xception (Functional)	(None, 7, 7, 2048)	20861480
global_average_pooling2d_1 (GlobalAveragePooling2D)	(None, 2048)	0
dense_2 (Dense)	(None, 200)	409800
dense_3 (Dense)	(None, 200)	40200

Total params: 21,311,480
Trainable params: 21,228,440
Non-trainable params: 83,040

loss: 0.0429 - mae: 0.1674 - val_loss: 0.0423 - val_mae: 0.1628





Xception without freezed layers

Layer (type)	Output Shape	Param #
xception (Functional)	(None, 7, 7, 2048)	20861480
global_average_pooling2d_2 (GlobalAveragePooling2D)	(None, 2048)	0
dense_4 (Dense)	(None, 200)	409800
dense_5 (Dense)	(None, 200)	40200
Total params: 21,311,480		
Trainable params: 21,256,952		
Non-trainable params: 54,528		

loss: 0.0429 - mae: 0.1672 - val_loss: 0.0420 - val_mae: 0.1640

